MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION

5th Floor, "Metro Plaza", E-5, Arera Colony, Bittan Market, Bhopal - 462016

Petition No.02/2016

PRESENT:

Dr. Dev Raj Birdi, Chairman

A. B. Bajpai, Member

Alok Gupta, Member

IN THE MATTER OF:

Determination of Multi Year Transmission Tariff for the control period FY 2016-17 to FY 2018-19 based on the tariff application filed by Madhya Pradesh Power Transmission Company Limited (MPPTCL), Jabalpur under Section 62 and 86(1)(a) of the Electricity Act, 2003.

M. P. Power Transmission Co. Ltd., Jabalpur - Petitioner

Versus

1. **M. P. Poorv Kshetra Vidyut Vitaran Co. Ltd., Jabalpur**
2. **M. P. Madhya Kshetra Vidyut Vitaran Co. Ltd., Bhopal**
3. **M. P. Paschim Kshetra Vidyut Vitaran Co. Ltd., Indore**
4. **M. P. Audyogik Kendra Vikas Nigam (SEZ), Indore**

- Respondents

ORDER

(Passed on this day of 10th June, 2016)

1. Madhya Pradesh Electricity Regulatory Commission (hereinafter called "the Commission") issued MPERC (Terms and Conditions for determination of Transmission Tariff)(Revision–III) Regulations, 2016 (G-28 (III) of 2016) (hereinafter referred to as "the Regulations") for the new control period i.e. FY 2016-17 to FY 2018-19. These were notified in the official gazette on 15th January, 2016.

2. M.P. Power Transmission Co. Ltd. filed the subject petition on 31st December' 2015 for determination of transmission tariff for new control period of FY 2016-17 to FY 2018-19.The Commission has scrutinized the subject petition filed by Madhya Pradesh Power Transmission Company Limited (hereinafter called "MPPTCL" or "Transmission Company" or "the petitioner") based on the principles, methodology and the norms specified in the MPERC (Terms & Conditions for determination of Transmission Tariff) Regulations, 2016.

3. Motion hearing in the matter was held on 4th February, 2016. Vide Commission's daily order dated 4th February, 2016, the petition was admitted and the petitioner was directed to serve copy of the petition on all Respondents in the matter. The petitioner was also asked to submit certain additional information/clarifications in respect of the Fixed Assets, O&M expenses, Terminal Benefits expenses, Depreciation, Interest and Finance charges, CWIP, Return on Equity etc. for further scrutiny of the petition. Vide letter no. 1326 dated 11th March' 2016, MPPTCL filed its additional submission/clarifications.

4. In the subject petition, MPPTCL worked out the expected Transmission system capacity and allocated the same among its long term customers on the basis of allocation of available generation capacity notified by the State Government vide its notification No.2260-F-3-24-2009-XIII dated 19.03.2013. Based on the aforesaid allocation of the generation capacity, MPPTCL submitted the MW capacity on its Transmission system and allocated the same to its long term customers in each year of the control period. The same is considered in this Order.

5. The orders for true-up of the transmission tariff up to FY 2014-15 have been issued by the Commission and the Audited accounts of MPPTCL for FY 2014-15 are also available with the Commission. Therefore, most of the financial figures in the Annual fixed cost considered in this order are based on the closing figures admitted in the last true-up order issued by the Commission for FY 2014-15

6. The summary of Annual Revenue Requirement filed by MPPTCL in the subject petition for new control period of FY 2016-17 to FY 2018-19 is as given below: -

Annual Revenue Requirement filed by the Petitioner

(₹ in Crores)

S. No.	Particulars	ARR for the Financial Year		
		FY 2016-17	**FY 2017-18**	**FY 2018-19**
1	O&M Expenses	395.91	445.04	497.28
2	Expenses Towards payment to PPP Licensee	37.80	37.80	37.80
3(i)	Against Current Liabilities	1047.09	1177.90	1282.38
3(ii)	Provisions	117.12	130.51	144.52
3(iii)	For Building Pension/ Gratuity etc. Funds	909.62	909.62	909.62
3	**Total Terminal Benefits -**	**2073.83**	**2218.03**	**2336.52**
4	Depreciation	353.01	403.43	453.77
5	Interest & Finance Charges	166.70	205.33	247.52
6	Interest on Working Capital	96.34	106.37	116.09
7	Return on Equity	458.00	527.85	600.01
8	MPERC's Fee	1.32	1.43	1.53
9	Taxes & fees (other than MPERC fee)	397.66	437.81	476.06
	TOTAL -	**3980.57**	**4383.08**	**4766.58**
10	Less Non-Tariff Income (-)	-19.00	-20.00	-21.00
	NET ARR -	**3961.57**	**4363.08**	**4745.58**

7. The Commission has considered the documents available on record and reallocation of generating capacity available as on date among the three Distribution Companies by the state Government vide its Notification no. 2260-F-3-24-2009-XIII dated 19th March, 2013.

8. MPPTCL is the owner of the transmission network previously owned by Madhya Pradesh State Electricity Board. MPPTCL started functioning independently from 1st June, 2005. This order relates to petition No. 02 of 2016 filed by Madhya Pradesh Power Transmission Company Limited, Jabalpur for determination of transmission multi-year tariff for the control period of FY 2016-17 to FY 2018-19.

9. The public notice was published in the following newspapers on 06th March' 2016:

(i)	Nav Bharat, Indore	:	Hindi
(ii)	Jabalpur Express, Jabalpur	:	Hindi
(iii)	Central Chronical, Bhopal	:	English

10. The last date for inviting comments/suggestions/objections was 21 days from the date of publication of the notice. Vide letter No. 2489 dated 28th March' 2016, MPPTCL informed that it has received no comments/ suggestions till date.

11. The public hearing in the subject petition was held on 29th March, 2016 in the office of the Commission. The petitioner's representatives attended the public hearing. No representative from any stakeholder/public/respondent appeared in the public hearing.

12. The petitioner broadly submitted the following status of M.P. Power Transmission Co. Ltd., Jabalpur:

"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 state Government vide order dated 31st May 2005, notified the provisional "Opening Balance Sheets" of the Companies as on 31.5.05. The Operation Management agreement between MPSEB and Companies stood terminated, and Companies started independent functioning w.e.f. 1.6.2005 under a Cash Flow Mechanism. The final Opening Balance Sheet as on 31.5.05 has been subsequently notified on 12th June 2008..

In compliance to Para 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. The Transmission Service Agreement dated 17th June'05 provides "The tariff and terms & conditions for the transmission services to be rendered by the Transco, shall be as per the tariff determined by the State Commission from time to time. The MPPTCL has therefore raised the bills of Transmission charges since 1.6.2005 as per the tariff determined by the Hon'ble Commission from time to time. Hon'ble Commission directed to enter into a long term Transmission Service Agreement. Accordingly, the Petitioner MPPTCL has entered into Transmission Service Agreement with the three Distribution Licensees on dates indicated hereunder;

(i)	*East Discom -*	*20.11.2006.*
(ii)	*Central Discom -*	*17.11.2006.*
(iii)	*West Discom -*	*17.11.2006.*

An agreement dated 29.01.2005 also exists between MPSEB and MPAKVN for SEZ, Pithampur which as now stands between MPPTCL and MPAKVN, as per Transfer Scheme. MPAKVN is a Long Term Open Access customer for MPPTCL, for its Special Economic Zone campus at Pithampur, Distt. Dhar near Indore.

Hon'ble Commission on 14th December 2012 notified the "MPERC (Terms & Conditions for determination of Transmission Tariff)(Revision-II) Regulations, 2012 {RG-28(II) of 2012}.

13. The petitioner broadly submitted its following status of performance*:*

Intra-State Transmission System

Intra-State Transmission System of MPPTCL comprises of EHV Lines and Sub-stations of various voltages. Position as on 31.3.15 and 31.10.15 is tabulated hereunder;

S. No.	Voltage Level	As on 31.3.2015			As on 31.10.2015		
		EHV Lines	EHV Sub-Stations		EHV Lines	EHV Sub-Stations	
		Ckt. KMs	Number	MVA Capacity	Ckt. KMs	Number	MVA Capacity
1	400 KV	3074.45	9	6720	3074.45	9	7035
2	220 KV	11801.08	64	18470	12010.84	66	19310
3	132 KV	15258.45	218	20246.5	15725.81	224	21196.5
4	66 KV	61.00	1	20	61.00	1	20
	TOTAL -	**30194.98**	**292**	**45456.5**	**30872.1**	**300**	**47561.5**

Transmission System Capacity:

The transmission system capacity of Intra-State transmission system of MPPTCL is allocated to the Long Term Open Access customers including the Distribution Licensees. The transmission system capacity is therefore determined as per the MPERC (Terms and conditions for Intra-State Open Access in MP) Regulations, 2005. The Average Capacity of Intra-State transmission system is defined as;

"Average capacity means the average capacity in MW served by the Intra-State transmission system of the transmission licensee in the previous financial year, and shall be the sum of the generating capacities, connected to the transmission system and contracted capacities of other Long Term transactions handled by the system of Transmission Licensee".

The power corresponding to Intra-State generating capacity is available to transmission system after deducting the auxiliary consumption. Similarly, power from the Central Sector generating stations is available at M.P. periphery after deduction of auxiliary consumption and losses in Inter-State transmission system. While determining transmission system capacity for the control period the above mentioned facts have been taken into consideration. The Regulation provides that the Average Capacity during a year shall be taken as that served in previous year. Therefore, the transmission capacity during a year is taken as that existing as on 1st April of that year.

The State Government time to time allocates the available Generating capacity among Discoms. The latest order in this regard is on 19th March 2013. This has been taken as base for allocation of Transmission capacity for the three years of control period.

Capacity Allocation among Discoms & SEZ:

The capacity allocation to Discoms is proposed on the following basis.

(i). Total Transmission Capacity available for a particular year is apportioned based on the percentage ratio as indicated in State Government order dated 19.03.2013 & presently acknowledged by MPPMCL. A capacity of 40 MW at MP periphery for SEZ is treated as additional.

(ii). The capacity during the year is taken as that on 1st April i.e. beginning of year.

(iii). The percentage takes care of Bundelkhand's allocation to East Discom.

(iv) Transmission capacity for a particular year is worked out on the basis of generating capacity allocation as on First of April of that year. Auxiliary consumption has been reduced from the Generators within the State. For Generating Stations, outside the State, both the Auxiliary consumption as well Inter-State Transmission losses have been reduced.

Based on above and consequent to the yearly additions of generating units commissioned in a particular year, which in turn is founded on the estimations of the State Planning Cell, the year wise transmission capacity for the MYT Period under consideration is given in the following paragraphs.

Transmission Capacity for FY 2016-17:

The total capacity commissioned/ contracted by MPPMCL on behalf of the Distribution Companies as on 01.04.2016 is depicted as 15954 MW out of which 20.46 MW worth Generating Units are at lower voltages and not connected to the MPPTCL system. Apart from the above, M/s SEZ has intimated that they expect an contracted transmission capacity of 40 MW in the forthcoming years thus a total of 15973.5 MW capacity is anticipated for commissioning/ contract. After deduction of auxiliary consumptions, ***15029.37*** *MW of net Transmission capacity is expected to be available for FY 2016-17 (as on 01.04.2016).*

Thus, the Generating capacity available in MP's System will be;

S No.	Particulars	Contracted/ Commissioned	Net : after aux. / loss deduction
1	MP Thermal Generation	4080.00	3684.42
2	MP Hydel Generation (including share)	605.00	603.52
3	Inter-state Hydel Projects	377.20	376.84
4	Joint Venture Hydel Projects	2346.50	2339.10
5	Central Sector	3230.88	2851.90
6	Additional share From E.R.E.B.	500.00	441.35
7	Additional share From Other Projects	1388.20	1388.20
8	For SEZ not included above	40.00	40.00
9	From Private Projects	3405.75	3304.05
Total Generation MW		**15973.53**	**15029.37**

Details of above capacity is allocated to Discoms and SEZ, Pithampur, based on the percentage allocation shown in State Govt. order dtd. 19.03.2013.

Transmission Capacity for FY 2017-18:

In addition to above the following Generating Units or allocation are expected during 2016-17;

Central Sector		
i.	NTPC Vindyachal STPS V (Ut 1)	128 MW
ii.	NTPC Mouda STPS II (Ut 1 & 2)	206 MW
	TOTAL -	**334 MW**

Thus, the Generating capacity of 16307.53 MW is expected to be available for FY 2017-18 as follows;

S No.	Particulars	Contracted/ Commissioned	Net : after aux. / loss deduction
1	MP Thermal Generation	4080.00	3684.42
2	MP Hydel Generation (including share)	605.00	603.52
3	Inter-state Hydel Projects	377.20	376.84
4	Joint Venture Hydel Projects	2346.50	2339.10
5	Central Sector	3564.88	3146.72
6	Additional share From E.R.E.B.	500.00	441.35
7	Additional share From Other Projects	1388.20	1388.20
8	For SEZ not included above	40.00	40.00
9	From Private Projects	3405.75	3304.05
Total Generation MW		**16307.53**	**15324.19**

*Deducting the Auxiliary consumption and Inter-State Transmission Losses, the net Transmission System Capacity for FY 2017-18 is worked out as **15324.19 MW**. This is allocated to Discoms & SEZ, Pithampur as per percentage allocation based on the percentage allocation shown in State Govt. order dtd. 19.03.2013.*

Transmission Capacity for FY 2018-19:

In addition to above the following Generating Units or allocation from Central Sector / Private Units are expected in FY 2017-18;

Central Sector		
i.	NTPC Lara STPS, Rajgarh (Units 1-5)	319 MW
ii.	NTPC Gadarwara STPS (Ut 1 & 2)	800 MW
	TOTAL -	**1119 MW**

Thus, the Generating capacity of 17426.53 MW is expected to be available for FY 2018-19.

S No.	Particulars	Contracted/ Commissioned	Net : after aux. / loss deduction
1	MP Thermal Generation	4080.00	3684.42
2	MP Hydel Generation(including share)	605.00	603.52
3	Inter-state Hydel Projects	377.20	376.84
4	Joint Venture Hydel Projects	2346.50	2339.10
5	Central Sector	4683.88	4134.46
6	Additional share From E.R.E.B.	500.00	441.35
7	Additional share From Other Projects	1388.20	1388.20
8	For SEZ not included above	40.00	40.00
9	From Private Projects	3405.75	3304.05
Total Generation MW		**17426.53**	**16311.93**

Deducting the Auxiliary consumption and Inter-State Transmission Losses, the net Transmission System Capacity for FY 2018-19 is worked out as ***16311.93 MW****. This is allocated to Discoms & SEZ, Pithampur as per percentage allocation based on the percentage allocation shown in State Govt. order dtd. 19.03.2013.*

Transmission Capacity Allocation among Discoms & SEZ:

The capacity allocation to Discoms is proposed on the following basis.

(i). Net transmission capacity available for a particular year is apportioned in the ratio based on the percentage allocation shown in State Govt. order dtd. 19.03.2013.. SEZ allocation is treated as additional.

(ii). The capacity during the year is taken as that on 1st April i.e. beginning of year.

(iii) Since SEZ has availed power under Open Access M/s SEZ has intimated that they expect an contracted transmission capacity of 40 MW in the forthcoming years, thus the same has been considered.

(iv) The fractional allocation worked out has been rounded off.

Based on above, the allocated transmission capacity proposed is tabulated hereunder;

S. No.	Distribution Licensee	% Allo-cation	Capacity Allocation (in MW)		
			2016-17	2017-18	2018-19
1	MP Poorva Kshetra Vidyut Vitaran Company Ltd. Jabalpur.	29.88%	4478.91	4567.01	4862.15
2	MP Madhya Kshetra Vidyut Vitaran Company Ltd. Bhopal.	31.83%	4770.50	4864.32	5178.68
3	MP Paschim Kshetra Vidyut Vitaran Company Ltd. Indore.	38.29%	5739.96	5852.86	6231.1
4	**Total Discoms -**	**100%**	**14989.37**	**15284.19**	**16271.93**
5	SEZ Pithampur (Dhar)	-	40	40	40
6	**GRAND TOTAL -**	-	**15029.37**	**15324.19**	**16311.93**

As per Transmission Tariff Regulations, the Distribution Companies and the SEZ will share the transmission charges in the ratio of capacity allocated to them.

14. The petitioner further submitted the following status of transmission losses, Transmission System Availability, Transformer failure & metering on interface points: -

"Transmission Losses: -

Transmission losses in Intra-State system have reduced gradually during past years on account of the execution of Capital Plan. These are tabulated hereunder;

Intra-state transmission losses

Transmission losses in Intra-State system have reduced gradually during last years on account of the execution of Capital Plan. These are tabulated hereunder;

Details	***2011-12***	***2012-13***	***2013-14***	***2014-15***	***2015-16 Apr-Sep***
Energy Received into System (MUs)	*42175*	*46848*	*50300*	*55206*	*25741*
Energy sent Out of System (MUs)	*40692*	*45301*	*48790*	*53648*	*24990*
Energy Lost (MUs)	*1482*	*1546*	*1510*	*1558*	*751*
Transmission Loss (%)	***3.51%***	***3.30%***	***3.00%***	***2.82%***	***2.92%***
Target fixed by Hon'ble MPERC	-	-	*3.16%*	*2.97%*	*2.78%*

As per the directives of the Hon'ble Commission, MPPTCL is computing the voltage-wise transmission losses. The year-wise details are given hereunder;

S. No.	***System Voltage***	***Transmission Losses in Percentage At Various Voltage Levels***				
		2011-12	***2012-13***	***2013-14***	***2014-15***	***2015-16 Apr-Sep***
1	*400 KV*	*1.18%*	*1.22%*	*1.19%*	*1.01%*	*1.16%*
2	*220 KV*	*2.39%*	*2.11%*	*1.85%*	*1.75%*	*1.70%*
3	*132 KV*	*0.89%*	*0.92%*	*0.79%*	*0.81%*	*0.82%*
4	***Overall loss***	***3.51%***	***3.30%***	***3.00%***	***2.82%***	***2.92%***

Transmission System Availability:

Hon'ble Commission has fixed a target of Transmission System Availability as 98% in the MYT Regulations. The Transmission System Availability achieved during the last control period i.e. FY 2009-10 to FY 2011-12 was higher than the target fixed. This indicates proper maintenance of lines and sub-stations as well as prompt outage management. The achievements are shown hereunder;

S. N.	System Voltage	Transmission System Availability				
		2011-12	2012-13	2013-14	2014-15	2015-16 Apr-Sep
1	400 KV	98.40%	99.37%	99.26%	99.30%	98.02%
2	220 KV	99.45%	99.43%	99.48%	99.32%	98.68%
3	132 KV	99.29%	99.46%	99.44%	99.39%	99.12%
4	**Total System -**	**99.23%**	**99.44%**	**99.43%**	**99.35%**	**98.75%**
5	**TARGET -**	**98.00%**	**98.00%**	**98.00%**	**98.00%**	**98.00%**

Transformer Failure:

The MPPTCL is carrying out the maintenance of transformers periodically as per schedules laid down. This has resulted in controlling the transformer failures. The year-wise details are given below;

S. No.	Period >	FY 2012-13		FY 2013-14		FY 2014-15	
		Nos.	%	Nos.	%	Nos.	%
1	Auto-Transformers	0	0	0	0	0	0
2	Power Transformers	7	1.13%	4	0.79%	4	0.76

Interface Points:

The MPPTCL's network is connected to Inter-State, Generating and Distribution Systems presently through 822 Interface points. Details are given hereunder;

Metering Status	2012-13	2013-14	2014-15	2015-16 Apr-Sep
GENCO -TRANSCO	53	55	55	56
CGS/NHPC/NTPC/PGCIL	60	61	61	66
OTHER STATE-TRANSCO	16	16	16	16
OPEN ACCESS (SEZ)	1	1	1	1
TRANSCO-DISCOM (E/Z)	170	182	192	207
TRANSCO-DISCOM (C/Z)	178	190	199	210
TRANSCO-DISCOM (W/Z)	218	233	251	266
Total	**696**	**738**	**775**	**822**

ABT compliant meters have been installed on Interface points for implementation of Intra-State ABT."

15. Commission's analysis on Transmission capacity & Energy to be handled by MPPTCL:

On perusal of the above Transmission Capacity projected in the petition, vide Commission's letter dated 09th February' 2016, the petitioner was asked to reconcile/submit reasons for the following generation capacity addition anticipated in control period particularly in respect of M/s BLA Power, M/s SEZ Indore & expected generating capacity from Central Generating Stations:

(a) Considering the generating capacity of M/s BLA Power whose tariff has not been determined beyond 31st March' 2015.
(b) Considering the contracted Transmission capacity of 40MW by M/s SEZ whereas the long term power supply agreement and procurement of this quantum of power from MPPMCL by SEZ is yet to be finalized as per Annexure III(d) of the petition.
(c) The basis of expected addition of generating Capacity from Central Generating Stations in FY 2017-18 & FY 2018-19.

16. In response to the above, vide letter no. 2056 dated 11th March' 2016 MPPTCL submitted the following:

"(a) The generating capacity of M/s BLA Power has been taken as 15.75 MW for all the three years of control period FY 2016-17 to FY 2018-19. It has been considered on the basis of details of contracted generation with MPPMCL as provided by State Planning Cell of MPPMCL. However, it is also to be submitted that the above capacity is considered only for the purpose of capacity allocation which in-turn forms the basis of proportionate Tariff to be charged from the Long Term Open Access customers.

(b) *M/s SEZ (MPAKVN) have been allocated a capacity of 40 MW envisaged under 25 years Long Term Power supply arrangement commencing from 01.04.2015, to be shared by various generating units of MPGENCO. A copy of letter dated 29.01.2016 from Energy Department, GoMP, conveying the approval for the said 40 MW capacity is placed for kind consideration.*

(c) The expected addition of generating capacity from Central Generating Stations in FY 2017-18 and FY 2018-19 is made on the basis of data provided by State Planning Cell of MPPMCL (on the basis of PPAs executed) for 1st April 2016, 1st April 2017 and 1st April 2018".

17. Vide Commission's letter dated 31st March' 2016, MPPTCL was asked to submit the Transmission Service Agreement for 40 MW power between MPPTCL and SEZ (MPAKVN) before apportionment/ sharing of transmission charges in terms of Regulation 4.2 of MPERC (Terms and Conditions for determination of Transmission Tariff) Regulations, 2016.

18. Vide its submission dated 13th April' 2016, MPPTCL submitted that M/s SEZ (MPAKVN) has drawn up an agreement with MPPTCL. A copy of the aforesaid third

supplementary Bulk Power Transmission Agreement (BPTA) for transmission of 40MW Power at M.P. Periphery from M.P. Genco stations to SEZ premises Pithampur (Distt Dhar) was also submitted by MPPTCL with its reply. This third supplementary BPTA has been entered into between MPPTCL and MPAKVN on 29th March' 2016. The aforesaid third Supplementary Agreement is a part of the original agreement executed on 29th January' 2005 and the first and second supplementary agreement executed between MPPTCL & MPAKVN on 11th October' 2010 & 05th October' 2013 respectively.

On perusal of the aforesaid agreement, it is observed that the following has been agreed to between MPPTCL & MPAKVN:

(i) *"The contracted Transmission capacity between the MPAKVN and MPPTCL stand enhanced to 40 MW (Forty Mega Watts) and MPAKVN agree to pay transmission charges for this capacity of 40 MW at the Rates, Terms & Conditions as may be determined by the MPERC from time to time. This Agreement shall commence from 01.04.2016 at 00.00 Hours*

(ii) *Clause 2.1 (i & ii) of the agreement dated 29th January' 2005 (hereafter referred as original agreement), stands substituted by the following clause;*

(a) The 40 MW power to MPAKVN is allowed from 220kV S/s Pithampur through the 33kV SEZ-I,II & III feeders emanating from existing 63MVA 132/33kVtransformer.

(b) The aforesaid arrangement of power supply shall be allowed subject to the condition that MPAKVN should complete the work of their new 132 kV sub-station being constructed at SEZ-Phase-II & by shifting of the 33kV feeders supplying power to SEZ area from existing 220kV Sub-station Pithampur to new 132kV Sub-station on priority basis. After completion of work 40 MW power supply to MPAKVN should be allowed from new 132 kV sub-station of SEZ."

