



ANNUAL REPORT
ON
REGULATORY COMPLIANCE
FOR THE YEAR
2016 - 2017



REPORTER OF COMPLIANCE

M.P. POWER TRANSMISSION COMPANY LTD.
2ND BLOCK, SHAKTI BHAWAN, JABALPUR.

**ANNUAL REPORT ON REGULATORY COMPLIANCE
IN RESPECT OF MP POWER TRANSMISSION COMPANY LIMITED
ANNUAL REPORT FOR THE YEAR 2016-17**

1. PREAMBLE -

1.1 MP POWER TRANSMISSION COMPANY – THE LICENSEE -

Deemed Transmission Licensee, Madhya Pradesh Power Transmission Company Limited was formed consequent to the reorganization of erstwhile MP State Electricity Board, to undertake the Intra-State Transmission activities in the State of Madhya Pradesh. The Company has been registered under Companies Act, 1956 on 22.11.2001. It started functioning under an O&M agreement with MPSEB since July 2002, and started independent functioning since 1st June 2005. It has also been declared as the State Transmission Utility vide the State Government's order No. 2491/13/04/BPL dated 17.05.2004 to function with effect from 01.06.2004. It is the deemed Transmission Licensee for the State of Madhya Pradesh as per Section-14 of the Electricity Act, 2003 and is also operating the State Load Despatch Centre (SLDC) situated at Jabalpur, under Section 31 of the Act.

Principal function of MPPTCL is to transmit / transform the power from the Generating Stations situated in the State to the area of Distribution Licensees. The power from the Central Sector and other Inter-State Generating sets is transmitted to Distribution Licensees & others, from the MP periphery, where the power is received through the network of Inter-State Transmission Licensee.

Sum total of the power requirement of the Long Term Open Access Customers of the State at its peak comes to be around 11,500 MW. To handle this much quantum of power, MPPTCL has developed a