19. Considering the above mentioned third supplementary agreement, the transmission capacity of 40MW for M/s MPAKVN (SEZ) Pithampur is considered in this order. However, for the purpose of total Transmission capacity, the Commission has not considered the generation capacity of M/s B L A Power Pvt. Ltd in terms of para 3.50 of the Retail Supply Tariff Order for FY 2016-17 issued by the Commission on 05th April' 2016. Accordingly, the Transmission Capacity- allocation among Discoms & SEZ is reworked and considered in this order as given below:

S. No.	Distribution Licensee	% Allocation	Capacity Allocation (in MW)		
			2016-17	2017-18	2018-19
1	MP Poorva Kshetra Vidyut Vitaran Company Ltd. Jabalpur.	29.88%	4474.21	4562.30	4857.44
2	MP Madhya Kshetra Vidyut Vitaran Company Ltd. Bhopal.	31.83%	4765.48	4859.31	5173.67
3	MP Paschim Kshetra Vidyut Vitaran Company Ltd. Indore.	38.29%	5733.93	5846.82	6225.07
4	**Total Discoms -**	**100%**	**14973.62**	**15268.44**	**16256.18**
5	SEZ Pithampur (Dhar)	-	40	40	40
6	**GRAND TOTAL -**	-	**15013.62**	**15308.44**	**16296.18**

20. **Energy to be handled by Transmission System:**
Regarding the energy to be handled by transmission System, MPPTCL was asked to inform the reasons for variation in figures filed by it and those filed by MPPMCL in its petition for determination of retail supply tariff for FY 2016-17.

21. In response, vide its letter no. 2056 dated 11th March’ 2016, MPPTCL submitted the following;
“The figures related to energy handled has been made available by MPPMCL on behalf of Discoms which is subject to scrutiny by Hon’ble Commission. Now, MPPMCL in its retail supply tariff petition for FY 2016-17 at page 92 has indicated the following energy requirement;

S. No.	***Particulars***	***FY 2016-17***	***FY 2017-18***	***FY 2018-19***
1	*Total Ex-bus energy requirement*	*62442*	*68215*	*75130*
2	*Total energy requirement at State periphery*	*60939*	*66551*	*73293*

The MPPTCL is expected to handle the total energy requirement at State periphery of Madhya Pradesh. Hon’ble Commission may kindly consider the same.”

Capital Cost and Capital Structure

The petitioner broadly submitted the following:

22. ***"Transmission Plan for FY 2012-13 to FY 2016-17(12th Plan):***
Accommodating the Evacuation Systems and Downstream System strengthening for generating capacity additions and load growth; the MPPTCL has formulated a Need Based Transmission Plan for FY 2012-13 to FY 2016-17 and same was approved by the Hon'ble Commission.

The total Plan amount was proposed as ₹7370.22 Crores, with EHV lines addition of 10667 Ckt. Kms and MVA capacity addition of 19,698 MVA. Financial linkages of the Transmission Plan are an ongoing process whereby the action to get the financial linkage for works to be taken in later years of Plan continues. The schemes already sanctioned are ADB-2323, ADB-2346, PFC-II and JICA. Certain funding will be available from the State Government for priority works. Schemes are to be posed under externally aided programme for remaining works. Works of ₹700.00 Crores were proposed to be allocated under Private Public Participation (PPP) Programme for which funds are to be arranged by the private players.

23. ***The year-wise Physical and Financial details are tabulated hereunder-***

Physical & Financial Plan FY 2013 TO FY 2017 –

(₹IN LAKH)

S. No.	Particulars	Year wise Physical Program (2013-17)					Total 12th Plan (2013-17)
		2012-13	2013-14	2014-15	2015-16	2016-17	
A	**EHV Lines (Ckt. Kms)**						
1	400KV Lines	790	490	90	1100	370	**2840**
2	220KV Lines	436	412.1	243	468	650	**2209.1**
3	132KV Lines	876.2	1515	1803	566	858	**5618.2**
	TOTAL CKT KMS	**2102.2**	**2417.1**	**2136**	**2134**	**1878**	**10667.3**
B	**EHV Substations (MVA)**						
1	400KV Sub-stations	1575	1260	945	2205	0	**5985**
2	220KV Sub-stations	1120	1600	2720	1280	960	**7680**
3	132KV Sub-stations	649	1717	2152	723	792	**6033**
	TotalL MVA	**3344**	**4577**	**5817**	**4208**	**1752**	**19698**

C	**EHV Substation (Nos)**						
1	400KV Sub-stations	4	0	2	4	0	**10**
2	220KV Sub-stations	1	6	4	6	0	**17**
3	132KV Sub-stations	9	22	32	1	3	**67**
	Roral (Nos)	**14**	**28**	**38**	**11**	**3**	**94**

S. No.	Particulars	Year wise Investment in 12th Plan (2013-17)					Total 12th Plan (2013-17)
		2012-13	2013-14	2014-15	2015-16	2016-17	
1	400KV Lines	41324	25500	39288	67190	35270	**208572**
2	220KV Lines	12328	5710	10814	17057	19740	**65649**
3	132KV Lines	19762	27415	37096	22794	22011	**129078**
	Total(Lines)	**73414**	**58625**	**87198**	**107041**	**77021**	**403299**
4	400KV Sub-stations	23044	4680	31004	46800	7600	**113128**
5	220KV Sub-stations	14919	13272	24511	20185	8760	**81647**
6	132KV Sub-stations	22505	30200	25346	18209	20490	**116750**
7	Misc. Works	2074	5658	5558	4658	4250	**22198**
	Total (S/s)	**62542**	**53810**	**86419**	**89852**	**41100**	**333723**
	Total (Transmission)	**135956**	**112435**	**173617**	**196893**	**118121**	**737022**

The above mentioned Plan has been approved in principle by the Hon'ble Commission as conveyed vide letter No. MPERC/D(T)/2329 dtd. 31.07.2012 (Order dated 30.07.3012).

Plan Related to Control Period:

The 12th Five Year Plan covers the period 2016-17, the remaining two years shall fall under the ambit of the 13th Five Year Plan which is on anvil. As the plan/s are basically need based plans linked to financial availabilities, shifting of certain works may occur, consequently change in plan size and period of execution may be reflected.

The anticipated plan for the control period after considering the requirements of a particular year and duly allowing for the impact of scaling down/ shifting of targets is as hereunder;

(₹In Crores)

S. No.	Particulars	MYT Period			Total (2016-17 to 2018-19)
		2016-17 (NB)	2017-18 (NB)	2018-19 (NB)	
1	400 KV Lines	143.43	187.07	297.57	**628.07**
2	220 KV Lines	297.24	435.12	354.91	**1087.27**
3	132 KV Lines	539.74	425.93	304.52	**1270.19**
	Total (Lines)	**980.41**	**1048.12**	**957**	**2985.53**
4	400 KV S/s	121.71	216.09	279.38	**617.18**
5	220 KV S/s	278.61	307.81	299.99	**886.41**
6	132 KV S/s	315.33	312.58	214.17	**842.08**
7	Misc. Works	42.76	0.01	108.19	**150.96**
	Total (S/S)	**758.41**	**836.48**	**901.73**	**2496.62**
	Total	**1738.82**	**1884.60**	**1858.73**	**5482.15**

Apart from the above an amount of Rs 510 Crores is envisaged for PPP works for FY 2018-19, which do not constitute a part of this petition. Based on above assumption, the year-wise fund requirement for the control period under consideration is given. It is *expected that certain funds may shift from one period to another due to shifting of certain works in subsequent years.*

The element-wise voltage-wise tabulation is given depicting the physical and financial plan components covering the MYT period under consideration. The tentative works to be carried out is given in TUT-16 of the Formats section of the petition.

The Physical programme for the period covering the Control Period is as tabulated below;

S. No.	Particulars	Yearwise Physical Programme			
		2016-17 (Need Based)	2017-18 (Need Based	2018-19 (Need Based)	Total for Control Period
A	**EHV Lines**				
1	400KV Lines	49	95	595	**739**
2	220KV Lines	483.6	303	1648	**2434.6**
3	132KV Lines	1425	1256	1023	**3704**
	Total CKT KMS	**1957.6**	**1654**	**3266**	**6877.6**
B	**MVA Addition**				
1	400KV	1460	0	1890	**3350**
2	220KV	2020	800	2880	**5700**
3	132KV	1488	1349	80	**2917**
	TotalMVA	**4968**	**2149**	**4850**	**11967**
C	**EHV Sub-stations**				
New	400KV Sub-stations	2	0	3	**5**
	220KV Sub-stations	6	4	11	**21**
	132KV Sub-stations	18	28	0	**46**
	Total Nos.	**26**	**32**	**14**	**72**
Addl	400KV Sub-stations	2	0	0	**2**
	220KV Sub-stations	7	0	0	**7**
	132KV Sub-stations	14	0	2	**16**
	Total Nos.	**23**	**0**	**2**	**25**
Aug	400KV Sub-stations	0	0	0	**0**
	220KV Sub-stations	0	0	0	**0**
	132KV Sub-stations	4	0	0	**4**
	Total Nos.	**4**	**0**	**0**	**4**
D	**New Bays**				
Addl	400KV Sub-stations	2	1	5	**8**
	220KV Sub-stations	12	6	28	**46**
	132KV Sub-stations	36	26	50	**112**
	Total Nos.	**50**	**33**	**83**	**166**

Works expected to be capitalized during control period:

All out efforts are being made by the Petitioner to get the works completed as per Plan. However, it has been experienced in past that certain works are to be shifted to later years on account of slippage in Generating units commissioning schedule to save idling of Transmission Assets. Certain slippage may also be due to problem of getting finance at reasonable rate of interest and lack of getting trained Turn-key contractors to complete the works in contracted time. Therefore, we may at this stage assume a percentage of Plan completion for Tariff purpose, which will be subject to True-up as per actual achievements during True-up exercise.

With reference to Para-4.1 and the previous MYT control period (i.e. FY 2013-14, 2014-15 & 2015-16) the plan position and completion situation is as under;

Rs in Crores

S No.	Particulars	2013-14	2014-15	2015-16*	Total of Previous MYT control period
1	Plan outlay	1124.35	1736.17	1968.93	4829.45
2	PPP Component	0.00	550.00	0.00	550
	Net	1124.35	1186.17	1968.93	4279.45
2	Work completed	916.52	904.48	1046.00	2867
	% Execution	81.52%	76.25%	53.13%	**66.99%**

** The plan outlay for 2015-16 is as per Approved Plan.*

Therefore, for Tariff purpose, we base our projections on the basis of 66.99% of the Plan provision.

For this MYT Tariff purpose works to be completed under PPP Scheme are excluded, as these will be financed by the Private Players, and separate Tariff for them will be adopted by the Commission under Section 63 of the Act.

S. No.	Particulars	Year wise Need B Investment for MYT Control period (Rs in Cr)			
		2016-17	2017-18	2018-19	TOTAL
1	400KV Lines	96.1	125.3	199.4	**420.8**
2	220KV Lines	199.1	291.5	237.8	**728.4**
3	132KV Lines	361.6	285.4	204.0	**851.0**
	Total(Lines)	**656.82**	**702.18**	**641.14**	**2000.14**
4	400KV Sub-stations	81.5	144.8	187.2	**413.5**
5	220KV Sub-stations	186.7	206.2	201.0	**593.8**
6	132KV Sub-stations	211.3	209.4	143.5	**564.1**
7	Misc. Works	28.6	0.0	72.5	**101.1**
	Total(Sub stations)	**508.09**	**560.40**	**604.11**	**1672.6**
	Total (Transmission)	**1164.92**	**1262.58**	**1245.25**	**3672.7**

Accordingly, in the same percentage, progress of physical achievements expected is tabulated hereunder;

S.No.	Particulars	Year wise Physical Programme			
		2016-17 (Need Based)	**2017-18 (Need Based)**	**2018-19 (Need Based)**	**Total for Control Period**
A	**EHV Lines**				
1	400KV Lines	32.83	63.64	398.62	**495.09**
2	220KV Lines	323.99	202.99	1104.07	**1631.05**
3	132KV Lines	954.67	841.45	685.35	**2481.48**
	Total CKT KMS	**1311.49**	**1108.09**	**2188.04**	**4607.62**
B	**MVA Addition**				
1	400KV	945	0	1260	**2205**
2	220KV	1353	536	1929	**3819**
3	132KV	997	904	54	**1954**
	Total MVA	**3295**	**1440**	**3243**	**7978**
C	**EHV Sub stations**				
New	400KV Sub-stations	1	0	2	**3**
	220KV Sub-stations	4	3	7	**14**
	132KV Sub-stations	12	19	0	**31**
	Total Nos.	**17**	**22**	**9**	**48**
Addl	400KV Sub-stations	1	0	0	**1**
	220KV Sub-stations	5	0	0	**5**
	132KV Sub-stations	9	0	1	**10**
	Total Nos.	**15**	**0**	**1**	**16**
Aug	400KV Sub-stations	0	0	0	**0**
	220KV Sub-stations	0	0	0	**0**
	132KV Sub-stations	3	0	0	**3**
	Total Nos.	**3**	**0**	**0**	**3**
D	**New Bays**				
Addl	400KV Sub-stations	1	1	3	**5**
	220KV Sub-stations	8	4	19	**31**
	132KV Sub-stations	24	17	33	**74**
	Total Nos.	**33**	**22**	**55**	**110**

It may kindly be perused that the fund required for works to be completed as referred to in the above table is/ shall be Tied-up. The Equity is expected to be invested by the State Government.

24. *Projection of Physical Assets :*

Based on Para-4.4 and True-up Petition for FY 2014-15, the cumulative Assets for each year of control period are projected hereunder;

S. No.	Particu-lars	Unit	As on 1.4.15 as per True-up Petition	Addition in FY 2015-16 As per MYT Order	As on 1.4.16	Expected Addition in FY 2016-17	As on 1.4.17	Expected Addition in FY 2017-18	As on 1.4.18	Expected Addition in FY 2018-19	As on 1.4.19
1	400 KV Lines	Ckt. KMs	3074.45	338	3412.45	32.83	3445.3	63.64	3508.92	398.62	3907.54
2	220 KV Lines	Ckt. KMs	11801.08	144	11945.08	323.99	12269	202.99	12472.06	1104.07	13576.13
3	132 KV Lines	Ckt. KMs	15319.45	174	15493.45	954.67	16448	841.45	17289.57	685.35	17974.93
4	400 KV Bays	No.	117	11	128	19	147	1	148	25	173
4	220 KV Bays	No.	574	21	595	75	670	28	698	113	811
6	132 KV Bays	No.	1820	14	1834	184	2018	194	2212	110	2322

Projection for O&M, Depreciation, Interest claim and RoE are done in subsequent chapters on the basis of above mentioned projections, conservatively based on the Transmission Plan covering the Control Period."

25. Provisions under Regulations

Regulation 17 of MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 (G-28 (III) of 2016) provides that,

"17.1. Capital cost for a Project shall include:

(a) the Expenditure incurred or projected to be incurred on original scope of work, including interest during construction and financing charges, any gain or loss on account of foreign exchange rate variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, up to the Date of Commercial Operation of the Project, as admitted by the Commission after prudent check, shall form the basis for determination of Tariff.

(b) Capitalized initial spares subject to the following ceiling norms:

(i) Transmission line- 1.00%
(ii) Transmission substation(Green Field)- 4.00%
(iii) Transmission substation(Brown Field)- 6.00%
(v) Series compensation devices and HVDS Station- 4.0 %
(vi) Communication Systtem- 3.5%
(vii) Gas Insulated Sub-stations- 5.0%

Provided that:

i where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above.

ii where the generating station has any transmission equipment forming part of the generating project, the ceiling norms for initial spares for such equipments shall be as per the ceiling norms specified for Transmission System under these Regulations.

(c) Additional capital expenditure determined under Regulation 18:

Provided that the assets forming part of the Project but not in use shall be taken out of the capital cost.

17.2. The capital cost admitted by the Commission after prudent check shall form the basis for determination of Tariff:

Provided that in case of individual transmission project, prudent check of capital cost may be carried out based on the benchmark norms specified by the Central Commission from time to time:

Provided further that in cases where benchmark norms specified by the Central Commission are not applied, prudent check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of Tariff:

Provided also that where the Transmission Service Agreement provide for ceiling of actual expenditure, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of Tariff:

Provided also that in case of the Existing Projects, the capital cost admitted by the Commission prior to 1.4.2016 and the additional capital expenditure projected to be incurred for the respective Year of the Tariff period during FY 2016-17 to FY 2018-19, as may be admitted by the Commission, shall form the basis for determination of capital cost.

Provided further that in cases where benchmarks norms have been specified, the transmission Licensee shall submit the reasons for exceeding the capital cost from benchmark norms to the satisfaction of the Commission for allowing cost *above benchmark norms.*

17.3. Scrutiny of the cost estimates by the Commission shall be with regard to the reasonableness of the capital cost, financing plan, interest during construction, use of efficient technology, and such other matters. The Commission may obtain expert advice as deemed necessary.

17.4. Restructuring of capital cost in terms of relative share of equity and loan component shall be permitted during the Tariff Period provided it does not affect Tariff adversely. Any benefit from such restructuring shall be passed on to long term intrastate Open Access customers of Transmission Licensee in a ratio as may be specified by the Commission."

26. Further, Regulation 20 of MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 (G-28 (III) of 2016) provides that:

Debt-equity Ratio

20.1 For a Project declared under commercial operation on or after 1.4.2016, the debt-equity ratio would be considered as 70:30 as on CoD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

i. where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of Tariff.

ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

iii. Any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt:equity ratio.

Explanation- *The premium, if any, raised by the Transmission Licensee, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the Project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilized for meeting the capital expenditure of the Transmission System.*

20.2 In case of the Transmission System including Communication System declared under commercial operation prior to 1.4.2016 debt-equity ratio allowed by the Commission for determination of Tariff for the period ending 31.3.2016 shall be considered.

20.3 In case the Transmission System including Communication System declared under commercial operation prior to 01.04.2016, but where debt:equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.03.2016, the Commission shall approve the debt:equity ratio based on actual information provided by the Transmission Licensee.

20.4 Any Expenditure incurred or projected to be incurred on or after 1.4.2016 as may be admitted by the Commission as additional capital expenditure for determination of Tariff and Renovation and Modernisation expenditure for life extension shall be serviced in the manner specified in Regulation 20.1.

27. Commission's Analysis

On preliminary scrutiny of the petition, vide commission's letter No 289 dated 09th February' 2016, MPPTCL was asked to inform the following:

(a) The basis of anticipation/ requirement of works mentioned in Para 4.3 of the petition.

(b) The reasons for considering the need based plan for FY 2016-17 beyond the limit of financial figures in the plan approved by the Commission for FY 2016-17.

(c) Details of work under anticipated plan for FY 2017-18 & FY 2018-19 are mentioned in Format TUT-18 wherein the name of various lending agencies like ADB, PFC, JICA and RE etc are mentioned. The amount and quantum of works actually tied up with the aforesaid lending agencies was sought. The source of equity for these works was also sought.

(d) MPPTCL was asked to explain the reasons for each and every proposed work in TUT-18 alongwith the cost benefit analysis.

(e) In sub-para 4.5 of the petition, MPPTCL had projected the physical assets based on the 12th Transmission plan for FY 2012-13 to FY 2016-17 by considering only 66.66% achievement of the Transmission Plan. It had further given an anticipated achievement in FY 2016-17. In view of the aforesaid, the actual physical and financial achievement of the 12th Plan as on date with expected projections upto 01st April' 2016 vis-a-vis the approved figures in 12th Plan was sought to arrive *at* the corrected projections

28. In response, MPPTCL vide its letter No. 2056 dated 11th March' 2016 submitted the following clarification: -

"(a) Apropos to the basis of anticipation / requirement of works as mentioned in Para 4.3 of the MYT Petition it is to be submitted for the kind consideration of the Hon. Commission that Govt. of MP has signed MOU with various IPPs for development of Power Plants in Madhya Pradesh for the next five year plan period. Similarly, Madhya Pradesh New and Renewable Energy Department (the MPNRED) has also registered Renewable Energy Projects of about 6000 MW in the state for RE development for the next five years. There shall be substantial availability of power from these Plants, Renewable Energy Projects and IPPs coming up in the State. It is also expected that due to availability of surplus power, there will be a substantial growth in the demand in the rural areas and in the housing & commercial sector in the urban areas, which is expected to substantially increase the load demand in Industrial, Urban and Rural areas.

Peak demand met in the State of MP during the financial year 2014-15 was 9832 MW and no system constraints in the transmission network of MP have been experienced in meeting this demand. As far as meeting the demand for financial year 2015-16 is concerned, the peak load season is from October to February and the maximum demand met so far has been 10841 MW on 25th December 2015. The net present availability of the State of Madhya Pradesh, including share of Madhya Pradesh from Central Sector Power Projects, Joint Venture Power Projects, IPP and other sources is around 15900 MW.

Objective of the works covered under in TUT-18 is to create infrastructure for evacuation of power available due to implementation of Renewable Energy Projects and IPPs projects and for catering the increased demand of the urban and rural areas in the State of Madhya Pradesh. Implementation of these works will help in evacuation and transmitting the increased power required by the Discoms for providing round-the-clock quality power supply to the consumers in different parts of the State efficiently without overloading of 400 KV, 220 KV & 132 KV lines and EHV Transformers. In addition to above, in order to provide 24x7 round the clock supply to the consumers in MP State and to meet out the present as well as future load demand and reliability of the system, the works covered under control period of Tariff are proposed to be taken up.

MPPTCL will be able to meet various parameters as defined in Grid Code issued by Madhya Pradesh Electricity Regulatory Commission after implementation of these works and the proposed 400 KV, 220 KV & 132 KV substations and associated lines will reduce overloading of the system. With the planned expansion in Transmission System, it is anticipated that the increased demand shall be met without any constraints.

(b) *Regarding the reasons for considering the need base plan for FY 2016-17 beyond the limit of financial figures in the plan approved by the Commission, it is to be submitted that the 12th Five Year Plan FY 2012-13 to FY 2016-17 was approved by the Hon'ble MPERC in the year 2012. This Plan was then prepared on the basis of load forecast, availability of financial resources and cost estimation of different works. Thereafter in financial year 2012-13, 2013-14, 2014-15, various works were executed as denoted in the* *table below. It can kindly be perused from the table that there is certain slippage in the achievement as against the plan approved by Hon'ble MPERC –*

Financial Year	**MPERC Approved Plan in ₹ Crores**	**Actual Achievement in ₹ Crores**	**Difference**
2012-13	*1359.56*	*825.25*	*534.31*
2013-14	*1124.35*	*916.52*	*207.83*
2014-15	*1736.17*	*1244.48 (Incl. PPP)*	*491.69*
Total	***4220.08***	***2986.25***	***1233.83***

It is further submitted that due to slippage during 2012-13 to 2014-15, some of the works have been shifted to 2016-17 and therefore the Plan for 2016-17 has been increased from earlier approved plan amount of ₹ 1181.21 Crores to ₹ 1738.82 Crores i.e. by ₹ 557.61 Crores.

(c) The financial institution wise abstract alongwith source of Equity and details of work which are tied up and to be tied up with physical targets are submitted .

(d) The works proposed to be carried out during the control period have been detailed in TUT-18 of the Petition, the route length and transformation capacity of which is summarized as below:-

S. No.	**PARTICULARS**	**YEARWISE NEED BASED PHYSICAL PROGRAMME**		
		2016-17	**2017-18**	**2018-19**
A	**EHV LINES**			
1	400KV Lines	32.83	63.64	398.62
2	220KV Lines	323.99	202.99	1104.07
3	132KV Lines	954.67	841.45	685.35
	TOTAL CKT KMS	**1311.49**	**1108.09**	**2188.04**
B	**MVA Addition**			
1	400KV	945	0	1260
2	220KV	1353	536	1929
3	132KV	997	904	54
	TOTAL MVA -	**3295**	**1440**	**3243**

The reasons of the works proposed are as they are required for power evacuation related to commissioning of new generation plants such as MPGenco's, Shri Singaji Stage-II (2x660MW) unit, Central Sector Projects like Vindhyachal Stage-V, Khargone NTPC, Barethi NTPC, Gadarwara NTPC etc. In addition to these IPPs & Renewable Energy Projects are anticipated during the next five year plan.

Consequent to operation of these plants, there also shall be substantial availability of power from these upcoming generating projects in the State. It is also expected that due to availability of increased power, there will be a substantial growth in the demand in both rural areas & in domestic and commercial sector in the urban areas. Considering load growth and consequent increase in demand, it is also envisaged that it will be essential to increase transmission capacity of the State transmission network by way of strengthening and up-gradation of the existing system.

The Cost Benefit Analysis etc. for the works proposed in TUT-18 is enclosed. The same is summarized as hereunder;

A.	***Load Conditions***	*Figures*
1	*Anticipated Peak Load of Madhya Pradesh System in MW (including losses) after implementation of project [Year 2018-19]*	*15734.610*
B.	***400KV & 220KV Projects & Interconnection Lines***	
1	*Peak load Loss (%) before implementation of the project [Year 2014-15]*	*3.10%*
2	*Peak load Loss (%) after implementation of the project [Year 2018-19]*	*2.28%*
3	*Saving in Peak Load losses (%) [(1) - (2)]*	*0.82%*
4	*Saving in Peak Load losses (MW) [A(1)xB(3)]*	*129.024*
5	*Annual Units Saved (MkWh) at 70% LF [B(4) x 8760 x 0.532 / 1000]*	*601.292*
6	***Cost of energy saved per annum at Rs.5.29 per unit (Rs.Lakh) [B(5) x 5.29 x 10]***	***31808.358***
C.	***132KV Substations and associated lines***	
1	*Total Annual Power Saved (MW) due to 63 individual 132KV Substations*	*127.143*
2	*Annual Units Saved (MkWh) at 70% LF [C(1) x 8760 x 0.532 / 1000]*	*592.528*
3	***Cost of energy saved per annum at Rs. 5.29 per unit (₹ Lakh) [C(2) x 5.29 x 10]***	***31344.706***
D.	***Revenue from Additional Transmission Capacity***	
1	*Increase in Transformation Capacity at 33KV (MVA)*	*4956.000*

2	*Annual additional units served (MkWh) at 80% diversity factor & 0.9 power factor [(1) x 0.8 x 0.9 x 8760 / 1000]*	*31258.483*
3	***Revenue due to additional energy served per annum at ₹ 0.256 per unit (₹ Lakh) [D(2) x 0.256 x 10]***	***80021.717***
E.	***Total additional revenue earned per annum due to proposed transmission projects (₹Lakh) [B(6)+C(3)+D(3)]***	***143174.781***

(e) The physical and financial achievement for the 12th plan (actual for 2012-13 to 2014-15) and anticipated for FY 2015-16 upto March 2016) is enclosed respectively."

29. Vide commission's letter dated 528 dated 31st March' 2016, MPPTCL was further asked to inform the following regarding Cost Benifit and financial Analysis:

(a) The percentage transmission loss derived from the study (Annexure I-A) is 3.10% and 2.28% for FY 2014-15 & FY 2018-19 respectively whereas, MPPTCL has already achieved transmission loss of 2.82% in FY 2014-15.

(b) The cost of energy is considered @ Rs. 5.29 per unit in the Cost Benefit Analysis (Annexure I-B). The basis of the aforesaid assumption was sought.

(c) Annual units saving is calculated at 70% load factor for 132 kV sub-stations and associated lines. The reasons for assuming 70% load factor was not mentioned.

(d) The reasons for considering revenue from additional transmission capacity at 33 kV (Sub-Transmission Network) considering 80% diversity factor and revenue on account of additional energy served per annum @ Rs. 0.256 per was also not clear.

(e) The reason for considering Equity below 30% in case of PFC-II Loan, JICA-I Loan and RE-I (KFW) Loan was sought.

(f) The rate of interest considered in Annexure II for JICA and ADB loans is much below the rate of interest mentioned in Page 8 of its reply filed by MPPTCL. The reasons for difference in the rate of interest were sought.

(g) In financial analysis of all proposed transmission projects (in Annexure-III), principal repayment is shown as NIL during the first three years and the amount of interest is shown only upto FY 2033-34 whereas, the moratorium period is shown as different for various lending agency.

(h) The basis and reason for considering O&M charges only in financial analysis for transmission projects was sought.

(i) The loan agreements/ documents indicating terms and conditions, moratorium period and the applicable rate of interest in respect of each lending agency like PFC, ADB, JICA and

REC etc tied up for the proposed transmission projects were also sought from MPPTCL.

(j) The reasons / constraints faced by it for shortfall in the last Five years' plan approved by the Commission for FY 2012-13 to FY 2016-17.

30. Vide its submission dated 13th April' 2016, MPPTCL informed the following:

"(a) Actual transmission losses of 2.82% achieved by MPPTCL in the financial year 2014-15 are the average annual energy losses for a period of one year whereas the loss of 3.10% derived from the studies for 2014-15 are the peak power losses corresponding to the peak load of 11490.89 MW which is bit higher than the average annual energy losses. The average annual energy loss is derived from the varying demand of the system throughout the year and is always less than peak load losses. In view of this, peak load loss and annual energy loss can not be directly correlated with each other.

(b) The cost of energy @ ₹ 5.29 per unit in the Cost Benefit Analysis calculation is considered from Table No. 92 (Page No.122) of the Aggregate Revenue Requirement and Retail Supply Tariff order for FY 2015-16. The same has been enclosed herewith as for reference.

(c) As per the prevailing practices, in order to derive average annual energy from the saving in peak power losses the load factor of 70% is considered for calculation of Loss Load Factor. The loss load factor is derived as per the formula given hereunder:-

$$\mathbf{LLF = (0.2xLF) + (0.8xLF^2)}$$

Where, LLF is Loss Load Factor
LF is Load Factor
The load factor of 70% has also been accepted by the Financial Lending Agencies.

(d) Here it is to be submitted that as all the transformers do not operate at peak load simultaneously an 80% diversity factor for calculation of additional energy served has been considered. Further, with the advent of large number of Renewable Energy Plants coming up in the State, which are normally connected at 132 KV voltage level, it is assumed that the additional transmission capacity so developed shall be used by them. As per Hon'ble Commission order dated 04.02.2013, whereby ₹ 0.256 as transmission charges per unit has been fixed for Non-conventional generators connected at 132 KV level or above for supply of power through open access, thus the same has been

considered. The relevant portion of Para 3.134, Table No. 86 (Page No. 72) of the Transmission MYT order for FY 2013-14 to FY 2015-16 issued on dated 04.02.2013 is enclosed.

(e) *The equity considered under these loans has been shown to be below 30% as the same was considered during the time of sanctioning of the said schemes. However, it is to be submitted for consideration that the infusion of equity by the State Government is an ongoing process, it may please be perused that the Government equity may reach the 30% mark. It is also to be submitted that the same will be firmed up during the True-up process.*

(f) *The rate of interest as shown in Annexure(II) of the Cost Benefit Analysis shows the rate of interest for JICA and ADB Loan which is being charged by the funding agencies from the Govt. of India. While the rate of interest as mentioned in para 8 of the reply dated 11.03.2016 is the rate which includes the additional interest charged by GoMP and the LIBOR rate as well as risk of currency exchange rate variations. It is also to be submitted that the same are of plan in nature and can only be firmed during the True-up stage.*

(g) *In the financial analysis of proposed transmission project the principle repayment is shown as NIL because the construction period of the works from the date of sanction of loan is considered as 3 years and during the construction period no principle amount is repaid to the lending agency. The Principal amount is paid up by the 12th year thus interest becomes zero by that time.*

(h) *As, O&M is the only charge which continues for the full life of the Asset, thus, O&M charges have been considered after completion of the project which shall be incurred by MPPTCL and recovered through the Tariff.*

(i) *The loan agreements executed with lending agency like PFC, ADB, JICA and REC is enclosed in which the terms and conditions of the loan, moratorium period and applicable rate of interest of the loan is mentioned."*

(j) *"Regarding the observation raised by Hon'ble Commission in this regard, it is to be submitted for kind consideration that the following causes restrained the Company to achieve the 100% mark :-*

i. Slackness of Contractors and other related problems
ii. Right Of Way problems
iii. Release of finance by Lending Agency
iv. Change in Load/ Generator parameters
v. Various Legal issues."

31. Based on the Plan layout and works completed by MPPTCL during FY 2013-14 to FY 2015-16, the petitioner projected the addition to GFA and addition in the network length only to the extent of 66.99% of its plan provision. In order to assess the correct projections of addition to GFA and the network length in each year of the control period, the Commission has reviewed the actual GFA additions in each year of the last control period from the past true up orders passed by the Commission to get into the actual capacity of the petitioner to execute its own proposed plan and to capitalize the same in its books of accounts. The aforesaid exercise is done to arrive at realistic figure of GFA projections in each year of the next control period. The following status is observed:

(Amount ₹ in Crores)

Year	**Details of GFA Addition**		
	As claimed by the MPPTCL for respective year in its petition/ MYT petition	**As considered by the Commission in past order / MYT Order**	**Actual GFA addition as per True-up Orders issued by the Commission**
FY 2012-13	672.28	489.98	316.80
FY 2013-14	754.88	434.20	649.01
FY 2014-15	994.56	434.20	591.31
Total	2421.72	1358.38	1557.12
Average			**519.04**

In this Order also, the Commission has followed its earlier approach of considering GFA (net of Consumer contribution) for tariff purpose and the average actual addition to GFA of the above three years is considered as the projected GFA addition in each year of the next control period subject to true up. Accordingly, the GFA addition of **₹ 519.04 Crores** is considered by the Commission for each year in this order.

Based on the above, the year-wise GFA additions (net of Consumer contribution on new & existing assets) as considered by the Commission for FY 2016-17 to FY 2018-19 in this order are as given below:

(Amount ₹ in Crores)

GFA AS ON 31ST MARCH OF EACH YEAR AND GFA ADDITION DURING EACH YEAR			
Year / date	**GFA**	**GFA Addition during the year**	**Remarks**
31/3/2012	5250.66	204.75	Actual figures as per true up orders of each year
31/3/2013	5567.46	316.8	
31/3/2014	6216.47	649.01	
31/3/2015	6807.78	591.31	
31/3/2016	7326.82	519.04	Addition to GFA as per average of FY2012-13 to FY2014-15
31/3/2017	7845.86	**519.04**	Projected addition to GFA based on average growth in GFA based on true up orders of last three years
31/3/2018	8364.90	**519.04**	
31/3/2019	8883.94	**519.04**	

32. As per the provisions under Regulations, the Commission has considered the source of funding as 70 % from Loan and 30% from Equity. Accordingly, the loan and equity components are considered as under:

(Amount ₹ in Crores)

Year	**Loan**	**Equity**	**Total GFA Addition**
FY14-15*	413.92	177.39	591.31
FY15-16*	363.33	155.71	519.04
FY16-17	363.33	155.71	519.04
FY17-18	363.33	155.71	519.04
FY18-19	363.33	155.71	519.04

(* Note: The figures for FY 2014-15 & FY 2015-16 are indicated for pro-forma calculation purpose only and not for approval of Tariff for those years)

The transmission tariff up to 31/03/2016 has already been determined by the Commission vide its order dated 02nd April' 2013. The figures for present control period of FY 2016-17 to FY 2018-19 are considered for determination of tariff in this order. However, the actual capitalization as per the Audited Financial Statements of each year shall be considered appropriately while undertaking true-up exercise for the respective year in accordance with the applicable Regulations.

Operation & Maintenance (O&M) Expenses

33. Petitioner's Submission

The petitioner broadly submitted the following:

"The O&M expenses comprise of Employee cost, Repairs & Maintenance (R&M) cost and Administrative & General (A&G) cost. The Norms for O&M Expenses have been fixed on the basis of Circuit kilometers of Transmission lines and number of bays in Sub-station. These Norms exclude Pension, Terminal Benefits, incentive and arrears to be paid to employees, taxes payable to the Government and fee payable to MPERC. The Petitioner shall claim the taxes payable to the Government, fees to be paid to MPERC and any arrears paid to employees separately. The Norms for O&M expenses per 100 Ckt-km and per bay have been prescribed in Para 37.1 of the Regulations as under;

Norms for O&M expenses per 100 Ckt. km and per bay

S. No.	Particulars	2016-17	2017-18	2018-19
	LINES -	₹Lacs / 100 Ckt. KM / Annum		
1	400 KV Line	32.00	33.32	34.70
2	220 KV Line	29.88	31.11	32.40
3	132 KV Line	31.44	32.74	34.10
	BAYS -	₹Lacs / Bay / Annum		
1	400 KV Bay	09.58	09.98	10.39
2	220 KV Bay	11.12	11.58	12.06
3	132 KV Bay	11.16	11.62	12.10

The total allowable O&M expenses for the Transmission Licensee shall be calculated by multiplying the average number of bays and 100 Ckt-km of line length for the Year with the applicable norms for O&M expenses per bay and per 100 Ckt-km respectively.

Projections of EHV Lines and Sub-stations:

Projections of EHV Lines and Sub-stations additions have been made under Para 4.5 as per Transmission Plan. The Petitioner has filed the 'True-up' Petition of FY 2014-15, in which the actual EHV Lines and Sub-stations have been given in the position of 31.03.2015, which is taken as actual Assets as on 01.04.2015. The projections made for FY 2015-16 are as per the MYT Order dated 02.04.2013. The projections for the Control Period under consideration are based on the value thus obtained and projected accordingly.

The works which are expected to be commissioned till 31.03.2019 are summarized in in this Petition. The projections of EHV Lines and number of bays in EHV Sub-stations given in the table under Para 4.5 of Transmission Plan have been taken on the basis of

66.99% (Ref. Para 4.4) of Plan provisions. The basis of progress percentage, is founded on historical progress data as mentioned in Para 4.4.

Assets during Control Period:

Based on the table given in Para 4.5 of Transmission Plan and the progress for 2015-16 as per MYT Order dated 02.04.2013 the average length of Lines and average numbers of bays expected during the years of control period are given in following table;

Voltage	Length of Line in Ckt : km as on					Average Length of Line during		
	1.4.15	1.4.16	1.4.17	1.4.18	1.4.19	2016-17 (3+4)/2	2017-18 (4+5)/2	2018-19 (5+6)/2
1	2	3	4	5	6	7	8	9
400 KV	3074.45	3412.45	3445.28	3508.92	3907.54	3428.9	3477.1	3708.2
220 KV	11801.1	11945.1	12269.1	12472.1	13576.1	12107.1	12370.6	13024.1
132 KV +66 KV	15319.5	15493.5	16448.1	17289.6	17974.9	15970.8	16868.8	17632.3
TOTAL	**30195.0**	**30851.0**	**32162.5**	**33270.6**	**35458.6**	**31506.7**	**32716.5**	**34364.6**

Voltage	Number of Bays in nos. as on					Average Number of Bays during		
	01.04.15	01.04.16	01.04.17	01.04.18	01.04.19	2016-17 (3+4)/2	2017-18 (4+5)/2	2018-19 (5+6)/2
1	2	3	4	5	6	7	8	9
400 KV	117	128	147	148	173	138.0	148.0	161.0
220 KV	574	595	670	698	811	633.0	684.0	755.0
132 KV +66 KV	1820	1834	2018	2212	2322	1926.0	2115.0	2267.0
TOTAL -	**2511.0**	**2557.0**	**2835.0**	**3058.0**	**3306.0**	**2697.0**	**2947.0**	**3183.0**

O & M Claim for Control Period:

Based on the 'O&M Norms' referred in Para 5.1 above, and the average length of EHV Lines and number of Bays, during the three years of control period, O&M expenditure claim for the control period is tabulated hereunder;

(Amount ₹ in Lacs)

S N	LINES	2016-17			2017-18			2018-19		
		Qty.	Norms	Amount	Qty.	Norms	Amount	Qty.	Norms	Amount
		(Ckt.KM)	Per 100 cKM	(3x4)/100	(Ckt.KM)	Per 100 cKM	(6x7)/100	(Ckt.KM)	Per 100 cKM	(9x10)/ 100
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	400 KV	3428.86	32.00	1097.24	3477.10	33.32	1158.57	3708.23	34.70	1286.76
2	220 KV	12107.07	29.88	3617.59	12370.56	31.11	3848.48	13024.09	32.40	4219.81
3	132 KV incl.66 kv	15970.79	31.44	5021.22	16868.85	32.74	5522.86	17632.25	34.10	6012.60
A	**TOTAL -**	**31506.72**	**-**	**9736.05**	**32716.51**	**-**	**10529.91**	**34364.58**	**-**	**11519.16**
S N	**BAYS**	**2016-17**			**2017-18**			**2018-19**		
		Qty.	**Norms**	**Amount**	**Qty.**	**Norms**	**Amount**	**Qty.**	**Norms**	**Amount**
		(Nos)	**Per Bay**	**(3x4)**	**(Nos)**	**Per Bay**	**(6x7)**	**(Nos)**	**Per Bay**	**(9x10)**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	400 KV	138.00	9.58	1322.04	148.00	9.98	1477.04	161.00	10.39	1672.79
2	220 KV	633.00	11.12	7038.96	684.00	11.58	7920.72	755.00	12.06	9105.30
3	132 KV +66 KV)	1926.00	11.16	21494.16	2115.00	11.62	24576.30	2267.00	12.10	27430.70
B	**TOTAL -**	**2697.00**	**-**	**29855.16**	**2947.00**	**-**	**33974.06**	**3183.00**	**-**	**38208.79**
GRAND TOTAL (A+B)		**-**	**-**	**39591.21**	**-**	**-**	**44503.97**	**-**	**-**	**49727.95**

It is prayed to allow O&M expenses for control period as under-

(i) FY 2016-17 - ₹ 395.91 Crores
(ii) FY 2017-18 - ₹ 445.04 Crores
(iii) FY 2018-19 - ₹ 497.28 Crores

The following may please be allowed in addition to the above amount as they were not a component during the formulation of Norms:-

a) The impact of revision in pay structure & arrears there of arising out of requirement of the orders of the Seventh Pay Commission.

b) The additional amount on account of grant of Third Higher Pay Scale to employees who have completed 30 years of Service from 1st September 2015 may please be permitted. As directed by the GoMP, a copy of the State Governments letter dated 09.11.2015 in this regard is placed. for intimation and thus prayed for allowing the requisite amount additionally. Order of MPPMCL in this regard is enclosed."

34. **Provisions under Regulations**

Regulation 27 of MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 (G-28 (III) of 2016) provides that,

"27.1 Operation and Maintenance Expenses shall be determined for the Tariff period based on normative O&M expenses specified by the Commission in these Regulations.

27.2 On examination of the details gathered from MPPTCL regarding transmission network parameters being considered for calculation of normative expenses and actual expenditure from FY 2010-11 to FY 2013-14 in respect of Employee expenses, Repair and Maintenance expenses and Administrative and General expenses, it was found that the normative O&M expenses allowed in the last control period was higher than the actual expenditure incurred by MPPTCL. The actual O&M expenses had been about 88% of the normative O&M expenses.

27.3. The cost components for employee expenses, repair & maintenance expenses and administrative and general expenses are considered as per Regulations 37.1 of these Regulations. The Operation and Maintenance expenses including employee expenses, repair and maintenance expenses, and administrative and general expenses are derived by considering the average of these expenditures for past four years (i.e. FY 2010-11 to FY 2013-14) as per Annual Audited Accounts. The average expenditure of the aforesaid four years is considered as base opening figure for FY 2012-13. Thereafter, the figures of O&M expenditure are derived upto FY 2015-16 by applying the annual escalation rate specified for the respective year in the applicable Regulations.

27.4. The O&M expenses for the subsequent years shall be determined by escalating the expenses of the base year i.e. FY 2015-16, as determined above, with the escalation factor @ 4.14% as considered by the Central Commission for Transmission Licensees in its Tariff Regulations, 2014 for the respective financial years to arrive at permissible O&M expenses for each year of the Control Period.

27.5. The employee expenses considered in the above Operation and Maintenance expenses are excluding the pension and other terminal benefits.The Commission has notified MPERC (Terms and Condition for for allowing Pension and Terminal Liabilities of Personal of Board and Successor Entities) Regulations, 2012 (G-38 of

2012) on 20th April, 2012. The expenses towards pension and terminal liabilities will be allowed as per the provisions of aforesaid Regulations.

27.6. Increase in O&M charges on account of war, insurgency or changes in laws, or like eventualities where the Commission is of the opinion that an increase in O&M charges is justified, may be considered by the Commission for a specified period.

27.7. Any saving achieved by a Transmission Company in any Year shall be allowed to be retained by it. The Transmission Company shall bear the loss if it exceeds the targeted O&M expenses for that Year."

35. Regulation 37 of MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 (G-28 (III) of 2016) provides that,

37.1 The O&M expenses comprise of employee cost, repairs & maintenance (R&M) cost and administrative & general (A&G) cost. The norms for O&M expenses have been fixed on the basis of circuit kilometers of transmission lines and number of bays in substation. These norms exclude Pension, Terminal Benefits, incentive and arrears to be paid to employees, taxes payable to the Government and fee payable to MPERC. The Transmission Licensee shall claim the taxes payable to the Government, fees to be paid to MPERC and any arrears paid to employees separately as actuals. The claim of pension and terminal benefits shall be dealt-with as per Regulation 27.5. The norms for O&M expenses per 100 ckt-km and per bay shall be as under:

Norms for O&M expenses per 100 Ckt. km and per bay

S. No.	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
	Lines	**Rs. Lakh / 100ckt km / annum**		
1.	400 kV Lines	32.00	33.32	34.70
2.	220 kV Lines	29.88	31.11	32.40
3.	132 kV Lines	31.44	32.74	34.10
	Bays	**Rs. Lakh / Bay / annum**		
1.	400 kV Bay	09.58	09.98	10.39
2.	220 kV Bay	11.12	11.58	12.06
3.	132 kV Bay	11.16	11.62	12.10

37.2 The total allowable O&M expenses for the Transmission Licensee shall be calculated by multiplying the average number of bays and 100 ckt-km of line length for the Year with the applicable norms for O&M expenses per bay and per 100 ckt-km respectively. In support of its claim for allowable O&M expenses, the Licensee shall submit before the Commission, the actual or projected circuit kilometers of line lengths and number of bays for each voltage level separately for each Year of the Tariff Period as the case may be.

37.3 The terminal benefits shall be paid as provided in Regulation 27.5."

36. Commission's Analysis

The actual information of lines and bays as on 01/04/2015 has been verified with the details filed by MPPTCL in its Transmission Tariff true-up petition for FY 2014-15 and also from the annual reports being submitted by the Reporter of Compliance of MPPTCL to the Commission.

37. Vide letter No. 772 dated 07th May' 2016, MPPTCL was asked to inform the actual figures for addition to EHV lines and sub-station bays completed by MPPTCL as on 31st March' 2016 so as to arrive at the more realistic figures for computation of O&M expenditure in each year during the control period in the subject petition.

38. Vide letter No. 04-01/CRA/F-100/3723 dated 11th May' 2016, MPPTCL has submitted the following figures as on 31st March' 2015, added during FY 2015-16 and the figures as on 31st March' :

S. No.	Particulars	Position as on 31.3.2015	Added during 2015-16	Position as on 31.3.2016
1.	400 KV Lines	3074.45	0.00	3074.45
2.	220 KV Lines	11801.08	338.68	12139.76
3.	132 KV Lines	15319.45	830.42	16149.87
1.	400 KV Bays	117	4	121
2.	220 KV Bays	574	32	606
3.	132 KV Bays	1820	166	1986

39. Considering the above figures on record, the Commission has considered the network length & bays informed above (as on 31.03.2016) as the base opening figures as on 01.04.2016. As mentioned in the chapter on Capital cost and capital structure, the Commission has considered the GFA addition based on the average of actual GFA addition in the past three years true up orders. The percentage of the aforesaid additions to GFA (considered for each year in this order) to the GFA claimed in the petition is worked out as given below:

Financial Year	Year-wise need based investment as Claimed by MPPTCL in its petition (₹ Crore)	Year-wise projected GFA addition considered in this order (₹ Crore)	Percentage of projected GFA addition considered in this order to the projected GFA addition claimed in the petition (%)
2016-17	1164.92	519.04	44.56
2017-18	1262.58	519.04	41.11
2018-19	1245.25	519.04	41.68
Total	**3672.75**	**1557.12**	42.40

40. In line with the same principles adopted in the petition, the Commission has applied the above percentage on the projected physical achievements (additions) filed by MPPTCL for the purpose of estimating addition to lines and bays and allowing O&M expenses in this order. The details of EHV lines and Bays considered are as under:

S. No.	Particulars	Unit	Actual network as on 1.4.16 as submitted by MPPTCL	Expected Addition in FY	As on 1.4.17	Expected Addition in FY	As on 1.4.18	Expected Addition in FY	As on 1.4.19
				2016-17		**2017-18**		**2018-19**	
1	400 KV Lines	Ckt. KMs	3074.45	13.92	3088.37	26.98	3115.35	169.01	3284.37
2	220 KV Lines	Ckt. KMs	12139.76	137.37	12277.13	86.07	12363.20	468.13	12831.33
3	132 KV Lines	Ckt. KMs	16149.87	404.78	16554.65	356.77	16911.42	290.59	17202.01
4	400 KV Bays	No.	121	8.06	129	0.42	129	10.60	140
5	220 KV Bays	No.	606	31.80	638	11.87	650	47.91	698
6	132 KV Bays	No.	1986	78.02	2064	82.26	2146	46.64	2193

Voltage	Average Length of Line during						
					2016-17	**2017-18**	**2018-19**
	1.4.16	**1.4.17**	**1.4.18**	**1.4.19**	**(2+3)/2**	**(3+4)/2**	**(4+5)/2**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
400 KV	3074.45	3088.37	3115.35	3284.37	3081.41	3101.86	3199.86
220 KV	12139.76	12277.13	12363.20	12831.33	12208.45	12320.17	12597.26
132KV+ 66KV	16149.87	16554.65	16911.42	17202.01	16352.26	16733.04	17056.72
TOTAL -	**31364.08**	**31920.15**	**32389.98**	**33317.71**	**31642.12**	**32155.065**	**32853.842**

Voltage	**Average Number of Bays during**						
					2016-17	**2017-18**	**2018-19**
	1.4.16	**1.4.17**	**1.4.18**	**1.4.19**	**(3+4)/2**	**(4+5)/2**	**(5+6)/2**
1	2	3	4	5	6	7	8
400 KV	121	129	129	140	125.03	129.27	134.78
220 KV	606	638	650	698	621.90	643.74	766.00
132 KV + 66 KV	1986	2064	2146	2193	2025.01	2105.14	2169.59
TOTAL	**2713**	**2831**	**2925**	**3031**	**2772**	**2878**	**3070**

S. No.	**Voltage**	**2016-17**			**2017-18**			**2018-19**		
		Qty. (Ckt.KM)	**Norms Per 100 KM**	**Amount (3x4)/100**	**Qty. (Ckt.KM)**	**Norms Per 100 KM**	**Amount (6x7)/100**	**Qty. (Ckt.KM)**	**Norms Per 100 KM**	**Amount (9x10)/100**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	**400 KV Line**	**3081.41**	**32**	**986.05**	**3101.86**	**33.32**	**1033.54**	**3199.86**	**34.7**	**1110.35**
2	**220 KV Line**	**12208.45**	**29.88**	**3647.88**	**12320.17**	**31.11**	**3832.80**	**12597.26**	**32.4**	**4081.51**
3	**132 KV Line (incl. 66 KV)**	**16352.26**	**31.44**	**5141.15**	**16733.04**	**32.74**	**5478.40**	**17056.72**	**34.1**	**5816.34**
A	**TOTAL -**	**31642.12**	**-**	**9775.09**	**32155.06**	**-**	**10604.93**	**32853.84**	**-**	**11008.21**
4	**400 KV Bay**	**125**	**9.58**	**1197.77**	**129**	**9.98**	**1290.09**	**135**	**10.39**	**1400.36**
5	**220 KV Bay**	**622**	**11.12**	**6915.53**	**644**	**11.58**	**7454.46**	**766**	**12.06**	**9237.96**
6	**132 KV Bay (incl. 66 KV)**	**2025**	**11.16**	**22878.00**	**2105**	**11.62**	**25308.36**	**2170**	**12.1**	**27902.60**
B	**TOTAL -**	**2772**	**-**	**30991.30**	**2878**	**-**	**34052.918**	**3070**	**-**	**38540.92**
GRAND TOTAL (A+B) -		**-**	**-**	**40766.38**		**-**	**44657.85**		**-**	**49549.13**

41. Based on the above, the O&M expenses of **₹ 407.66 Cr, ₹ 446.57 Cr and ₹ 495.49 Cr** are allowed for FY 2016-17,FY2017-18 and FY 2018-19 respectively in this Order. The actual additions of transmission system network shall be considered in the true-up exercise of the respective year after prudence check.

Terminal Benefit Expenses

42. Petitioner's submission

The petitioner broadly submitted the following:

"*Hon'ble Commission notified the MPERC(Terms & Conditions for allowing Pension & Terminal Benefit liabilities of personnel of the Board and successor Entities 2012) (G-38 of 2012) on 20th April 2012, prescribing the funding of Pension and Gratuity of Pensioners of various categories through ARR of different unbundled entities of the*

Board. Accordingly, the Petitioner (MPPTCL) is required to make provisions in its ARR for the following categories;

i. *For the Pensioners, retired up to 01.06.2005 from services of MPSEB, Pension liabilities shall form part of ARR of MPPTCL (Petitioner).*
ii. *For the Pensioners retired after 01.06.2005, the liabilities corresponding to their service in Board (i.e. up to 01.06.2005) are to be contributed by MPPTCL.*
iii. *Remaining liabilities against S. No. (ii) above for the persons retired after 01.06.2005 for Pensioners of MPPTCL, MPPMCL.*
iv. *Provisioning for future service for the employees of MPPTCL, MPPMCL.*
v. *For contribution to be made for Pension and Terminal Benefit Trust Fund for past services till 31.05.2005 based on Actuarial Analysis.*

Present Practice & removal of difficulties through Pay As You Go

i. *At present the actual Pension and Terminal Benefits of all the Companies i.e. unbundled entities of MPSEB, are being allowed in the MYT/ True-up of MPPTCL.*

ii. *M.P. Power Transmission Company Ltd., Jabalpur has filed the petition for allowing billing / recovery of Terminal Benefit Expenses for FY 2015-16 on "Pay as You Go" principle as enunciated in Para 3.63 of MYT Order 02.04.2013 in respect of control period FY 2013-14 to FY 2015-16, read with Para 3.86 of Retail Supply Order dated 17.4.2015, on the basis of projected figures of FY 2015-16, subject to true-up with a view to remove difficulties in timely payment of pension etc. to the retired personnel. MPPTCL prayed for approving and allowing the petitioner to bill its Long Term Open Access Consumers and to recover the actual Amount paid under the head of Terminal Benefits on monthly basis in the ratio of the Transmission capacity allocated.*

iii. *Hon. Commission vide its Order dated 12.08.2015 allowed MPPTCL to bill and recover the difference amount of Rs. 508.27 Crores over and above the Annual Revenue Requirement determined by the Commission for FY 2015-16 without any interest in equal monthly installments during FY 2015- 16.*

iv. *Hon. Commission may kindly consider that in line with the above and as per the spirit of Pay As You Go principle may permit MPPTCL to revise the amount in lieu of actual payments made under the head of Terminal Benefits on monthly basis during the control period under consideration.*

Actuarial Analysis:

The last 'Actuarial Analysis' was conducted in the position of 31.03.2009, the report of which has been submitted before Hon'ble Commission on 5th March 2010. The actual Pension outgo during previous years has been quite high as compared to projections in the Actuarial Analysis. However, certain ratios and percentage have been used in bifurcation and assessment of Terminal Benefit liabilities.

Criteria & Assumptions for estimation of Terminal Benefit Liabilities :

The estimation of Terminal Benefits has been done considering following assumptions;

i. *The estimation of figure is based on the requirement received from all companies on account of pension & Gratuity from April'15 to October'15.*

ii. *Effect of proposed seventh pay revision has **not** been taken.*

iii. *No. of pensioners prior to 31.05.2005 is 16306 (nos.) (pensioners + family pensioners) & post 31.05.2005 is 23145 (nos.). These numbers has been taken from monthly requirement for the month of Oct 2015 from all companies. The no. of exits in future year has been taken from the data provided by all companies to GPF section.*

iv. *In the absence of exact data the average pension for the pensioner's up to 31.05.2005 has been estimated as Rs.178772 per pensioner per annum for FY 2015-16. The basis for average estimation has been made based on actual pay out for the FY 2005-06 as intimated by the successor companies to TBT. The detail calculation is given. The amount of pension for the pensioners up to 31.05.2005 had been estimated on the basis of number of pensioners as on 31.05.2005 multiplied by average pension.*

v. *Assumption of average service is taken from actuary report of 2009 for estimation of payout on account of MPSEB service & company service.*

vi. *The no. of exits per annum is taken from the data provided by all companies to GPF section.*

vii. *Weighted average growth rate of D.A. is taken as 9% per annum. Increase in D.A. is estimated as 6% for every 6 month based on current trend. Hence, the weighted average rate of D.A. has been estimated by using the formula : {((6*6)+(12*6))/12}.*

viii. *Pension amount includes Pension & Family Pension.*

ix. *Gratuity for respective years is calculated on the basis of no. of exits per annum. (Based on data provided by all companies to TBT) & amount of estimated payout for FY 2015-16 is duly accounted for by increase in D.A @ 6 % twice subsequently and cumulative increase of 9 % per annum.*

Computation of Liabilities:

*Based on above assumption the following are the estimations for **Pension and Gratuity** Liabilities:-*

Rs in Crores

S. N.	Particulars		2016-17	2017-18	2018-19
1	***Estimated PENSION Liability to be Recovered through MPPTCL ARR***		***846.71***	***939.36***	***1040.35***
	i	*Estimated amount of pension for Pensioners retired prior to 31.05.2005*	*303.49*	*315.46*	*327.44*
	ii	*Estimated amount of liability for pension of MPPTCL & MPPMCL who retire after 01.06.2005*	*146.72*	*164.55*	*184.08*
	iii	*Estimated liabilities of pension up to 31.05.2005 for pensioner of other companies who retired after 31.05.2005*	*396.50*	*459.35*	*528.83*
	iv	*Future contribution percentage of Establishment expenses of present employees (as per Actuary Report of 2009)*	*17.35%*	*17.35%*	*17.35%*
2	***Estimated Gratuity Liability to be recovered through MPPTCL ARR.***		***179.78***	***213.45***	***215.89***
	i	*Liabilities up to 31.05.2005 for gratuity of pensioners of other companies*	*144.37*	*173.37*	*174.91*
	ii	*Liabilities of gratuity for MPPTCL including MPPMCL*	*35.41*	*40.08*	*40.98*
	iii	*Future contribution percentage of Establishment expenses of present employees (as per Actuary Report of 2009)*	*3.82%*	*3.82%*	*3.82%*
3	***Estimated payment due in lieu of leave not availed at the time of retirement (for MPPTCL only)***				
	i	*No. of Retirees during the year*	*308*	*341*	*323*
	ii	*Amount due*	*20.60*	*25.09*	*26.14*

Estimation of Pension per person for Pensioner retired up to 31.05.2005, and number of exits each year is shown.

Company-wise Pensioners retired up to 31.05.2005 and thereafter is enclosed. The calculation of weighted average for Dearness Relief of the Pensioners for 2015-16 is given .

The working of the Pension and Gratuity Liabilities to be borne by MPPTCL for the control period is given.

The working of the estimated payment due in lieu of leave not availed at the time of retirement for MPPTCL Employees only for the control period is given.

Liabilities against Pensioners retired up to 31.05.2005 and there after:

(Amount ₹in Crores)

S. No.	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	Estimated amount of Pension for Pensioners retired up to 31.05.2005	303.49	315.46	327.44
2	Estimated amount of Pension for Pensioners retired after 01.06.2005 on MPPTCL	396.50	459.35	528.83
3	Estimated amount of liability of Pension for MPPTCL & MPPMCL	146.72	164.55	184.08
	TOTAL PENSION -	**846.71**	**939.36**	**1040.35**
4	Liabilities up to 31.05.2005 for Gratuity of Pensioners of other Companies	144.37	173.37	174.91
5	Liabilities of Gratuity for MPPTCL & MPPMCL	35.41	40.08	40.98
	TOTAL GRATUITY -	**179.78**	**213.45**	**215.89**
6	Liabilities for payment due in lieu of leave not availed at the time of retirement (for MPPTCL only)	20.60	25.09	26.14
	TOTAL -	**20.60**	**25.09**	**26.14**
	GRAND TOTAL -	**1047.09**	**1177.90**	**1282.38**

Provisioning for working employees:

The Actuarial Analysis-2009 mentions percentage of salary to be contributed for Pension and Gratuity for each Company. The following is worked out for MPPMCL & MPPTCL's employees at the rate mentioned in the said analysis as under;

(Amount ₹in Crores)

Financial Year	Service Cost				Opening Balance	Inter-est Cost @ 7%	Provi-sion
	MPPTCL		MP PMCL	MPPTCL			
	Pension	Gratuity		Leave Encash-ment			
2016-17	52.50	12.40	12.54	2.16	535.92	37.51	117.12
2017-18	58.02	13.71	13.48	2.37	613.36	42.94	130.51
2018-19	63.55	15.01	14.48	2.58	698.56	48.90	144.52

Contribution to trust Fund:

The contribution to be made for Pension and Terminal Benefit Trust Fund for all the past services till 31.05.2005 of the personnel of the Board and its successor entities, both retired and in service, based on Actuarial Analysis undertaken by Madhya Pradesh Power Transmission Company Limited from time to time as per the directions of the Hon'ble Commission is to be worked out. These shall be allowed in the Tariff of Madhya Pradesh Power Transmission Company Limited in the relevant year limited to the extent to be decided by the Hon'ble Commission in the relevant Tariff order based on a comprehensive assessment of financial implication thereof, its effect on Transmission charges and consequent effect on Retail Tariff payable by the consumers.

The last Actuarial Analysis as per the direction of Hon'ble Commission was conducted in March 2010 in the position of 31.03.2009. According to this analysis the Actuarial liabilities as on 31.03.2009 was mentioned as ₹ 9866.76 Crores for period up to 01.06.2005 and ₹ 1736.78 Crores for period after 01.06.2005 making a total of ₹ 11603.54 Crores. The above figures include leave encashment on retirement.

It may be submitted that the assessment made in Actuarial Analysis as on 31.03.2009 may now differ appreciably, and another Actuarial Analysis is to be conducted as per Regulations 3(2) (ii & iii) by MPPTCL from time to time as per the directions of the Commission. Further, the Pension & Terminal Benefit Regulations [Para-3(5)] mention the allowance in this regard by Hon'ble Commission depending on implication on Retail Tariff / Transmission charges.

However, a statement of contribution of each Company to be paid by MPPTCL (Petitioner) to develop fund in 20 years is given below. Accordingly, contribution considering 20 years period is mentioned hereunder;

(Amount ₹in Crores)

S. No.	Particulars	2016-17	2017-18	2018-19
1	Contribution amount for Gratuity	125.63	125.63	125.63
2	Contribution amount for Pension	783.99	783.99	783.99

S. No.	*Particulars*	*2016-17*	*2017-18*	*2018-19*
3	***TOTAL CONTRIBUTION***	***909.62***	***909.62***	***909.62***

Total Terminal Benefits Claimed:

The claims in foregoing Paras are summarized in the following table;

(Amount ₹ in Crores)

S. No.	*Particulars*	*2016-17*	*2017-18*	*2018-19*
1	*Current Terminal Benefit Liabilities*	*1047.09*	*1177.90*	*1282.38*
2	*Provisioning for working employees*	*117.12*	*130.51*	*144.52*
3	*Contribution for developing Trust Fund*	*909.62*	*909.62*	*909.62*
	TOTAL -	***2073.83***	***2218.03***	***2336.52***

43. **Provisions under Regulations :**

The Commission notified MPERC (Terms and conditions for allowing Pension and Terminal Liabilities of Board and Successor Entities) Regulations 2012 (G-38 of 2012). Some relevant provisions of the Regulations are reproduced below: -

a) Regulation 3 (1) & (2) (i), (ii) & (iii)

(1) "The funding of pension and other terminal benefits in respect of Personnel including Existing Pensioners of the Board and the Pensioners of its successor entities shall be allowed in the manner provided for in these Regulations through tariff to be determined by the Commission for the Successor Entities from time to time.

(2) The liability towards the pension and other Terminal Benefits of the Pensioners and Personnel of the Board and its Successor Entities shall comprise of the following :

(i) cash outflow in each fiscal year for making payment to all the Pensioners including Existing Pensioners subject to the provision of Regulation 3 (8).

(ii) contributions to be made for Pension and Terminal Benefit Trust Fund for all the past services till 31.5.2005 of the Personnel of the Board and its successor entities, both retired and in service, based on

actuarial analysis undertaken by Madhya Pradesh Power Transmission Company Limited from time to time as per the directions of the Commission; and

(iii) contributions for the current service of the serving Personnel of the Board and the successor entities, for the period 1.6.2005 onwards on a year to year basis as per the actuarial analysis undertaken by the Madhya Pradesh Power Transmission Company Limited from time to time as per the directions of the Commission."

b) Second Proviso of Regulation 3 (4) provides that,

"Provided further that apportionment of liabilities amongst MP Power Transmission Company and other successor entities mentioned in sub-para 1 and 2 above shall be as determined through actuarial analysis undertaken by MP Power Transmission Company."

c) Regarding liabilities with regard to the contribution to be made under sub-clause 3 (2) (ii) and (iii), it is provided in Regulation (5) and (6) that the aforesaid liabilities shall be allowed either in the tariff of MPPTCL or the respective Successor Entities, as the case may be, in the relevant year, *limited to the extent to be decided by the Commission in the relevant tariff order based on a comprehensive assessment of financial implications thereof…….*

d) Regulation 4 (1) and 4 (2) provides that,

"Nodal Agency

(1) The Madhya Pradesh Power Transmission Company Limited shall be the Nodal Agency for all intent and purpose to implement the Pension and Terminal Benefits Trust Funds contributions under these Regulations.

(2) The Madhya Pradesh Power Transmission Company Limited shall coordinate with the representatives of other Successor Entities as well as the Personnel for all matters relating to management and administration of the funds for the pension and terminal benefits in accordance with the applicable law governing such funds."

Commission's Analysis:

44. Vide Commission's letter No. 287 dated 09th February' 2016, MPPTCL was asked to substantiate its claim in light of the provisions under MPERC(Terms & Conditions for allowing pension & Terminal benefit liabilities of personnel on board and successor entities) Regulations, 2012 notified on 20th April' 2012.

45. Vide letter No 2056 dated 11th March' 2016, MPPTCL has informed the following*:*

"The Petitioner has claimed the Terminal Benefit liabilities as per the MPERC (Terms & Conditions for allowing Pension & Terminal Benefits liabilities of personnel of the Board and successor Entities, 2012)(G-38 of 2012) notified on 20th April 2012. Only those

liabilities have been claimed, which are entrusted to the Transmission Company, and the liabilities on part of other Companies have not been claimed. A specific remark in Para 6.10 is given to clarify this, which is reiterated for reference of Hon'ble Commission.

Remarks:–

The other Companies i.e. the Genco and Discoms are required to make provision for the liabilities on their part in their ARR, mainly the contribution to Trust for Pensioners retired after 31.05.2005 corresponding to their services in the Company, and provisioning for their working employees."

The claims are as per Regulations, as an example the figures for FY 2016-17 alongwith the reference of corresponding Regulations is shown in the following table;

S. No.	***Category***	***Regulation Para***	***Provision***	***Claim in MYT Petition***	***Amount (₹ Crores) for FY 2016-17***
1	*Existing Pensioners retired upto 01.06.05 cash out flow*	***3** (2) (i) & **3** (3)*	*Shall be allowed as a pass through in the Tariff of MPPTCL.*	***Para 6.6*** *Table S. No. 1 S. No. 4*	*303.49 144.37*
2	*Pensioners retired after 01.06.2005*				
(a)	*Corresponding to service upto 01.06.2005*	***3** (2) (i) & **3** (4)*	*Shall be allowed as a pass through in the Tariff of MPPTCL.*	***Para 6.6*** *Table S. No. 2*	*396.50*
(b)	*Corresponding to services after 01.06.2005*	***3** (2) (i) & **3** (4)*	*Shall be allowed as a pass through in the Tariff of respective successor entities*	*Not claimed for Genco and Discoms. To be claimed by them.*	*NIL*
(c)	*Claim for category 2(b) above but for MPPTCL and MPPMCL*	***3** (2) (i) & **3** (4)*	*Shall be allowed as a pass through in the Tariff of respective successor entities. Liabilities of MPPMCL also entrusted to MPPTCL.*	***Para 6.6*** *Table S. No. 3 S. No. 5*	*146.72 35.41*
	Total current claim on part of MPPTCL -				***1026.49***
3	*Provisioning for working employees for*				

S. No.	Category	Regulation Para	Provision	Claim in MYT Petition	Amount (₹ Crores) for FY 2016-17
	future service				
(a)	*For employees of MPPTCL & MPPMCL*	***3** (2) (iii) & **3** (6)*	*Shall be allowed in the Tariff of the respective successor entities limited to the extent to be decided by the Commission.*	***Para 6.7*** *Table*	*117.12*
(b)	*For employees of Genco, Discoms.*	***3** (2) (iii) & **3** (6)*	*Shall be allowed in the Tariff of the respective successor entities limited to the extent to be decided by the Commission.*	*Not claimed. To be claimed by Genco and Discoms.*	*NIL*
4	*Contribution to be made for Pension & Terminal Benefit Trust Fund for all the past services till 31.05.2005 of personnel of Board and its successor entities both retired and in service.*	***3** (2) (ii) & **3** (5)*	*Shall be allowed in the Tariff of MPPTCL in the relevant year limited to the extent to be decided by the Commission.*	***Para 6.8***	*909.62*
5	***GRAND TOTAL -***				***2053.23***
6	*The liabilities for payment due in lieu of leave not availed at the time of retirement (for MPPTCL only)*				***20.60***
					₹2073.83 Crores

The amount for FY 2017-18 and FY 2018-19 is given in the petition. Thus, the claims in Petition for FY 2016-17 to FY 2018-19 of the MPPTCL are as per the Terminal Benefit Regulations."

As per provisions under MPERC (Terms & Conditions for allowing Pension and Terminal Benefit Liabilities of Personnel of the Board and Successor Entities) Regulation, 2012, the following is observed:

a) The Actuarial Analysis for the contribution of terminal benefits as per Regulations 3(2)(ii) and (iii) is to be undertaken by MPPTCL from time to time as per the directions of the Commission.

b) MPPTCL shall be the nodal agency for all intent and purpose to implement the Pension and Terminal Benefits Trust Funds under the Regulations.

c) MPPTCL is required to coordinate with the representatives of other Successor Entities as well as the Personnel for all matters relating to management and administration of the funds for the pension and terminal benefits funds.

d) The liabilities referred to in Regulation 3(2)(i) related to Personnel who retired after 1st June, 2005 shall be allowed as a pass through in the ARR of such Successor Entities in the relevant year for the period of service rendered after 1st June, 2005.

e) Apportionment of liabilities amongst MPPTCL and other Successor Entities shall be as determined through actuarial analysis undertaken by MPPTCL.

46. The Commission observed that the above issue needs to be dealt with in accordance with the various provisions under MPERC (Terms & Conditions for allowing Pension and Terminal Benefit Liabilities of Personnel of the Board and Successor Entities) Regulation, 2012. In so far as the provision for contribution for pension and terminal benefit liabilities of personnel of the Board and the successor entities is concerned, this provision can only be made after proper and updated actuarial analysis by MPPTCL. This, however, shall be a separate exercise to be undertaken by Transco on directions of the Commission. Results of this exercise shall get reflected in transmission tariff orders at the discretion of the Commission as per the Regulation referred to above.

47. In view of the above, the Commission has considered the current terminal benefits and pension expenses of ₹ 1047.09 Crore, ₹ 1177.90 Crore and ₹ 1282.38 Crore for FY 2016-17 to FY 2018-19 respectively in this order on provisional basis and on ‘pay as you go’ principle as claimed by MPPTCL in the subject petition subject to true-up in each year on availability of the actual figures.

(₹ in Crore)

S. No.	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	Current Terminal Benefit Liabilities	1047.09	1177.90	1282.38
2	Provisioning for working employees	0	0	0
	TOTAL -	**1047.09**	**1177.90**	**1282.38**

Depreciation

48. Petitioner's submission

The petitioner broadly submitted the following:

“Opening Balance Sheet

The Government of Madhya Pradesh has notified the final Opening Balance Sheet on 12th June 2008 in the position of 31.05.2005. The fixed assets transferred are shown as hereunder;

(i)	*Opening Gross Block*	*₹ 2932.75 Crores*
(ii)	*Accumulated Depreciation*	*₹ 1205.95 Crores*
(iii)	*Net Fixed Assets*	*₹ 1726.81 Crores*

Hon'ble Commission had directed the Petitioner to reconcile the Asset Register and work out the Depreciation during the year on the above. The details of this Asset Register was submitted during the Truing-up process of 2012-13 for perusal of the Hon'ble Commission. The Opening Gross Blocks and Net Blocks of the Asset Register were reconciled & were of the same value as given in the Final Opening Balance Sheet. There was no change in Assets capitalized after 1.6.2005 which in turn were the same as submitted earlier and reconciled with the accounts. The depreciation for FY 2013-14 was also worked out on the basis of this reconciled Asset Register.

Continuing with the Asset Register thus submitted, by extending the figures of GFA - Depreciation for the year, Accumulated Depreciation & Net Fixed Assets has been worked out for the True-up Petition filed for 2014-15.

The petitioner has been allowed the True-ups for the year's up to 2013-14, on the basis of final opening Balance Sheet. The development up to 31.03.2015 in respect of Opening Gross Block, Accumulated Depreciation is shown in the following table;

(Amount ₹ in Crores)

S. No.	Date as on	Gross Fixed Assets	Accumulated Depreciation	Net Fixed Assets
1	2	3	4	5
1	31/05/2005	2932.75	1205.95	1726.80
2	31/03/2006	3092.47	1273.70	1818.77
3	31/03/2007	3341.55	1357.07	1984.48
4	31/03/2008	3575.99	1447.81	2128.18
5	31/03/2009	3954.13	1544.23	2409.90
6	31/03/2010	4544.60	1711.06	2833.54
7	31/03/2011	5045.92	1919.01	3126.91
8	31/03/2012	5309.90	2130.25	3179.65
9	31/03/2013	5616.62	2348.64	3267.98
10	31/03/2014	6296.45	2589.08	3707.37
11	31/03/2015	6928.81	2859.51	4069.30

The figures upto S. No. 10 i.e. 31.03.2014 are as per 'True-up' Orders / Petition. Whereas for S. No. 11 i.e. 31.03.2015 is as per the True-up filed for FY 2014-15.

Regulations on Depreciation Claimed:

The Regulations on Depreciation till 31.03.2009 provided for Depreciation claim on 'Straight Line Method' considering Depreciation up to 90% of the book value. From 01.04.2009 onwards the Regulations provide for accelerated rate of Depreciation for initial period of 12 years thereafter, the rates of Depreciation get reduced as per residual value of Asset and residual life.

The same methodology is prescribed in present control period i.e. FY 2016-17 to FY 2018-19. The salient Para 25(1) (f) & (g) of the Regulations are reproduced hereunder;

"25.1 (f) "Depreciation shall be calculated annually based on 'straight line method' and at the rates specified in Appendix-II to these Regulations for the assets of the Transmission System.

Provided that, the remaining depreciable value as on 31st March of the Year closing after a period of 12 Years from Date of Commercial Operation shall be spread over the balance useful life of the assets.

Provided further that the Consumer contribution or capital subsidy/ grant etc. for asset creation shall be treated as per the Accounting Rules notified and in force from time to time".

25.1(g) "In case of the existing Projects, the balance depreciable value as on 1.4.2016 shall be worked out by deducting the cumulative depreciation including Advance Against Depreciation as admitted by the Commission up to 31.3.2016 from the gross depreciable value of the assets. The rate of depreciation shall be continued to be charged at the rate specified in Appendix-II till cumulative depreciation reaches 70%. Thereafter, the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%"

Appendix-II of the regulations provides for depreciation rates for different category of Assets.

Asset Data Base for working out Depreciation:

The Petitioner has maintained an Asset Register in the form of Database for working out Depreciation for a particular year. The salient features of the database are;

(i) The database is as per Final Opening Balance Sheet figures notified on 12th June 2008 in the position of 31.05.05.

(ii) The works Capitalized during subsequent years have been entered in the data base till 31.03.2015.

(iii) The Depreciation rates after 31.05.05 have been taken as per Hon'ble MPERC's Regulations applicable time to time.

(iv) Depreciation working formula is as per Straight Line Method of Depreciation

(v) The Depreciation ceases to add further as soon as the Depreciation reaches 90% of Opening Gross Block. 10% is taken as salvage value.

(vi) In case of the existing Projects, the balance depreciable value as on 1.4.2016 shall be worked out by deducting the cumulative depreciation including Advance against Depreciation as admitted by the Commission up to 31.3.2016 from the gross depreciable value of the assets. The rate of depreciation shall be continued to be charged at the rate specified in Appendix-II till cumulative depreciation reaches 70%. Thereafter, the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

(vii) The Opening Balance Sheet notified on 12th June 2008, transferred no Asset value out of Gross Block of ₹ 2932.75 Crores funded through contribution from consumers. In Asset capitalized from FY 2005-06 to FY 2009-10 too, no works have been capitalized as funded through consumer's contribution. No Depreciation is being charged by MPPTCL against contributory works.

(viii) The useful life for AC and DC substations and GIS for which Notice Inviting Tender is floated on or after 01.04.2016 is considered as 35 years.

Updation in view of Current Regulations:

In accordance to above necessary changes in software of Depreciation Model has been made for calculating depreciable value on year to year basis.

Depreciation for Control Period:

The figures of Gross Block, Depreciation and Net Block up to FY 2014-15 have been brought forwarded from the True-up Petition filed for FY 2014-15. The figures for FY 2015-16 has been assessed on the basis of Assets expected to be added as per progress anticipated. The expected capitalized amount for the ensuing years have been equally divided in to lines and Sub-stations and lumped to the middle of year i.e. 1st October of each year.

Capitalization for the year 2015-16 is estimated to be Rs. 850 Crores based on Annual Accounts of 2014-15 which shows that an amount of Rs 778 Crores are under works in progress i.e. CWIP; in addition to it some works are also anticipated to start and finish in 2015-16 only.

As per the requirement of Regulation 25.1 (g); regarding the existing Projects, the balance depreciable value as on 1.4.2016 is worked out by deducting the cumulative depreciation including Advance against Depreciation and the same in Rs Crores is calculated to be ;

S NO.	GFA AS ON 01.04.2016	CUMM. DEPRECIATION AS ON 01.04.2016	NET BLOCK AS ON 01.04.2016
1	7778.8	3165.52	4613.28

(i) For control period under consideration, the Asset addition is taken from Table 4.4 of the Transmission Plan. The category-wise details of Depreciation for control period are calculated by continuing the existing data base as on 31.03.2015 & incorporating rate of depreciation specified in Appendix-II till cumulative depreciation reaches 70%. Thereafter, the remaining depreciable value is spread over the remaining life of the asset/s such that the maximum depreciation does not exceed 90%. The major head-wise summary is given in Format TUT-7 & TUT-8.

(ii) The summary of GFA, Depreciation without Consumer Contribution works and Net Block is given in the following table;

(Amount ₹in Crores)

S. N.	YEAR	Gross Fixed Assets			Provision For Depreciation			Net Fixed Assets	
		At the beginning of Year	Addition During Year	At End of Year	At the beginning of Year	Addition During Year	At End of Year	At the beginning of Year	At the End of Year
1	2016-17	7778.80	1164.92	8943.72	3165.52	353.01	3518.53	4613.28	5425.19
2	2017-18	8943.72	1262.58	10206.30	3518.53	403.43	3921.96	5425.19	6284.34
3	2018-19	10206.30	1245.25	11451.54	3921.96	453.77	4375.73	6284.34	7075.81

It is therefore prayed to allow Depreciation for control period as under;

i. *FY 2016-17 - **₹353.01 Crores***
ii. *FY 2017-18 - **₹403.43 Crores***
iii. *FY 2018-19 - **₹453.77 Crores**."*

49 Provisions under Regulations

Regulation 25 of MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 (G-28 (III) of 2016) provides that,

25. "For the purpose of Tariff, depreciation shall be computed in the following manner:

(a) Depreciation shall be computed from the date of commercial operation of a Transmission System including Communication System or element thereof. In case of the tariff of a Transmission System including Communication System for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial Operation of the Transmission System taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of Commercial Operation shall be worked out by considering the actual date of Commercial Operation and installed capacity or capital cost of all elements of the Transmission System, for which single tariff needs to be determined.

(b) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple elements of Transmission System, weighted average life Transmission System shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(c) The approved/accepted cost shall include foreign currency funding converted to equivalent rupee at the exchange rate prevalent on the date of foreign currency actually availed.

(d) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

(e) Land other than land held under lease shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(f) Depreciation shall be calculated annually based on 'Straight Line Method' and at rates specified in ***Appendix-II*** *to these Regulations for the assets of the Transmission System.*

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of Commercial Operation shall be spread over the balance useful life of the assets.

Provided further that the Consumer contribution or capital subsidy/ grant etc for asset creation shall be treated as per the Accounting Rules notified and in force from time to time.

(g) In case of the existing Projects, the balance depreciable value as on 1.4.2016 shall be worked out by deducting the cumulative depreciation including Advance

Against Depreciation as admitted by the Commission upto 31.3.2016 from the gross depreciable value of the assets. The rate of Depreciation shall be continued to be charged at the rate specified in Appendix-II till cumulative depreciation reaches 70%. Thereafter, the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

(h) Depreciation shall be chargeable from the first Year of commercial operation. In case of commercial operation of the asset for part of the Year, depreciation shall be charged on pro rata basis.

(i) In case of de-capitalization of assets in respect of Transmission System or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services."

50 Commission's Analysis

On preliminary scrutiny of the petition, some observation was communicated to the petitioner seeking its clarification. In response, vide letter No. 2056 dated 11th March' 2016, MPPTCL submitted the following:

"*Regarding the observation made, it is to be submitted that as per the Regulations, the GFA includes the Assets created out of consumer contributions, whereas the Depreciation earned on them is then subtracted from total Depreciation claim. In the new Format of Accounts (Note 12), these are separately indicated. The figures are shown hereunder;*

(i)	*GFA shown in Note 12*	*₹ 6784.54 Crores*
(ii)	*Assets created against Consumer Contribution*	*+ ₹ 131.29 Crores*
(iii)	*Assets created against Consumer Contribution (against deferred income)*	*+ ₹ 13.00 Crores*
(iv)	*Adjustment of OBS*	*(-) ₹ 0.02 Crores*
	TOTAL -	*₹ 6928.81 Crores*

₹ 6928.81 Crores is the figure in the Table of Para 7.1 of the Petition, as such it is to be mentioned for kind consideration that there is no discrepancy as such.

Considering the petitioner's submission, the capital cost & capital structure is determined by considering GFA (net of consumer contribution) of ₹ 6784.54 Cr as on 31/03/2015 instead of the figure ₹ 6928.81 Cr as mentioned in table for calculation of depreciation filed by the petitioner. The petitioner has filed following table as summary of its claim for depreciation for the control period.

(Amount ₹ in Crores)

S. N.	YEAR	Gross Fixed Assets			Provision For Depreciation			Net Fixed Assets	
		At the beginning of Year	Addition During Year	At End of Year	At the beginning of Year	Addition During Year	At End of Year	At the beginning of Year	At the End of Year
1	2016-17	7778.80	1164.92	8943.72	3165.52	353.01	3518.53	4613.28	5425.19
2	2017-18	8943.72	1262.58	10206.30	3518.53	403.43	3921.96	5425.19	6284.34
3	2018-19	10206.30	1245.25	11451.54	3921.96	453.77	4375.73	6284.34	7075.81

In its claim for depreciation, MPPTCL considered GFA of ₹6928.81 Cr. as on 31.03.2015. The Commission has observed from Note 12 of Audited Accounts for FY 2014-15 that the total fixed assets as on 31.03.2015 are of ₹6784.54 Cr.

It is observed that the MPPTCL claimed depreciation at the average GFA on the capital cost proposed and claimed in the subject petition. The Commission has worked out the addition to GFA as ₹519.04 Crore on account of reasons discussed in preceding paras of this Order. Therefore, there is a difference in the average GFA claimed in the petition and considered by the Commission in this Order. The percentage of average addition to GFA claimed over the opening GFA is considered in this order for calculation of depreciation amount. While doing so, the average rate of depreciation claimed in the petition in each year of the control period is computed on the basis of assumptions made by the petitioner as given below: -

Calculation of Depreciation percentage

S.No.	Year	Opening GFA	Closing GFA	Average GFA
1	FY 2016-17	7778.80	8943.72	8361.26
2	FY 2017-18	8943.72	11206.30	10075.01
3	FY 2018-19	11206.30	11451.54	11328.92

S.No.	Year	Average GFA	Depreciation Claimed by MPPTCL	% of Depreciation to Average GFA
1	FY 2016-17	8361.26	353.01	4.22%
2	FY 2017-18	10075.01	403.43	4.00%
3	FY 2018-19	11328.92	453.77	4.01%

The Commission has considered the above mentioned percentages and allowed Depreciation in this order as given below:

Depreciation allowed

S. No.	Year	Opening GFA	Average GFA	Closing GFA	Depreciation	% of Depreciation to average GFA
1	FY 2016-17	7326.82	7586.34	7845.86	320.14	4.22%
2	FY 2017-18	7845.86	8105.38	8364.90	324.22	4.00%
3	FY 2018-19	8364.90	8624.42	8883.94	345.84	4.01%

Accordingly, the depreciation of ₹ **320.14 Cr,** ₹ **324.22 Cr and** ₹ **345.84 Cr** for FY 2016-17 to FY 2018-19 is allowed in this order subject to true-up.

Interest & Finance Charges

51. Petitioner's submission

The petitioner broadly submitted the following:
"*Loans Transferred through Opening Balance sheet: -*

The Govt. of M.P. has notified the final Opening Balance Sheet on 12th June 2008, as referred in Chapter 1 of this Petition. Loan liabilities of ₹1313.21 Crores are indicated in the Balance Sheet and a liability of ₹5.53 Crores is indicated in the footnote as loan from MP Power Generating Company Ltd., making a total of ₹1318.74 Crores. Details of these are mentioned hereunder;

As on 31.05.2005 *(Amount ₹in Lacs)*

S. No.	*Particulars*	*Opening Balance at the beginning of the year*			
		Principal Not Due	*Principal overdue*	*Interest overdue*	*TOTAL*
1	*Loan from PFC - Unsecured*	*30990.54*	*0.00*	*0.00*	*30990.54*
2	*Loan from PFC - Secured*	*0.00*	*0.00*	*0.00*	*0.00*
3	*Loan from Canara Bank*	*0.00*	*0.00*	*0.00*	*0.00*
4	*Loan from SADA Gwalior*	*720.00*	*480.00*	*302.80*	*1502.80*
5	*Bonds & Debentures*	*29692.14*	*7655.06*	*11545.70*	*48892.90*
6	*MP Genco*	*553.00*	*0.00*	*0.00*	*553.00*
7	*Direct Loans*	*0.00*	*0.00*	*0.00*	*0.00*
8	*ADB*	*20844.32*	*0.00*	*0.00*	*20844.32*
9	*NABARD*	*7619.10*	*1215.02*	*0.00*	*8834.32*
10	*General Loans*	*2876.59*	*214.78*	*0.00*	*3091.37*
11	*Market Bonds*	*15964.95*	*1200.55*	*0.00*	*17165.50*
	TOTAL -	***109260.64***	***10765.41***	***11848.50***	***131874.55***

There have been fresh loans received in subsequent years, and repayments have also been done during these years. The year-wise growth has been shown in the 'True-up' Petitions *of earlier years. Position of outstanding loans as per latest available Audited Accounts for FY 2014-15 and True-up Petition for FY 2014-15 is given in the following table;*

S. No.	Particulars	Opening Balance at the beginning of 2014-15			
		Principal Not Due	Principal overdue	Interest overdue	Total Rs Lacs
1	Loan from PFC - Unsecured	7329.99	0.00	0.00	**7329.99**
2	Loan from PFC - Secured	21521.14	0.00	0.00	**21521.14**
3	Bonds & Debentures	0.00	2192.00	1649.21	**3841.21**
4	Direct Loans	0.00	1629.22	1045.08	**2674.30**
5	ADB	25681.43	11606.42	18773.86	**56061.71**
6	NABARD	0.00	9285.16	6252.38	**15537.54**
7	General Loans	17903.81	11120.57	8623.78	**37648.16**
8	Market Bonds	685.44	16480.07	10446.33	**27611.84**
9	GoMP ADB 2323	42603.70	952.05	3275.09	**46830.84**
10	GoMP ADB 2346	63466.71	1244.40	4948.57	**69659.68**
11	TSP	4255.00	1820.00	1457.62	**7532.62**
12	SCSP	4615.00	2730.00	2183.32	**9528.32**
13	GoMP JICA IDP - 217	26953.37	0.00	297.84	**27251.21**
	TOTAL -	**215015.59**	**59059.89**	**58953.08**	**333028.56**

Similarly the position of outstanding loans received at the beginning of the year FY 2015-16 is given in the following table;

S. No.	Particulars	Opening Balance at beginning of 2015-16			
		Principal Not Due	Principal overdue	Interest overdue	Total Rs Lacs
1	Loan from PFC Unsecured	4703.36	0.00	0.00	**4703.36**
2	Loan from PFC Secured	19230.14	0.00	0.00	**19230.14**
5	Bonds & Debentures	0.00	2180.00	1644.94	**3824.94**
6	Direct Loan	0.00	1629.22	1265.02	**2894.24**
7	ADB	23477.85	13810.01	23119.11	**60406.96**
8	NABARD	0.00	9285.16	7561.77	**16846.93**
9	General Loan	12717.21	16307.17	13756.12	**42780.50**
10	Market Bond	609.28	16556.23	13066.46	**30231.97**
11	GOMP ADB 2323	41107.84	2447.91	4018.92	**47574.67**
12	GOMP ADB 2346	60911.50	3799.61	6058.37	**70769.48**
13	TSP	3040.00	3035.00	2548.56	**8623.56**
14	SCSP	3146.00	4199.00	3478.58	**10823.579**
15	GOMP JICA IDP-217	42769.29	0.00	788.19	**43557.48**
16	GOMP ADB 3066	10435.10	0.00	178.26	**10613.36**
	TOTAL	**222147.56**	**73249.30**	**77484.32**	**372881.18**

Projections for Control Period:

The source-wise loans are projected for the three years of control period is based on the anticipated closure of 2015-16 and the following basis;

i. *Loan receipts are projected as per the Plan table given in Para 4.4 of the Petition.*
ii. *Principal repayment due is assessed approximately on the basis of repayment terms.*
iii. *Actual repayments are mentioned in full for loans taken from various Institutions. Since Discoms are not making full payment of bills of Transmission charges, the default in certain State Government loans is shown on anticipation of financial constraints.*
iv. *Interest due is worked out as rate of interest in general.*

Based on above, the year-wise loans details are projected and enclosed for 2016-17 to 2018-19.

52. Weighted Average rate of Interest:

Hon'ble Commission has desired that the Rate of Interest for each category of loans such as PFC, ADB, State Govt. etc. should be worked out by considering rate of interest of various loan installments applicable during the year. Accordingly, 'Weighted Average Rate of Interest' is worked out based on 'Principal Not Due' only, therefore, it may differ from actual/entire loan portfolio.

The Weighted Average Rate of Interest for the three years is worked on the basis of 'Principal Not Due' at the beginning of year, applying the rate of interest available.

(Amount ₹ in Lacs)

S. No	Loan Scheme	FY 2016-17			FY 2017-18			FY 2018-19		
		Rate	**Principal not overdue as on 1st April**	**Interest**	**Rate**	**Principal not overdue as on 1st April**	**Interest**	**Rate**	**Principal not overdue as on 1st April**	**Interest**
1	**2**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
1	PFC Unsecured	12.60%	2889.65	364.10	12.60%	1201.89	151.44	12.60%	222.26	28.01
2	PFC Secured	12.64%	16939.14	2141.11	12.64%	13814.74	1746.18	12.64%	10690.34	1351.26
3	REC New	10.10%	15470.00	1562.47	10.10%	15470.00	1562.47	10.10%	15470.00	1562.47
4	REC New 2	10.10%	25600.00	2585.60	10.10%	25600.00	2585.60	10.10%	25600.00	2585.60
5	ADB- 1869	10.61%	21274.26	2257.20	10.61%	19070.67	2023.40	10.61%	16867.08	1789.60
6	General Loans	15.39%	7530.61	1158.96	15.39%	3044.01	468.47	15.39%	1522.01	234.24
7	Market Bond	8.30%	533.12	44.25	8.30%	456.96	37.93	8.30%	380.80	31.61
8	ADB - 2323	1.61%	39241.30	630.22	1.61%	37374.76	600.24	1.61%	35508.22	570.26
9	ADB - 2346	1.61%	58058.59	932.42	1.61%	55205.68	886.60	1.61%	52352.77	840.79
10	TSP	15.77%	1825.00	287.80	15.77%	1030.00	162.43	15.77%	515.00	81.22
11	S.C. S. P.	15.47%	1677.00	259.43	15.47%	838.00	129.64	15.47%	419.00	64.82
12	JICA IDP 217	1.50%	42769.29	641.54	1.50%	42769.29	641.54	1.50%	41023.60	615.35
13	ADB- 3066	1.91%	10435.10	199.31	1.91%	10435.10	199.31	1.91%	10435.10	199.31
14	ADB proposed	2.00%	27327.00	546.54	2.00%	72413.00	1448.26	2.00%	134845.00	2696.90
15	PFC proposed	11.25%	31087.00	3497.29	11.25%	56258.00	6329.03	11.25%	63115.00	7100.44
16	JICA proposed	1.50%	30358.00	455.37	1.50%	41626.00	624.39	1.50%	46939.00	704.09
17	Others Source proposed	11.25%	13165.00	1481.06	11.25%	21868.00	2460.15	11.25%	22218.00	2499.53
18	GoI Intervention.	16.50%	0.00	0.00	16.50%	13458.00	2220.57	16.50%	46056.00	7599.24
19	Others Loans	11.25%	0.00	0.00	11.25%	18735.00	2107.69	11.25%	51333.00	5774.96
TOTAL -		-	**346180.05**	**19044.66**	-	**450669.10**	**26385.33**		**575512.18**	**36329.67**
Weighted Average Rate of Interest		$\frac{19044.66}{346180.05} \times 100$ **5.50%**			$\frac{26385.33}{450669.10} \times 100$ **5.85%**			$\frac{36329.67}{575512.18} \times 100$ **6.31%**		

As per the MYT Order dated 02.04.13, the interest rate for the previous control period was 7.08%, 6.76% and 6.41% for FY-14, FY-15 & FY-16 respectively.

Interest Calculation for control period:

As per Clause 24.5 of the Transmission Tariff Regulations;

"The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment or interest capitalized."

Accordingly, the Weighted Rate of Interest is worked out on the basis of the principal not due outstanding at the end of the year i.e. 01.04.2016, and on the rate of interest against various loans as worked out above.

In accordance with the above, the position of loans up to 31.03.2019 has been worked out, considering the loan repayments being deemed to be equal to Depreciation being claimed for each year.

Further, Hon'ble Commission vide its order dtd. 12.12.2013 has directed to adopt its approach regarding the True up order for FY 2011-12. In line with the approach & True up order for FY 2011-12 to 2013-14, the interest claims for the three years of the control period is worked out as shown in the following table:-

(Amount ₹ in Crores)

S. N.	**Particulars**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
1	*Principal not due on 1st April of year*	*2221.48*	*2510.47*	*2972.90*	*3453.27*
2	*Loan received during the year (equal to 70% of Capitalization considered)*	*595.00*	*815.44*	*883.81*	*871.67*
3	*Principal repayment deemed equal to Depreciation during that year*	*306.01*	*353.01*	*403.43*	*453.77*
4	*Principal Not Due on 31st March of year (S. No. 1+2 – 3)*	*2510.47*	*2972.90*	*3453.27*	*3871.18*
5	*Weighted Average Rate of Interest for the year*	-	*5.50%*	*5.85%*	*6.31%*
6	*Interest eligibility for the year*	*NA*	*163.55*	*202.18*	*244.37*

Normative Loan:

If the average Equity is more than the eligible Equity, the same is to be treated as Normative Loan, and this "Normative loan" is eligible for interest at the rates indicated in Para 8.4 covering overall Weighted Average Rate of Interest for the respective Year.

On this basis, formulated on lines of True up order for FY 2011-12 to FY 2013-14, with opening figures from True up filed for FY 2014-15, the following is obtained;

(Amount ₹in Crores)

S. N.	Particulars	2015-16	2016-17	2017-18	2018-19
a	Gross Block of Assets beginning of year	6807.78	7657.78	8822.70	10085.28
b	Gross Block of Assets at end of year Net of Consumer Contribution	7657.78	8822.70	10085.3	11330.52
c	Gross Block of Assets (Average)	7232.78	8240.24	9453.99	10707.90
d	Maximum Qualifying Equity (30%) with 70:30 Debt:Equity ratio	2169.83	2472.07	2836.20	3212.37
e	Equity at the beginning of the year employed on Capitalized Works	1958.37	2213.37	2562.85	2941.62
f	Equity at the end of the year employed on Capitalized Works	2213.37	2562.85	2941.62	3315.20
g	Average Equity employed on Capitalized Works	2085.87	2388.11	2752.23	3128.41
h	Qualifying Equity	2169.83	2472.07	2836.20	3212.37
i	Normative Loan component (only if (g)>(h))	nil	nil	nil	nil

Net Interest Claim:

(Amount ₹in Crores)

S. No.	Particulars	2016-17	2017-18	2018-19
1	Interest Eligibility	163.55	202.18	244.37
2	Interest on normative loan	0	0	0
3	Bank & Finance charges #	3.15	3.15	3.15
4	**Total Interest & Finance charges**	**166.70**	**205.33**	**247.52**

 # On the basis of last Audited Accounts (i.e. 2014-15)

53. Interest on Working Capital:

Clause 28.1 of the regulation states that Interest on working capital shall be payable on normative basis notwithstanding that the Transmission Licensee has not taken loan for *working capital from any outside agency. The Interest on working capital for the three years on Normative basis is worked out in the following table;*

(Amount ₹ in Crores)

S. No.	Particulars	2016-17	2017-18	2018-19
1	O&M Expenses for One month	32.99	37.09	41.44
2	Maintenance Spare @ 15% of O&M Expenses	59.39	66.76	74.59
3	Receivables equivalent to two month's Transmission charges	660.26	727.18	790.93
4	Total Working Capital (1+2+3)	752.64	831.02	906.96
5	SBI's Base Rate + 3½% on 1st April of year (9.3% + 3.5% = 12.8%)*	12.80%	12.80%	12.80%
6	Interest on Working Capital for the year	**96.34**	**106.37**	**116.09**

(*) ***Remark****- Base rate of SBI as on 05.10.2015 is 9.3% and the same is considered for all three years.*

Total interest claimed:

(Amount ₹ in Crores)

S. No.	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	Interest & Finance charges	166.70	205.33	247.52
2	Interest on Working Capital (Normative)	96.34	106.37	116.09
3	**Total Interest**	**263.04**	**311.70**	**363.61**

54. Provisions of Regulations

Regulation 24 under MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 provides that,

24.1. The loans arrived at in the manner indicated in Regulation 20 shall be considered as gross normative loan for calculation of interest on loan.

24.2. The normative loan outstanding as on 1.4.2016 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2016 from the gross normative loan.

24.3. The repayment for each year of the tariff period FY 2016-17 to FY 2018-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro-rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalization of such asset.

24.4. Notwithstanding any moratorium period availed by the Transmission Licensee, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

24.5. The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment or interest capitalized

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered.

Provided further that if the Transmission System, does not have actual loan, then the weighted average rate of interest of the Transmission Licensee as a whole shall be considered.

24.6. The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

24.7. The Transmission Licensee shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the Beneficiaries and the net savings shall be shared between the Beneficiaries and the Transmission Licensee, in the ratio of 2:1.

24.8. The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

24.9. In case of dispute, any of the parties may make an application in accordance with the MPERC (Conduct of Business) Regulation, 2004, as amended from time to time:

Provided that the Transmission Customers shall not withhold any payment on *account of the interest claimed by the Transmission Licensee during the pendency of any dispute arising out of re-financing of loan.*

55. Regulation 28 under MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 provides that,

28.1. Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2016 or as on 1st April of the year during the tariff period FY 2016-17 to FY 2018-19 in which the Transmission System including Communication System or element thereof is declared under commercial operation, whichever is later.

28.2. Interest on working capital shall be payable on normative basis notwithstanding that the Transmission Licensee has not taken loan for working capital from any outside agency.

56. Regulation 38 of the above Regulations provides that,

For each Year of the Tariff Period working capital shall cover the following:

(1) Maintenance spares @ 15% of the O&M expenses specified in Regulation37.1;
(2) Receivables equivalent to two months of transmission charges calculated on Target Availability Level; and
(3) Operation and Maintenance expenses for one month."

57. Commission's Analysis

Vide Commission's letter No 287 dated 09th February' 2016, the petitioner was asked to clarify and submit the following :

(i) The weighted average rate of interest for FY 2016-17 has been worked out as 5.50%, 5.85% in FY 2017-18 and 6.31% in FY 2018-19. These weighted average rates are higher than the weighted average rate of interest actually claimed in the True up petition for FY 2014-15. The reason for increase in these figures with reference to each loan scheme be submitted. The petitioner is also required to submit the documents along with terms and conditions of loan schemes to the Commission.

(ii) The year-wise details regarding State Government and other loans as provided in Annexure-XIV of the petition is appearing irrelevant in light of the provisions under MPERC (Terms & Conditions for determination of Transmission Tariff) Regulation, 2016 since the repayment is now to be considered equal to the depreciation for the year. Further, unlike the actual status of the principal and interest repayments informed by the petitioner in its true-up petitions, these figures show payment of total due amount, which is not appearing in line with the past trends. In view of the aforesaid observation, the working for the lender-wise loan balances at the start and end of each financial year be revised and resubmitted to the Commission so that computation of interest and finance charges for the multi year period be possible appropriately.

58. In response , MPPTCL vide letter no 2056 dated 11th March' 2016, submitted that;

"*It may be seen from the table that the weighted average interest rate of the existing loans of MPPTCL shows a decreasing trend, whereas the same for new loans is having an increasing trend. This is mainly due to the following reasons-*

(i) All disbursements during FY 2016-17 to FY 2018-19 are from new loans which is increasing periodically, whereas in case of existing loans, principal not due amount (majorly from ADB/JICA having lower interest rates) are decreasing gradually. This leads to lower weighted average interest rates in case of existing loans while that for the new loans have higher Weighted Average Rates.

(ii) The rate of interest assumed for the new loans, which is based on the rate of the existing loans from these agencies/similar agencies, is quite high.

The table below depicts the Agency wise interest rates considered for calculation of the weighted average interest rates along with the basis for the assumptions thereof:

S. No.	***Funding agency***	***Interest rate for loan disbursed upto FY 2014-15***	***Remarks***
1	*JICA*	*1.50%*	*Assumed same 1.50%*
2	*ADB*	*2%*	*Assumed same 2%*
3	*PFC*	*11.25%*	*Assumed same 11.25%*
4	*GoI Intervention*	*Not Applicable*	*Since the funding agency is not yet decided the interest rate is assumed @ 16.50% as per the latest GoMP order.*
5	*REC*	*Not Applicable*	*Assumed @ 10.10% as per latest accepted offer.*
6	*Other sources*	*Not Applicable*	*Since the funding agency is not yet decided the interest rate is assumed @ 11.25% as per the latest PFC rate.*
7	*Other loan*	*Not Applicable*	*Since the funding agency is not yet decided the interest rate is assumed @ 11.25% as per the latest PFC rate.*

Lender-wise Loan balances –
Regarding the MPERC Regulation of Depreciation equal to repayment, the True up is actual position whereas MYT 2017-19 is estimation only. It is prayed that at this stage it cannot be forecasted that repayment and interest payment will have to be deferred as this will depend on the extent of Transmission charges, which will be paid by Discoms in the future.
However, as indicated in S. No. 3 of the table given in Para 8.5 (Page 37) of the MYT Petition, the depreciated amount has been fully deducted while calculating the Weighted Average Rate of Interest."

59. Vide Commission's letter dated 31st March' 2016, MPPTCL was asked to provide one specimen copy of each loan agreement in respect of new loans (where the rate of interest has been increased) in support of the contention of MPPTCL for Interest and Finance charges.

60. Vide its submission dated 13th April' 2016, MPPTCL has submitted the specimen copies of each loan agreement in respect of new REC & PFC loans. Based on the aforesaid and the following figures, the interest on loan (Principal not due) is worked out in this order as under:

(i) In table of para 33 of the Order on true-up of transmission Tariff for FY 2014-15, closing loan of ₹ 2060.97 as on 31/03/2015 was admitted by the Commission.
(ii) Depreciation for the next control period is considered as approved in preceding paras of this order.
(iii) The weighted average rate of interest as filed by the petitioner is considered.

Accordingly, the interest on loan for the next control period is calculated as under:

Interest and Finance Charges allowed :

S. No	Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
1	Principal not due at beginning of year (01.04.2014) as per true-up order for FY 2014-15.	1917.48	2060.97	2127.14	2170.32	2209.44
2	Addition of loan during FY 2014-15	413.92	363.33	363.33	363.33	363.33
3	Repayment (equal to depreciation)*	270.43	297.16	320.14	324.22	345.84
4	Principal not due at the end of year(4=1+2-3)	2060.97	2127.14	2170.32	2209.44	2226.92

5	Average of principal not due for the FY {5=(1+4)/2}	1989.23	2094.05	2148.73	2189.88	2218.18
6	Rate of Interest (in % as filed in the petition)	5.351	5.5	5.5	5.85	6.31
7	**Interest**	106.44	115.17	118.18	128.11	139.97
8	F C	3.15	3.15	3.15	3.15	3.15
9	**Interest Allowed (9=7+8)**	**109.59**	**118.32**	**121.33**	**131.26**	**143.12**

(Note:1. The figures for FY 2014-15 & FY 2015-16 are indicative for pro-forma calculation purpose only and not for approval of interest for those years)
2. *The figures of depreciation for FY 2014-15 and FY 2015-16 are provisionally considered from the true-up petition for FY 2014-15 and Multi Year Tariff Order for FY 2015-16 respectively.

61. Interest on Working Capital

As per the provisions of the Regulations, the interest on working capital is calculated as under:

Interest on Working capital **(₹ in Cr.)**

S. No.	**Particular**	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**
i.	O&M expenses for one month	33.97	37.21	41.29
ii.	Maintenance spares @ 15% of the O&M expenses	61.15	66.99	74.32
iii.	Receivables equivalent to 2 months transmission charges	386.34	421.79	457.83
iv.	Total working Capital	481.46	525.99	573.44
v.	Interest on working capital (@ 12.80% as filed)	**61.63**	**67.33**	**73.40**

Return on Equity (RoE)

62. Petitioner's submission

The petitioner broadly submitted the following:

"*The Regulations regarding the present control period, make following provisions for claiming the RoE during control period;*

Return on Equity

23.1. Return on equity shall be computed in rupee terms, on the paid up equity capital determined in accordance with Regulation 20.

23.2. Return on equity shall be computed at the base rate of 15.5% to be grossed up as per clause 23.3 of this Regulation:

Provided that:

i. *in case of Projects commissioned on or after 1st April, 2016, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-I**:*

ii. *the additional return of 0.5% shall not be admissible if the Project is not completed within the timeline specified above for reasons whatsoever:*

iii. *additional RoE of 0.5% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the competent authority that commissioning of the particular element will benefit the system operation in the regional/national grid:*

iv. *the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the Transmission System is found to be declared under Commercial Operation without commissioning of any of the data telemetry and Communication System up to Load Dispatch Centre or protection system:*

v. *as and when any of the above requirements are found lacking in a Transmission System based on the report submitted by SLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:*

23.3. The base rate of return on equity as allowed by the Commission under Regulation 23.2 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respective financial year in line with the provisions of the relevant Finance Acts by the concerned Transmission Licensee, The actual income tax on other income stream including deferred tax (i.e., income of non transmission business) shall not be considered for the calculation of "effective tax rate".

23.4. Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the effective tax rate in accordance with clause 23.3 of this Regulation, and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of or non-transmission business, as the case may be, and the corresponding tax thereon. In case of Transmission Licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

The Transmission Licensee shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any *additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period FY 2016-17 to FY 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the Transmission Licensee. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to the Long Term Transmission Customers on year to year basis.*

***Equity Infused:**–*

The Equity held as per the Audited Accounts for FY 2014-15 provide for following figures for Equity;

(i). Equity held on 31.03.2014 - ₹2375.64 Crores
(ii). Equity held on 31.03.2015 - ₹2553.14 Crores

Eligible Equity for claim of RoE in line with the approach adopted by Hon'ble Commission in True up order of Previous Years is worked out taking opening figures as per the True-up order for 2014-15, and assuming 30% of the Asset capitalized, as mentioned in Para 4.4, as equity infusion year to year; the following tabulated is obtained;

The Equity growth is accordingly given in following table;

(Amount ₹in Crores)

S. No.	Particulars	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
1	Equity at the beginning of the year employed on capitalized works	1958.37	2213.37	2562.84	2941.62
2	Assets capitalized during the year	850.00	1164.92	1262.58	1245.25
3	Equity received during the year	255.00	349.47	378.77	373.57
4	Equity at the end of the year	2213.37	2562.84	2941.62	3315.19

Rate for Claim of RoE:

(i). Base Rate - 15.5%
(ii). M.A.T. Rate - 18.5% + Surcharge of 3% on the same = 19.06%
(iii). Gross Rate - $\dfrac{15.50}{(1 - 0.1906)} = 19.15\%$

63. ***Incentive for early completion of works:***

The Regulations provide that additional 0.5% RoE will be provided for works completed within time line prescribed. This is applicable for works completed on or after 01.04.2009. These have been taken on actuals for works completed during the period 01.04.2009 to

31.03.2015, and thereafter, on assessed basis i.e. the maximum of the previous years. The list of such works completed up to 31.03.2015 has been submitted in the True-up Petition for FY 2014-15.

S N	Addl. RoE claimed in Previous Years through True-up	₹Crores
1	For Works Capitalized In FY 2009-10 (**allowed**)	0.005
2	For Works Capitalized In FY 2010-11 (**allowed**)	0.10
3	For Works Capitalized In FY 2011-12 (**allowed**)	0.12
4	For Works Capitalized In FY 2012-13 (**allowed**)	0.02
5	For Works Capitalized In FY 2013-14 (**allowed**)	0.12
6	For Works Capitalized In FY 2014-15 (**filed**)	0.07
	Total -	**0.44**

FINANCIAL YEAR						
S. No.	**Particulars**	**Up to 31.03.15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
1	0.5% Additional RoE claimed during the year	NA	0.12	0.12	0.12	0.12
2	Cumulative Addl. RoE claimed	0.44	0.56	0.68	0.80	0.92

64. Claim of RoE for Control Period:

(Amount ₹in Crores)

Sr. No.	Particular	Unit	Amount for FY 2016-17	Amount for FY 2017-18	Amount for FY 2018-19
1	Opening Equity (closing equity of previous year)	Rs. Cr.	2213.37	2562.84	2941.62
2	Equity addition due to capitalization during the year i.e. Equity employed on Capitalized works at the end of year	Rs. Cr.	349.47	378.77	373.57
3	Closing Equity	Rs. Cr.	2562.84	2941.62	3315.19
4	Average Equity employed during the year	Rs. Cr.	2388.11	2752.23	3128.41
5	Return on equity base rate	%	15.50%	15.50%	15.50%
6	Tax rate actually paid during the year	%	19.06%	19.06%	19.06%
7	Rate of return on Equity	%	19.15%	19.15%	19.15%

8	***Return on equity***	***Rs. Cr.***	***457.32***	***527.05***	***599.09***
9	*Additional RoE in respect of projects completed within specified time limit*	***Rs. Cr.***	***0.68***	***0.80***	***0.92***
10	***Total return on equity***	***Rs. Cr.***	***458.00***	***527.85***	***600.01***

Toal RoE Claimed for control Period:

(Amount ₹in Crores)

S. No.	*Particulars*	*2016-17*	*2017-18*	*2018-19*
1	*RoE Normal*	*457.32*	*527.05*	*599.09*
2	*RoE Incentive*	*0.68*	*0.80*	*0.92*
3	*Total RoE*	*458.00*	*527.85*	*600.01*

Thus the claim for RoE for the three years of the control period under consideration is submitted as follows;

(i). FY 2016-17 - ₹ 458.00 Crores
(ii). FY 2017-18 - ₹ 527.85 Crores
(iii). FY 2018-19 - ₹ 600.01 Crores"

65. **Provisions of Regulations**

Regulation 23 of MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 provides that,

23.1 Return on equity shall be computed in rupee terms, on the paid up equity capital determined in accordance with Regulation 20.

23.2 Return on equity shall be computed at the base rate of 15.5% to be grossed up as per clause 23.3 of this Regulation:

Provided that:

i. *in case of Projects commissioned on or after 1st April, 2016, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in* **Appendix-I***:*
ii. *the additional return of 0.5% shall not be admissible if the Project is not completed within the timeline specified above for reasons whatsoever:*
iii. *additional RoE of 0.5% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the competent authority that commissioning of the particular element will benefit the system operation in the regional/national grid:*

iv. the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the Transmission System is found to be declared under Commercial Operation without commissioning of any of the data telemetry and Communication System up to Load Dispatch Centre or protection system:

v. as and when any of the above requirements are found lacking in a Transmission System based on the report submitted by SLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

23.3 The base rate of return on equity as allowed by the Commission under Regulation 23.2 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respective financial year in line with the provisions of the relevant Finance Acts by the concerned Transmission Licensee, The actual income tax on other income stream including deferred tax (i.e., income of non transmission business) shall not be considered for the calculation of "effective tax rate".

23.4 Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the effective tax rate in accordance with clause 23.3 of this Regulation, and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of or non-transmission business, as the case may be, and the corresponding tax thereon. In case of Transmission Licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

Illustration.-

(i) In case of the Transmission Licensee paying Minimum Alternate Tax (MAT) say, @ 20.96% including surcharge and cess:

Rate of return on equity = 15.50/ (1-0.0.2096) = 19.610%

(ii) In case of the Transmission Licensee paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from transmission business for FY 2016-17 is Rs 1000 Crore.

(b) Estimated Advance Tax for the year on above is Rs 240 Crore

(c) Effective Tax Rate for the year 2016-17 = Rs 240 Crore/Rs 1000 Crore = 24%

(d) Rate of return on equity = 15.50/ (1-0.24) = 20.395%

(iii) The Transmission Licensee shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period FY 2016-17 to FY 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the Transmission Licensee. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to the Long Term Transmission Customers on year to year basis.

66. Commission's Analysis

Vide Commission's letter dated 31st March' 2016, MPPTCL was asked to submit the documents in support of substantial amount of Equity in each year of the control period to be infused from the Government besides MPPTCL"s share. Vide its submission dated 13th April' 2016, MPPTCL submitted the following:

"Sanctioning of Equity by the State Govt. is a rolling process and is obtained year to year. On the basis of requirement, the appropriate amount as found reasonable by the Govt. is sanctioned in budget of state Government. If felt necessary by the State Government, the amount may be further revised and allocation letter followed by disbursement orders will accordingly be issued by the Government time to time."

67. The Company has not paid any income tax. Therefore, the RoE is allowed @ 15.50 % without grossing up. The actual position shall be considered appropriately during the true-up exercise of the respective year. Accordingly, the RoE allowed in this order is as given below:

Return on Equity allowed **(₹ in crores)**

S. No.	Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
(i)	Equity at the beginning of FY 2014-15 employed on Capitalized Works (as per True up order for FY 2014-15)	1780.98	1958.37	2114.08	2269.79	2425.50

(ii)	Equity infusion (used in creation of Assets)	177.39	155.71	155.71	155.71	155.71
(iii)	Equity at the end of the year employed on Capitalized Works	1958.37	2114.08	2269.79	2425.51	2581.22
(iv)	Average Equity employed on Capitalized Works	1869.68	2036.23	2191.94	2347.65	2503.36
(v)	RoE @ 15.5% Base rate as no Income Tax has been paid	289.80	315.62	339.75	363.89	388.02
(v)	Addl RoE	0.44	0.44	0.44	0.44	0.44
(vi)	Total return on Equity	290.24	316.06	340.19	364.33	388.46

(* Note: The figures for FY 2014-15 & FY 2015-16 are indicative for pro-forma calculation purpose only and not for approval of Return on equity for those years)

Taxes, Duties and Fees

68. Petitioner's submission:
"*Arrears for wage Revision:*

Hon'ble Commission while finalizing O&M norms for MPPTCL has considered the actual O&M expenses of previous years. As the impact of wage revision arising out of the Seventh Pay Commission & the additional amount on account of grant of Third Higher Pay Scale to employees who have completed 30 years of Service due from 1st September 2015 is not foreseen at present and neither any weightage has been applied for consideration towards O&M norms, it is prayed that the claims thus arising out of revision of salary including arrears due to the impact of above may please be allowed on actual basis along with the normative O&M expenses claimed vide Para 5.4 of the petition.

MPERC Fees :

MPPMCL on behalf of the DISCOMS has anticipated the following energy requirement for the 3 years of the control period under consideration. Hon. MPERC presently has fixed a fee at the rate of ₹ 200/- per million unit, which will be paid every year for the ensuing year. Based on this figures of Energy expected to be handled by MPPTCL during this control period, the working of MPERC Fees are as shown in the following table;

SN	***Particulars***	***Units***	***2016-17***	***2017-18***	***2018-19***
1	*Energy handled during the Year*	*MU*	*66131*	*71354*	*76688*
2	*Rate of fees*	*₹ / MU*	*200*	*200*	*200*
3	*Amount towards MPERC fees*	*₹ Crores*	*1.32*	*1.43*	*1.53*

Taxes :

a) As per the clause 37.1 of the Regulations, taxes etc. payable to the Government are not covered through O&M expenses and thus are being claimed separately. Therefore, on the basis of the last audited accounts available the following amount towards taxes & fees (other than MPERC fee) are proposed for the period under consideration as under;

S. No.	Particulars	Units	2016-17	2017-18	2018-19
1	Taxes & fees (other than MPERC fee)	₹ Crores	1.5	1.5	1.5

b) As per Section 194 J of IT Act TDS is being deducted by Long Term Open Access Customer/s @10% from the bills raised by MPPTCL. As the same is over and above the ARR the same is being claimed separately for the control period as hereunder;

S. N.	Particulars	Units	2016-17	2017-18	2018-19
1	ARR of MPPTCL	₹ Crores	3961.57	4363.08	4745.58
2	TDS Claimed by LTOA as per Section 194 J of IT Act @10%	₹ Crores	396.16	436.31	474.56

Incentive:

As per the Regulations, the incentive is linked to the Transmission System Availability and the same is billed to the beneficiaries every month depending on the target and achievements of the Transmission System Availability. Therefore, this is not being claimed through this Petition."

69. Provisions of Regulations

Regulation 30 of MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 provides as under:

Tax on Income

30. Tax on Income streams of the Transmission Licensee shall not be recovered separately from the Transmission Customers:

Tariff income

31. Income from all charges determined by the Commission for transmission of electricity shall be considered as Tariff income. Tariff income shall include transmission charge, reactive energy charge and other charges as may be specified by the Commission.

Non-Tariff Income

32.1. schedule for other income as provided in the schedule of Miscellaneous Charges and General Charges under MPERC (Details to be furnished by licensees for *determination of Tariff and manner of making an application) Regulation 2004 as amended from time to time shall be classified under 'Non-Tariff Income'. The non-tariff income shall include income from investments, Fixed and other deposits and any other non-tariff income.*

32.2. Revenue from other business shall be treated as income to the extent authorized by the Commission under Section 41 of the Act.

Late payment surcharge

33. In case the payment of bills of transmission and other charges are delayed beyond a period of 60 days from the date of presentation of bills, a Transmission Licensee may levy a late payment surcharge at the rate of 1.50% per month for each day of delay of payment.

Rebate

34. For payment of transmission charges through a letter of credit on presentation or through NEFT/RGTS within a period of 2 days of presentation of bill by Transmission Licensee, a rebate of 2% shall be allowed. If the payment is made by any other mode but within a period of one month of presentation of bills by the Transmission Licensee, a rebate of 1% shall be allowed.

Business Plan and Capital Investment

35.0 The Transmission Licensee shall file a detailed capital investment plan, financing plan and physical targets in accordance with guidelines issued by the Commission in this regard for meeting the requirement of load growth, reduction in transmission losses, improvement in quality of supply, reliability, metering etc. The Capital Investment plan shall show separately, on going Projects that will spill into the Year under review and new Project (along with justification) that will commence but may be completed within or beyond the Tariff Period. The Transmission Licensee shall enter into Long-term agreements with Beneficiaries for whom the proposed capital works (schemes) will provide exclusive benefit for upstream and down stream interconnections. Such specific schemes shall be submitted to the Commission for its approval only after the agreements with the Beneficiaries have been executed. The facility shall be made available to such Long- term Beneficiaries and Distribution Licensees only after they enter into Long-term agreement for use of transmission capacity with the Transmission Licensee.

The Commission shall consider and approve the Licensee's capital investment plan for which the Licensee shall be required to provide relevant technical and commercial details. The Licensee shall get the Capital Investment Plan approved by the Commission before filing the Tariff application.

The proportion for debt and equity for the approved capital investment shall be as per Regulation 20".

70. Commission's Analysis

The application fee paid/ to be paid by the petitioner to the Commission is admitted as filed in the petition. The arrears on account of wage revision shall be allowed on actual in the true up exercise for the respective year.

Non Tariff Income

71. Petitioner's submission

The petitioner broadly submitted as under:

"*The Petitioner is earning certain minor income on account of incidental income other than Transmission & Allied charges. These are to be reduced from the Gross ARR to work out Net ARR.*

Based on the True-up petition of 2014-15, the treatment in Non Tariff Income is projected @ 5% increment accordingly.

(Amount ₹ in Crores)

S. No.	Particulars	2016-17	2017-18	2018-19
i	Application fees for Open Access	0.86	0.90	0.95
ii	Hire charges for contractors etc.	1.06	1.11	1.17
iii	Consultant services charges received	12.42	13.04	13.69
iv.	Sale of Tender forms	0.32	0.33	0.35
v	Applications under RTI charges	0.00	0.00	0.00
vi.	Recovery of transport facilities	0.06	0.07	0.07
vii.	Ground rent	0.00	0.00	0.00
viii.	Rent of Staff quarters / Water charges/ Guest House	0.43	0.45	0.47
ix.	Recovery of telephone charges	0.05	0.06	0.06
x.	Other MISC receipts	0.28	0.30	0.31
xi.	Profit on Sale of Store's scrap	3.32	3.48	3.66
	TOTAL -	**18.81**	**19.75**	**20.73**
	Say	**19.00**	**20.00**	**21.00**

72. **Provisions of Regulations**

Regulation 32 of MPERC (Terms & Condition for determination of Transmission Tariff) (Revision–III) Regulations, 2016 provides that,

32.1 A schedule for other income as provided in the schedule of Miscellaneous Charges and General Charges under MPERC (Details to be furnished by licensees for determination of Tariff and manner of making an application) Regulation 2004 as amended from time to time shall be classified under 'Non-Tariff Income'. The non-tariff income shall include income from investments, Fixed and other deposits and any other non-tariff income.

32.2. Revenue from other business shall be treated as income to the extent authorized by the Commission under Section 41 of the Act.

73. Commission's Analysis

The Commission has considered the petitioner's filings. The actual other income will be considered appropriately as per the audited financial statement of the respective year during true-up process. As per the provisions of the Regulations, the following income of MPPTCL is considered under Non-tariff Income in this Order.

Non-Tariff Income:

₹ in Crores

S. No.	Particulars	2016-17	2017-18	2018-19
i	Application fees for Open Access	0.86	0.9	0.95
ii	Hire charges for contractors etc.	1.06	1.11	1.17
iii	Consultant services charges received	12.42	13.04	13.69
iv.	Sale of Tender forms	0.32	0.33	0.35
v	Applications under RTI charges	0	0	0
vi.	Recovery of transport facilities	0.06	0.07	0.07
vii.	Ground rent	0	0	0
viii.	Rent of Staff quarters / Water charges/ Guest House	0.43	0.45	0.47
ix.	Recovery of telephone charges	0.05	0.06	0.06
x.	Other MISC receipts	0.28	0.3	0.31
xi.	Profit on Sale of Store's scrap	3.32	3.48	3.66
	TOTAL -	**18.81**	**19.75**	**20.73**
	Say	**19**	**20**	**21**

Payment towards PPP Licensee M/s KSTPL:

74. Petitioner's submission

"*Hon. MPERC vide order dated 08.10.2013 under Petition No. 45/2013 has adopted the base unitary charge of Rs. 3.15 Crores per month determined through a transparent process of bidding in accordance with the guideline issued by the Central Government under Section 63 of the Electricity Act 2003 . Further, Hon. MPERC, vide its Order dated 01.11.2013, under Petition No. 32/ 2013 has granted transmission Licence to M/s KSTPL. The Licensee has started its commercial operation from April 2015. The claim has been indicated in TUT-15. Submitted that only base unitary charges of M/s KSTPL are included in the MYT Petition as follows:-*

1.	*FY 2016-17*	*3.15x12 =*	*Rs. 37.80 Crores*
2.	*FY 2017-18*	*3.15x12 =*	*Rs. 37.80 Crores*
3.	*FY 2018-19*	*3.15x12 =*	*Rs. 37.80 Crores"*

75. On preliminary scrutiny of the petition, MPPTCL was asked to inform the basis for claiming the expenses of ₹ 37.80 Crores for each year of the control period in ARR of MPPTCL. The details and documents of payment if any, made by MPPTCL till date on this head be submitted.

76. Vide its submission dated 11th March' 2016, MPPTCL has submitted the following:

"*The provision regarding payment of Unitary Charge to the Concessionaire has been given in Article-26 of the Transmission Agreement. The power so transmitted by the Concessionaire (KSTPL) till the Sub-station of the Authority (MPPTCL) shall be for the beneficiaries of the State i.e. Discoms.*

According to the provision made in the Transmission Agreement, the Authority (MPPTCL) shall pay to the Concessionaire (KSTPL) Unitary Charge determined in accordance with the provision of Article-26, as the monthly fee for providing of Transmission Services.

The Base Unitary Charge for the Accounting Year in which COD occurs has been adopted by the Hon. MPERC as ₹ 3.15 Crores per month and for each subsequent Accounting Year, the applicable Base Unitary Charge shall be determined by decreasing Base Unitary Charge for the immediately preceding Account Year by the 3% thereof. The Base Unitary Charge shall be revised to reflect 30% of the variation in Wholesale Price Index (WPI) between the reference Index Date for January 2013 and the reference Index Date for the month of January preceding the Accounting year for which such revision is undertaken.

The Project has achieved the Commercial Operation on 7.4.2015. The details of payment made to the Concessionaire after Commercial Operation up to till date is enclosed along with the documents of payments made by MPPTCL.

Further, a copy of Transmission Agreement signed between MPPTCL and Concessionaire M/s Kalpataru Satpura Transco Pvt. Ltd., Gandhinagar is submitted *herewith.. It is also prayed that the agreement being voluminous is submitted in one copy only. For the other sets the same is enclosed in the form of Compact Disk.*

Here it is also to be submitted that MPPTCL has claimed only the Unitary Charges for the MYT Tariff, other charges shall be claimed during filing of the subsequent True up Petitions."

77. Vide Commission's letter dated 31st March' 2016, MPPTCL was asked to inform the details of Unitary Charges paid to M/s. Kalpataru Satpura Transco Pvt. Ltd., Gandhi Nagar, the break-up of monthly invoice amount and the Discount shown in the table is required to be submitted clearly indicating basis of computation of Unitary Charges with actual availability and incentive and damages in terms of Article 26.5 and 26.6 of Transmission Agreement filed with the instant submission.

78. Vide its submission dated 13th April' 2016 MPPTCL has submitted the following:
"Regarding details of Unitary Charges paid to M/s KSPTL, the breakup of monthly invoice amount etc. are given in Appendix-V. Simultaneously an explanatory breakup for three months (i.e. Aptil'2015, May'2015 & June'2015) is also submitted for the kind consideration of the Commission"

79. The summary of the Annual Revenue Requirement (ARR) approved by the Commission in this order for the control period of FY 2016-17 to FY 2018-19 is as given below: -

Annual Revenue Requirement approved by the Commission

(₹ in Crores)

S. No.	Particulars	ARR for the Financial Year		
		FY 2016-17	**FY 2017-18**	**FY 2018-19**
1	O&M Expenses	407.66	446.58	495.49
2	Expenses towards Payment to PPP	37.80	37.80	37.80
3	Terminal benefits against Current Liabilities	1047.09	1177.9	1282.38
4	Depreciation	320.14	324.22	345.84
5	Interest & Finance Charges	121.33	131.26	143.12
6	Interest on Working Capital	61.63	67.33	73.40
7	Return on Equity	340.19	364.33	388.46
8	MPERC Fee	1.22	1.33	1.47
	TOTAL -	**2337.06**	**2550.74**	**2767.96**
9	Less Non-Tariff Income (-)	19	20	21
10	**NET ARR -**	**2318.06**	**2530.74**	**2746.96**

Transmission Charges for Long Term / Short Term Customers-

80. Petitioner's submission

The petitioner broadly filed the following:

S No	PARTICULARS	2016-17	2017-18	2018-19
1	Annual Fixed Cost in ₹Crores	3961.57	4363.08	4745.58
2	Transmission System Capacity (MW)	15029.37	15324.19	16311.93
3	Transmission Charges for Long Term Customers ₹Lacs per MW per Annum	26.36	28.47	29.09
4	Transmission Charges for Long Term Customers ₹per MW per Day	7221.61	7800.51	7970.61
5	Short Term Rates (25% of above) ₹per MW per Day	1805.40	1950.13	1992.65
6	Short Term Rates for 6 hour block ₹per MW	451.35	487.53	498.16
7	Short Term Rates for more than 6 hour to 12 hour in one block - ₹per MW	902.70	975.06	996.33
8	Short Term Rates for more than 12 hour upto 24 hour in ₹per MW	1805.40	1950.13	1992.65
9	Units expected to be transmitted in a year (MU)	66131.00	71354.00	76688.00
10	Short Term Open Access Rates in ₹per MWH (from S No 1/ S No 9)*0.25	149.76	152.87	154.70

81. Commission's Analysis

Based on the ARR approved by the Commission in this order, the following transmission charges are approved by the Commission for Long term and Short term customers:

Transmission charges for Long Term/Short Term Customers

S No	Particulars	FY 2016-17	FY 2016-18	FY 2018-19
1	Annual Fixed Cost in ₹ Crores	2318.06	2530.74	2746.96
2	Transmission System Capacity (MW)	15013.62	15308.44	16296.18
3	Transmission Charges for Long Term Customers ₹ Lacs per MW per Annum	15.44	16.53	16.86
4	Transmission Charges for Long Term	4230.07	4529.21	4618.20

	Customers ₹ per MW per Day			
5	Short Term Rates (25% of above) ₹ per MW per Day	1057.52	1132.30	1154.55
6	Short Term Rates for 6 hour block ₹ per MW	264.38	283.08	288.64
7	Short Term Rates for more than 6 hour to 12 hour in one block - ₹ per MW	528.76	566.15	577.28
8	Short Term Rates for more than 12 hour upto 24 hour in ₹ per MW	1057.52	1132.30	1154.55
9	Units expected to be transmitted in a year (MU)	60939	66551	73293
10	Short Term Open Access Rates in ₹ per MWH (from S No 1/ S No 9)*0.25	95.10	95.07	93.70

Annual Fixed Cost Allocated to the Long Term Customers –

82. Petitioner's submission

The petitioner filed the following allocation of the annual fixed cost in the petition:

₹in Crores

S. No.	*Customers*	*FY 2016-17*		*FY 2017-18*		*FY 2018-19*	
		Capacity MW	*Amount*	*Capacity MW*	*Amount*	*Capacity MW*	*Amount*
1	*MP Poorva Kshetra VVCL Jabalpur*	*4478.91*	*1180.59*	*4567.01*	*1300.31*	*4862.15*	*1414.53*
2	*MP Madhya Kshetra VVCL Bhopal*	*4770.50*	*1257.45*	*4864.32*	*1384.96*	*5178.68*	*1506.62*
3	*MP Paschim Kshetra VVCL Indore*	*5739.96*	*1512.99*	*5852.86*	*1666.42*	*6231.10*	*1812.80*
4	*MP AKVN SEZ – Pithampur*	*40*	*10.54*	*40.00*	*11.39*	*40.00*	*11.64*
	Total -	***15029.37***	***3961.57***	***15324.19***	***4363.08***	***16311.93***	***4745.58***

83. Commission's Analysis:

The above allocation is reworked and allowed as given below on the basis of Annual fixed cost approved in this Order:

S. No.	Customers	FY 2016-17		FY 2017-18		FY 2018-19	
		Capacity MW	Amount ₹ *Crores*	Capacity MW	Amount ₹ *Crores*	Capacity MW	Amount ₹ *Crores*
1	MP Poorva Kshetra VVCL Jabalpur	4474.12	690.79	4562.21	754.21	4857.35	818.78
2	MP Madhya Kshetra VVCL Bhopal	4766.10	735.87	4859.94	803.43	5174.34	872.21
3	MP Paschim Kshetra VVCL Indore	5733.40	855.22	5846.29	966.49	6224.49	1049.23
		14973.62	2311.89	15268.44	2524.12	16256.18	2740.21
4	MP AKVN SEZ – Pithampur	40	6.18	40	6.61	40	6.74
	Total -	**15013.62**	**2318.06**	**15308.44**	**2530.74**	**16296.18**	**2746.96**

Transmission Charges for Non-conventional Energy source based Generating Units Connected on 132 KV or above Voltage -

84. Petitioner's submission

"*Commission has approved the Transmission Charges for the previous control period in this regard. At present there are 21 nos. non-conventional energy source based generating units connected at 132 KV or above voltage level having a total of 1246.10 MW capacities. As per the applications under process, further additional capacities, as tabulated below, are also expected during the control period under consideration;*

S N	*Particulars*	*FY 2015-16*		*FY 2016-17*		*FY 2017-18*		*FY 2018-19*	
		Addn	*Total*	*Addn*	*Total*	*Addn*	*Total*	*Addn*	*Total*
1	*No. of Connections*	*10*	*21*	*12*	*33*	*19*	*52*	*12*	*64*
2	*RE Capacity in MW*	*614.9*	*1246.1*	*1120.8*	*2366.9*	*1514.5*	*3881.4*	*1022.1*	*4903.5*

During the previous control period, Hon'ble Commission determined the Transmission Charges for this category on Energy Based Pooled Method. The Transmission Charges for the ensuing control period are also worked out on the same method, as given in the table hereunder;

S.	*Particulars*	*Unit*	*FY 2016-17*	*FY 2017-18*	*FY 2018-19*
1	*Annual Fixed Cost as per Tariff*	*₹ Crores*	*3961.57*	*4363.08*	*4745.58*
2	*Transmission System capacity*	*MW*	*15029.37*	*15324.19*	*16311.93*
3	*Transmission charges per MW per Annum*	*₹ Lacs / MW*	*26.36*	*28.47*	*29.09*
4	*Capacity of Non-conventional Energy based Plants connected at 132 KV &*	*MW*	*2366.90*	*3881.40*	*4903.50*

	above				
5	*Total Pooled Capacity*	*MW*	*17396.27*	*19205.59*	*21215.43*
6	*Pooled Cost Addition*	*₹ Crores*	*0.00*	*0.00*	*0.00*
7	*Total Pooled Cost*	*₹ Crores*	*3961.57*	*4363.08*	*4745.58*
8	*Energy expected to be transmitted*	*MU*	*61984*	*64554*	*68097*
9	*Energy generated by Non-conventional Energy based Plant at 20% CUF with MW capacity*	*MU*	*4147*	*6800*	*8591*
10	*Total Energy Handled*	*MU*	*66131*	*71354*	*76688*
11	*Transmission Charges per Unit*	*₹ / Unit*	*0.639* ***(Say 0.64)***	*0.676* ***(Say 0.68)***	*0.619* ***(Say 0.62)***

85. Commission's Analysis

The above transmission charges are reworked and allowed as given below on the basis of Annual fixed cost approved in this Order:

S. No.	**Particulars**	**Unit**	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**
1	Annual Fixed Cost as per Tariff	₹ Crores	2318.06	2530.74	2746.96
2	Transmission System capacity	MW	15013.62	15308.44	16296.18
3	Transmission charges per MW per Annum	₹ Lacs/ MW	15.44	16.53	16.86
4	Capacity of Non-conventional Energy based Plants	MW	2366.9	3881.4	4903.5
5	Total Pooled Capacity	MW	17380.52	19189.84	21199.68
6	Pooled Cost Addition	₹ Crores	0	0	0
7	Total Pooled Cost	₹ Crores	2318.06	2530.74	2746.96
8	Energy expected to be transmitted	MU	60939	66551	73293
9	Energy generated by Non-conventional Energy based Plant at 20% CUF with MW capacity	MU	4146.81	6800.21	8590.93
10	Total Energy Handled	MU	65085.81	73351.21	81883.93
11	Transmission Charges per Unit	₹ / Unit	0.36	0.35	0.34

The above charges shall be applicable for such non-conventional energy based generating units which are connected to the Transmission System at voltage 132 KV and above for energy supplied by them to customers other than Discoms/MP Power Management Co. Ltd.

Fifty percent (50%) of the revenue thus earned through the transmission charges recovered from non-conventional energy source based generating units shall be utilized to reduce the transmission charges of the long term open access customers. The remaining 50% revenue shall be kept by the transmission licensee for making capital expenditure for development of the infrastructure.

86. In exercise of the powers vested in it under Section 64 of the Electricity Act, 2003, the Commission directs that the transmission tariff determined in this order shall be applicable from 1st April, 2016 and will continue to be operative till 31st March, 2019 under Multi Year Tariff principles. The petitioner must take steps to implement this order after giving public notice in accordance to Regulation 1.30 of MPERC (Details to be furnished and fee payable by licensee or generating company for determination of tariff and manner of making application) Regulations, 2004 and its amendments and must also provide information to the Commission in support of having complied with this order.

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

(Alok Gupta) **Member**	**(A. B. Bajpai)** **Member**	**(Dr Dev Raj Birdi)** **Chairman**

Date: 10th June'2016
Place: Bhopal

Annexure-1

Commission's observation and response of petitioner

(i) **Issue :- In Chapter IV of the subject petition, it is mentioned by MPPTCL that the anticipated plan for FY 20016-17 to FY 2018-19 has been worked out after considering the requirements of a particular year and also the impact of scaling down/ shifting of targets. The 12th Five-year Investment Plan of MPPTCL was approved upto FY 2016-17 only whereas, MPPTCL has claimed the "expected capitalization" of works & Physical achievements of works during the control period under consideration (i.e. FY 2016-17 to FY 2018-19). The petitioner was asked to reply to certain queries as mentioned below:**

Issue a :-The basis of anticipation/ requirement of works mentioned in Para 4.3 of the petition.

Response :- *Apropos to the basis of anticipation / requirement of works as mentioned in Para 4.3 of the MYT Petition it is to be submitted for the kind consideration of the Hon. Commission that Govt. of MP has signed MOU with various IPPs for development of Power Plants in Madhya Pradesh for the next five year plan period. Similarly, Madhya Pradesh New and Renewable Energy Department (the MPNRED) has also registered Renewable Energy Projects of about 6000 MW in the state for RE development for the next five years. There shall be substantial availability of power from these Plants, Renewable Energy Projects and IPPs coming up in the State. It is also expected that due to availability of surplus power, there will be a substantial growth in the demand in the rural areas and in the housing & commercial sector in the urban areas, which is expected to substantially increase the load demand in Industrial, Urban and Rural areas.*

Peak demand met in the State of MP during the financial year 2014-15 was 9832 MW and no system constraints in the transmission network of MP have been experienced in meeting this demand. As far as meeting the demand for financial year 2015-16 is concerned, the peak load season is from October to February and the maximum demand met so far has been 10841 MW on 25th December 2015. The net present availability of the State of Madhya Pradesh, including share of Madhya Pradesh from Central Sector Power Projects, Joint Venture Power Projects, IPP and other sources is around 15900

MW.

Objective of the works covered under in TUT-18 is to create infrastructure for evacuation of power available due to implementation of Renewable Energy Projects and IPPs projects and for catering the increased demand of the urban and rural areas in the State of Madhya Pradesh. Implementation of these works will help in evacuation and transmitting the increased power required by the Discoms for providing round-the-clock quality power supply to the consumers in different parts of the State efficiently without overloading of 400 KV, 220 KV & 132 KV lines and EHV Transformers. In addition to above, in order to provide 24x7 round the clock supply to the consumers in MP State and to meet out the present as well as future load demand and reliability of the system, the works covered under control period of Tariff are proposed to be taken up.

MPPTCL will be able to meet various parameters as defined in Grid Code issued by Madhya Pradesh Electricity Regulatory Commission after implementation of these works and the proposed 400 KV, 220 KV & 132 KV substations and associated lines will reduce overloading of the system. With the planned expansion in Transmission System, it is anticipated that the increased demand shall be met without any constraints.

Issue b:- The reasons for considering the need based plan for FY 2016-17 beyond the limit of financial figures in the plan approved by the Commission for FY 2016-17.

Response:-*Regarding the reasons for considering the need base plan for FY 2016-17 beyond the limit of financial figures in the plan approved by the Commission, it is to be submitted that the 12th Five Year Plan FY 2012-13 to FY 2016-17 was approved by the Hon'ble MPERC in the year 2012. This Plan was then prepared on the basis of load forecast, availability of financial resources and cost estimation of different works. Thereafter in financial year 2012-13, 2013-14, 2014-15, various works were executed as denoted in the table below. It can kindly be perused from the table that there is certain slippage in the achievement as against the plan approved by Hon'ble MPERC –*

Financial Year	MPERC Approved Plan in ₹Crores	Actual Achievement in ₹Crores	Difference
2012-13	1359.56	825.25	534.31
2013-14	1124.35	916.52	207.83
2014-15	1736.17	1244.48 (Incl. PPP)	491.69
Total	**4220.08**	**2986.25**	**1233.83**

It is further submitted that due to slippage during 2012-13 to 2014-15, some of the works have been shifted to 2016-17 and therefore the Plan for 2016-17 has been increased from earlier approved plan amount of ₹1181.21 Crores to ₹1738.82 Crores i.e. by ₹557.61 Crores.

Issue c:- Details of work under anticipated plan for FY 2017-18 & FY 2018-19 are mentioned in Format TUT-18 wherein the name of various lending agencies like ADB, PFC, JICA and RE etc are mentioned. The amount and quantum of works actually tied up with the aforesaid lending agencies be mentioned. The source of equity for these works be also mentioned.

Response:- *The financial institution wise abstract alongwith source of Equity and details of work which are tied up and to be tied up with physical targets are submitted as Annexure- I, II & III .*

Issue d:- MPPTCL is required to explain the reasons for each and every proposed work in TUT-18 alongwith the cost benefit analysis.

Response:- *The works proposed to be carried out during the control period have been detailed in TUT-18 of the Petition, the route length and transformation capacity of which is summarized as below:-*

S. No.	PARTICULARS	YEARWISE NEED BASED PHYSICAL PROGRAMME		
		2016-17	2017-18	2018-19
A	EHV LINES			
1	400KV Lines	32.83	63.64	398.62
2	220KV Lines	323.99	202.99	1104.07
3	132KV Lines	954.67	841.45	685.35
	TOTAL CKT KMS	1311.49	1108.09	2188.04
B	MVA Addition			
1	400KV	945	0	1260
2	220KV	1353	536	1929
3	132KV	997	904	54
	TOTAL MVA -	3295	1440	3243

The reasons of the works proposed are as they are required for power evacuation related to commissioning of new generation plants such as MPGenco's Shri Singaji Stage-

II (2x660MW) unit, Central Sector Projects like Vindhyachal Stage-V, Khargone NTPC, Barethi NTPC, Gadarwara NTPC etc. In addition to these IPPs & Renewable Energy Projects are anticipated during the next five year plan.

Consequent to operation of these plants, there also shall be substantial availability of power from these upcoming generating projects in the State. It is also expected that due to availability of increased power, there will be a substantial growth in the demand in both rural areas & in domestic and commercial sector in the urban areas. Considering load growth and consequent increase in demand, it is also envisaged that it will be essential to increase transmission capacity of the State transmission network by way of strengthening and up-gradation of the existing system.

The Cost Benefit Analysis etc. for the works proposed in TUT-18 is enclosed herewith as Annexure--IV. The same is summarized as hereunder;

A.	***Load Conditions***	*Figures*
1	*Anticipated Peak Load of Madhya Pradesh System in MW (including losses) after implementation of project [Year 2018-19]*	*15734.610*
B.	***400KV & 220KV Projects & Interconnection Lines***	
1	*Peak load Loss (%) before implementation of the project [Year 2014-15]*	*3.10%*
2	*Peak load Loss (%) after implementation of the project [Year 2018-19]*	*2.28%*
3	*Saving in Peak Load losses (%) [(1) - (2)]*	*0.82%*
4	*Saving in Peak Load losses (MW) [A(1)xB(3)]*	*129.024*
5	*Annual Units Saved (MkWh) at 70% LF [B(4) x 8760 x 0.532 / 1000]*	*601.292*
6	***Cost of energy saved per annum at Rs.5.29 per unit (Rs.Lakh) [B(5) x 5.29 x 10]***	***31808.358***
C.	***132KV Substations and associated lines***	
1	*Total Annual Power Saved (MW) due to 63 individual 132KV Substations*	*127.143*
2	*Annual Units Saved (MkWh) at 70% LF [C(1) x 8760 x 0.532 / 1000]*	*592.528*
3	***Cost of energy saved per annum at Rs. 5.29 per unit (₹ Lakh) [C(2) x 5.29 x 10]***	***31344.706***

D.	***Revenue from Additional Transmission Capacity***	
1	*Increase in Transformation Capacity at 33KV (MVA)*	*4956.000*
2	*Annual additional units served (MkWh) at 80% diversity factor & 0.9 power factor* *[(1) x 0.8 x 0.9 x 8760 / 1000]*	*31258.483*
3	***Revenue due to additional energy served per annum at ₹0.256 per unit (₹ Lakh) [D(2) x 0.256 x 10]***	***80021.717***
E.	***Total additional revenue earned per annum due to proposed transmission projects (₹Lakh) [B(6)+C(3)+D(3)]***	***143174.781***

Here it is also begged to be submitted that as the details pertaining to Financial & Cost Benefit Analysis being voluminous, only 1 No. hard copy of the Annexure-IV is being enclosed, for the other sets the same is enclosed in the form of Compact Disk.

(ii) **Transmission capacity:**

Issue e:- Considering the generating capacity of M/s BLA Power whose tariff has not been determined beyond 31st March' 2015.

Response :-*The generating capacity of M/s BLA Power has been taken as 15.75 MW for all the three years of control period FY 2016-17 to FY 2018-19. It has been considered on the basis of details of contracted generation with MPPMCL as provided by State Planning Cell of MPPMCL. However, it is also to be submitted that the above capacity is considered only for the purpose of capacity allocation which in-turn forms the basis of proportionate Tariff to be charged from the Long Term Open Access customers.*

Issue f :- Considering the Contracted Transmission capacity of 40MW by M/s SEZ whereas, the long term power supply agreement and procurement of this quantum of power from MPPMCL by SEZ is yet to be finalized as per Annexure III(d) of the petition.

Response :-*M/s SEZ (MPAKVN) have been allocated a capacity of 40 MW envisaged under 25 years Long Term Power supply arrangement commencing from 01.04.2015, to be shared by various generating units of MPGENCO. A copy of letter dated 29.01.2016 from Energy Department, GoMP, conveying the approval for the said 40 MW capacity is placed as Annexure-V, for kind consideration.*

Issue g :- The basis of expected addition of generating Capacity from Central Generating Stations in FY 2017-18 & FY 2018-19.

Response :- *The expected addition of generating capacity from Central Generating Stations in FY 2017-18 and FY 2018-19 is made on the basis of data provided by State Planning Cell of MPPMCL (on the basis of PPAs executed) for 1st April 2016, 1st April 2017 and 1st April 2018.*

(iii) **Issue h :- In sub-para 4.5 of the petition, MPPTCL has projected the physical assets based on the 12th Transmission plan for FY 2012-13 to FY 2016-17 by considering only 66.66% achievement of the Transmission Plan. It has further given an anticipated achievement in FY 2016-17. In view of the aforesaid, the actual physical and financial achievement of the 12th Plan as on date with expected projections upto 01st April' 2016 vis-a-vis the approved figures in 12th Plan be submitted to arrive at the corrected projections.**

Response:- *The physical and financial achievement for the 12th plan (actual for 2012-13 to 2014-15) and anticipated for FY 2015-16 upto March 2016) is enclosed as Annexure VI & VII respectively.*

(iv) **Issue I :- MPPTCL has also claimed the expenses of ₹ 37.80 Crores for each year of the control period. The basis for claiming this amount in ARR of MPPTCL along with the details and documents of payment if any, made by MPPTCL till date on this head be submitted.**

Response :- *The provision regarding payment of Unitary Charge to the Concessionaire has been given in Article-26 of the Transmission Agreement. The power so transmitted by the Concessionaire (KSTPL) till the Sub-station of the Authority (MPPTCL) shall be for the beneficiaries of the State i.e. Discoms.*

According to the provision made in the Transmission Agreement, the Authority (MPPTCL) shall pay to the Concessionaire (KSTPL) Unitary Charge determined in accordance with the provision of Article-26, as the monthly fee for providing of Transmission Services.

The Base Unitary Charge for the Accounting Year in which COD occurs has been adopted by the Hon. MPERC as ₹ 3.15 Crores per month and for each subsequent Accounting Year, the applicable Base Unitary Charge shall be determined by decreasing Base Unitary Charge for the immediately preceding Account Year by the 3% thereof. The Base Unitary Charge shall be revised to reflect 30% of the variation in Wholesale Price Index (WPI) between the reference Index Date for January 2013 and the reference Index Date for the month of January preceding the Accounting year for which such revision is undertaken.

The Project has achieved the Commercial Operation on 7.4.2015. The details of payment made to the Concessionaire after Commercial Operation up to till date is enclosed as Annexure -VIII along with the documents of payments made by MPPTCL.

Further, a copy of Transmission Agreement signed between MPPTCL and Concessionaire M/s Kalpataru Satpura Transco Pvt. Ltd., Gandhinagar is submitted herewith as Annexure - IX.. It is also prayed that the agreement being voluminous is submitted in one copy only. For the other sets the same is enclosed in the form of Compact Disk.

Here it is also to be submitted that MPPTCL has claimed only the Unitary Charges for the MYT Tariff, other charges shall be claimed during filing of the subsequent True up Petitions. .

(v) **Issue j :- Terminal Benefit Expenses:**

The petitioner has claimed the provisioning for working employees and the contribution of amount for gratuity and pension on year-to-year basis for next 15 years and 20 years to build up a terminal benefit fund for the past-unfunded liability. The petitioner has claimed total terminal benefit liabilities including the aforesaid claims also. In view of the aforesaid, MPPTCL is required to substantiate its claim in light of the provisions under MPERC (Terms & Conditions for allowing pension and terminal benefit liabilities of personnel on board and successor entities) Regulations, 2012 notified on 20th April, 2012.

Response :-*The Petitioner has claimed the Terminal Benefit liabilities as per the MPERC (Terms & Conditions for allowing Pension & Terminal Benefits liabilities of personnel of* *the Board and successor Entities, 2012)(G-38 of 2012) notified on 20th April 2012. Only those liabilities have been claimed, which are entrusted to the Transmission Company, and the liabilities on part of other Companies have not been claimed. A specific remark in Para 6.10 is given to clarify this, which is reiterated for reference of Hon'ble Commission.*

"6.10 ***Remarks:***

The other Companies i.e. the Genco and Discoms are required to make provision for the liabilities on their part in their ARR, mainly the contribution to Trust for Pensioners retired after 31.05.2005 corresponding to their services in the Company, and provisioning for their working employees."

The claims are as per Regulations, as an example the figures for FY 2016-17 alongwith the reference of corresponding Regulations is shown in the following table;

S. No.	Category	Regulation Para	Provision	Claim in MYT Petition	Amount (₹ Crores) for FY 2016-17
1	Existing Pensioners retired upto 01.06.05 cash out flow	**3** (2) (i) & **3** (3)	Shall be allowed as a pass through in the Tariff of MPPTCL.	**Para 6.6** Table S. No. 1 S. No. 4	303.49 144.37
2	Pensioners retired after 01.06.2005				
(a)	Corresponding to service upto 01.06.2005	**3** (2) (i) & **3** (4)	Shall be allowed as a pass through in the Tariff of MPPTCL.	**Para 6.6** Table S. No. 2	396.50
(b)	Corresponding to services after 01.06.2005	**3** (2) (i) & **3** (4)	Shall be allowed as a pass through in the Tariff of respective successor entities	Not claimed for Genco and Discoms. To be claimed by them.	NIL
(c)	Claim for category 2(b) above but for MPPTCL and MPPMCL	**3** (2) (i) & **3** (4)	Shall be allowed as a pass through in the Tariff of respective successor entities. Liabilities of MPPMCL also entrusted to MPPTCL.	**Para 6.6** Table S. No. 3 S. No. 5	146.72 35.41
	Total current claim on part of MPPTCL -				**1026.49**
3	Provisioning for working employees for future service				
(a)	For employees of MPPTCL & MPPMCL	**3** (2) (iii) & **3** (6)	Shall be allowed in the Tariff of the respective successor entities limited to the extent to be decided by the Commission.	**Para 6.7** Table	117.12

S. No.	Category	Regulation Para	Provision	Claim in MYT Petition	Amount (₹ Crores) for FY 2016-17
(b)	For employees of Genco, Discoms.	**3** (2) (iii) & **3** (6)	Shall be allowed in the Tariff of the respective successor entities limited to the extent to be decided by the Commission.	Not claimed. To be claimed by Genco and Discoms.	NIL
4	Contribution to be made for Pension & Terminal Benefit Trust Fund for all the past services till 31.05.2005 of personnel of Board and its successor entities both retired and in service.	**3** (2) (ii) & **3** (5)	Shall be allowed in the Tariff of MPPTCL in the relevant year limited to the extent to be decided by the Commission.	**Para 6.8**	909.62
5				**GRAND TOTAL -**	**2053.23**
6	The liabilities for payment due in lieu of leave not availed at the time of retirement (for MPPTCL only)				**20.60**
					₹2073.83 Crores

The amount for FY 2017-18 and FY 2018-19 is given in the petition. Thus, the claims in Petition for FY 2016-17 to FY 2018-19 of the MPPTCL are as per the Terminal Benefit Regulations.

(vi) **Issue k :- Depreciation:**

In table under para 7.1 of the petition, GFA as on 31.03.2015 is mentioned as ₹6928.81 Crore whereas, Note 12 of the audited balance sheet mentions GFA as ₹6784.54 Crore. This discrepancy be clarified/rectified by the petitioner.

Response :-*Regarding the observation made, it is to be submitted that as per the Regulations, the GFA includes the Assets created out of consumer contributions, whereas the Depreciation earned on them is then subtracted from total Depreciation claim. In the new Format of Accounts (Note 12), these are separately indicated. The figures are shown hereunder;*

(i)	*GFA shown in Note 12*	*₹6784.54 Crores*
(ii)	*Assets created against Consumer Contribution*	*+ ₹131.29 Crores*
(iii)	*Assets created against Consumer Contribution (against deferred income)*	*+ ₹13.00 Crores*
(iv)	*Adjustment of OBS*	*(-) ₹0.02 Crores*
	TOTAL -	***₹6928.81 Crores***

₹6928.81 Crores is the figure in the Table of Para 7.1 of the Petition, as such it is to be mentioned for kind consideration that there is no discrepancy as such.

(vii) **Issue l :- Interest and Finance charges:**

The weighted average rate of interest for FY 2016-17 has been worked out as 5.50%, 5.85% in FY 2017-18 and 6.31% in FY 2018-19. These weighted average rates are higher than the weighted average rate of interest actually claimed in the True up petition for FY 2014-15. The reason for increase in these figures with reference to each loan scheme be submitted. The petitioner is also required to submit the documents along with terms and conditions of loan schemes to the Commission.

Response :- *It may be seen from the table (Annexure-X) that the weighted average interest rate of the existing loans of MPPTCL shows a decreasing trend, whereas the same for new loans is having an increasing trend. This is mainly due to the following reasons-*

(i) All disbursements during FY 2016-17 to FY 2018-19 are from new loans which is increasing periodically, whereas in case of existing loans, principal not due amount (majorly from ADB/JICA having lower interest rates) are decreasing gradually. This leads to lower weighted average interest rates in case of existing loans while that for the new loans have higher Weighted Average Rates (as can be seen from Annexure-X).

(ii) The rate of interest assumed for the new loans, which is based on the rate of the existing loans from these agencies/similar agencies, is quite high. The table below depicts the Agency wise interest rates considered for calculation of the weighted average interest rates along with the basis for the assumptions thereof:

S. No.	***Funding agency***	***Interest rate for loan disbursed upto FY 2014-15***	***Remarks***
1	*JICA*	*1.50%*	*Assumed same 1.50%*
2	*ADB*	*2%*	*Assumed same 2%*
3	*PFC*	*11.25%*	*Assumed same 11.25%*
4	*GoI Intervention*	*Not Applicable*	*Since the funding agency is not yet decided the interest rate is assumed @ 16.50% as per the latest GoMP order.*
5	*REC*	*Not Applicable*	*Assumed @ 10.10% as per latest accepted offer.*

6	*Other sources*	*Not Applicable*	*Since the funding agency is not yet decided the interest rate is assumed @ 11.25% as per the latest PFC rate.*
7	*Other loan*	*Not Applicable*	*Since the funding agency is not yet decided the interest rate is assumed @ 11.25% as per the latest PFC rate.*

(viii) **Issue m :- The year-wise details regarding State Government and other loans as provided in Annexure-XIV of the petition is appearing irrelevant in light of the provisions under MPERC (Terms & Conditions for determination of Transmission Tariff) Regulation, 2015 since the repayment is now to be considered equal to the depreciation for the year. Further, unlike the actual status of the principal and interest repayments informed by the petitioner in its true-up petitions, these figures show payment of total due amount, which is not appearing in line with the past trends. In view of the aforesaid observation, the working for the lender-wise loan balances at the start and end of each financial year be revised and resubmitted to the Commission so that computation of interest and finance charges for the multi year period be possible appropriately.**

Response :- *Regarding the MPERC Regulation of Depreciation equal to repayment, the True up is actual position whereas MYT 2017-19 is estimation only. It is prayed that at this stage it cannot be forecasted that repayment and interest payment will have to be deferred as this will depend on the extent of Transmission charges, which will be paid by Discoms in the future.*

However, as indicated in S. No. 3 of the table given in Para 8.5 (Page 37) of the MYT Petition, the depreciated amount has been fully deducted while calculating the Weighted Average Rate of Interest.

(ix) **Issue n :- The petitioner has mentioned 61984 MU, 64554 MU and 68097 MU as total energy handled during FY 2016-17, FY 2017-18 and FY 2018-19 respectively. The aforesaid quantum of energy filed in the subject petition is at variance with the total energy requirement (ex-bus) filed by MP Power Management Co. Ltd in its petition for determination of ARR and retail supply tariff for FY 2016-17. The variation in figures be reconciled and the reconciled figures be filed to the**

Commission.

Response :-*The figures related to energy handled has been made available by MPPMCL on behalf of Discoms which is subject to scrutiny by Hon'ble Commission. Now, MPPMCL in its retail supply tariff petition for FY 2016-17 at page 92 has indicated the following energy requirement;*

S. No.	***Particulars***	***FY 2016-17***	***FY 2017-18***	***FY 2018-19***
1	*Total Ex-bus energy requirement*	*62442*	*68215*	*75130*
2	*Total energy requirement at State periphery*	*60939*	*66551*	*73293*

The MPPTCL is expected to handle the total energy requirement at State periphery of Madhya Pradesh.

(xi) **Issue :- Cost Benefit and Financial Analysis of transmission projects planned during FY 2016-17 to FY 2018-19 :**

Issue o :- The percentage transmission loss derived from the study (Annexure I-A) is 3.10% and 2.28% for FY 2014-15 & FY 2018-19 respectively whereas, MPPTCL has already achieved transmission loss of 2.82% in FY 2014-15.

Response:- Actual transmission losses of 2.82% achieved by MPPTCL in the financial year 2014-15 are the average annual energy losses for a period of one year whereas the loss of 3.10% derived from the studies for 2014-15 are the peak power losses corresponding to the peak load of 11490.89 MW which is bit higher than the average annual energy losses. The average annual energy loss is derived from the varying demand of the system throughout the year and is always less than peak load losses. In view of this, peak load loss and annual energy loss can not be directly correlated with each other.

Issue p:-The cost of energy is considered @ Rs. 5.29 per unit in the Cost Benefit Analysis. The basis of the aforesaid assumption is not mentioned.

Response:- The cost of energy @ ₹ 5.29 per unit in the Cost Benefit Analysis (Annexure-I-B) calculation is considered from Table No. 92 (Page No.122) of the

Aggregate Revenue Requirement and Retail Supply Tariff order for FY 2015-16. The same has been enclosed herewith for reference.

Issue q:- Annual units saving is calculated at 70% load factor for 132 kV sub-stations and associated lines. The reasons for assuming 70% load factor is not mentioned.

Response :- As per the prevailing practices, in order to derive average annual energy from the saving in peak power losses the load factor of 70% is considered for calculation of Loss Load Factor. The loss load factor is derived as per the formula given hereunder:-

$LLF = (0.2xLF) + (0.8xLF^2)$

Where, LLF is Loss Load Factor
LF is Load Factor

The load factor of 70% has also been accepted by the Financial Lending Agencies.

Issue r :- The reasons for considering revenue from additional transmission capacity at 33 kV (Sub-Transmission Network) considering 80% diversity factor and revenue on account of additional energy served per annum @ Rs. 0.256 per is also not clear.

Response :- Here it is to be submitted that as all the transformers do not operate at peak load simultaneously an 80% diversity factor for calculation of additional energy served has been considered. Further, with the advent of large number of Renewable Energy Plants coming up in the State, which are normally connected at 132 KV voltage level, it is assumed that the additional transmission capacity so developed shall be used by them. As per Hon'ble Commission order dated 04.02.2013, whereby ` 0.256 as transmission charges per unit has been fixed for Non-conventional generators connected at 132 KV level or above for supply of power through open access, thus the same has been considered. The relevant portion of Para 3.134, Table No. 86 (Page No. 72) of the Transmission MYT order for FY 2013-14 to FY 2015-16 issued on dated 04.02.2013 is enclosed .

Issue s :-The reason for considering Equity below 30% in case of PFC-II Loan, JICA-I Loan and RE-I (KFW) Loan needs to be explained.

Response :-The equity considered under these loans has been shown to be below 30% as the same was considered during the time of sanctioning of the said schemes. However, it is to be submitted for consideration that the infusion of equity by the State

Government is an ongoing process, it may please be perused that the Government equity may reach the 30% mark. It is also to be submitted that the same will be firmed up during the True-up process.

Issue t :- The rate of interest considered in Annexure II for JICA and ADB loans is much below the rate of interest mentioned in Page 8 of instant reply filed by MPPTCL in its letter under reference. The reason for difference in the rate of interest be submitted.

Response :- The rate of interest as shown in Annexure(II) of the Cost Benefit Analysis shows the rate of interest for JICA and ADB Loan which is being charged by the funding agencies from the Govt. of India. While the rate of interest as mentioned in para 8 of the reply dated 11.03.2016 is the rate which includes the additional interest charged by GoMP and the LIBOR rate as well as risk of currency exchange rate variations. It is also to be submitted that the same are of plan in nature and can only be firmed during the True-up stage.

Issue u :- In financial analysis of all proposed transmission projects (in Annexure-III), principal repayment is shown as NIL during the first three years and the amount of interest is shown only upto FY 2033-34 whereas, the moratorium period is shown as different for various lending agency.

Response :-In the financial analysis of proposed transmission project the principle repayment is shown as NIL because the construction period of the works from the date of sanction of loan is considered as 3 years and during the construction period no principle amount is repaid to the lending agency. The Principal amount is paid up by the 12th year thus interest becomes zero by that time.

Issue v:- The basis and reason for considering O&M charges only in financial analysis for transmission projects be submitted.

Response :- As, O&M is the only charge which continues for the full life of the Asset, thus, O&M charges have been considered after completion of the project which shall be incurred by MPPTCL and recovered through the Tariff.

Issue w:-The loan agreements/ documents indicating terms and conditions, moratorium period and the applicable rate of interest in respect of each lending agency like PFC, ADB, JICA and REC etc tied up for the proposed transmission

projects be submitted.

Response:- The loan agreements executed with lending agency like PFC, ADB, JICA and REC is enclosed in which the terms and conditions of the loan, moratorium period and applicable rate of interest of the loan is mentioned

(xii) Issue x:- Financial Achievements during 12th Plan:

It is observed from the year-wise financial achievement of MPPTCL in 12th Plan (FY 2012-13 to FY 2016-17) that the actual achievement upto FY 2014-15 and anticipated upto FY 2016-17 is only 70% of the plan approved by the Commission for EHV lines. Similarly, the achievement in respect of EHV Sub-Stations is 90% of the plan approved by the Commission. Accordingly, the over all actual financial achievement upto FY 2014-15 including anticipated achievement in FY 2015-16 and FY 2016-17 is 80% of the approved plan. In view of the aforesaid observations, MPPTCL is required to inform the reasons/ constraints faced by it for shortfall in the last five years plan approved by the Commission for FY 2012-13 to FY 2016-17.

Response :-Regarding the observation raised by Hon'ble Commission in this regard, it is to be submitted for kind consideration that the following causes restrained the Company to achieve the 100% mark :-

i. *Slackness of Contractors and other related problems*
ii. *Right Of Way problems*
iii. *Release of finance by Lending Agency*
iv. *Change in Load/ Generator parameters*
v. *Various Legal issues.*

(xiii) Issue y :- Financial Plan for FY 2016-17 to FY 2018-19:

In Annexure I filed with the instant submission, it is observed from the statement of financial institution-wise plan that a substantial amount of equity in each year of the control period is shown to be infused from the Government besides MPPTCL's share. However, no document/ approval of the State Government is submitted by MPPTCL in this regard. Therefore, the supporting documents need to be submitted by MPPTCL.

Response :- In this subject it is to be submitted that sanctioning of Equity by the State Govt. is a rolling process and is obtained year to year. On the basis of requirement, the appropriate amount as found reasonable by the Govt. is sanctioned in budget of state Government. If felt necessary by the State Government, the amount may be further *revised and allocation letter followed by disbursement orders will accordingly be issued by the Government time to time.*

(xiv) Issue z :-Sharing of Transmission Charges:

In terms of Regulation 4.1 (za) and (zo) of MPERC (Terms and Conditions for determination of Transmission Tariff) Regulations, 2016 "Long Term Transmission Customers" means *a person having a Long Term Transmission Service agreement with the Transmission Licensee including deemed Transmission Licensee for use of intra/ inter-State Transmission System by paying transmission charges and the term may be used interchangeably with the term Designated ISTS Customers (DICs)* and the "Transmission Service Agreement" means *the agreement entered into between the Transmission Licensee and the Long-Term/Medium Term Transmission customer(s) for the use of Transmission System*.

Accordingly, the Transmission Service Agreement for 40 MW power between MPPTCL and SEZ (MPAKVN) is required to be submitted before apportionment/ sharing of transmission charges in terms of Regulation 4.2 of MPERC (Terms and Conditions for determination of Transmission Tariff) Regulations, 2016.

Response :-With respect to the observation raised, it is to be submitted that M/s SEZ (MPAKVN) has since drawn up an agreement with MPPTCL. A copy of the same is put up.

(xv) Issue a1:-Unitary Charges:

Regarding details of Unitary Charges paid to M/s. Kalpataru Satpura Transco Pvt. Ltd., Gandhi Nagar, the break-up of monthly invoice amount and the Discount shown in the table is required to be submitted clearly indicating basis of computation of Unitary Charges with actual availability and incentive and damages in terms of Article 26.5 and 26.6 of Transmission Agreement filed with the instant submission.

Response :-Regarding details of Unitary Charges paid to M/s KSPTL, the breakup of monthly invoice amount etc. are given. Simultaneously an explanatory breakup for three months (i.e. Aptil'2015, May'2015 & June'2015) is also submitted for the kind consideration of the Commission.

(xvi) Issue a2 :-Interest and Finance Charges:

One specimen copy of each loan agreement in respect of new loans (wherein the rate of interest has been increased) be submitted in support of the contention of MPPTCL

for Interest and Finance charges.

Response :-As desired, specimen copies of each loan agreement in respect of new REC & PFC loans are submitted.

(xvii) Issue:- The actual figures for addition to EHV lines and sub-station bays completed by MPPTCL as on 31st March' 2016 so as to arrive at the more realistic figures for computation of O&M expenditure in each year during the control period in the subject petition.

Response:-Vide letter No. 04-01/CRA/F-100/3723 dated 11th May' 2016, MPPTCL has submitted the figures as on 31st March' 2015, added during FY 2015-16 and the figures as on 31st March' 2016 as tabulated below:

S. No.	***Particulars***	***Position as on 31.3.2015***	***Added during 2015-16***	***Position as on 31.3.2016***
1.	*400 KV Lines*	*3074.45*	*0.00*	*3074.45*
2.	*220 KV Lines*	*11801.08*	*338.68*	*12139.76*
3.	*132 KV Lines*	*15319.45*	*830.42*	*16149.87*
1.	*400 KV Bays*	*117*	*4*	*121*
2.	*220 KV Bays*	*574*	*32*	*606*
3.	*132 KV Bays*	*1820*	*166*	*1986*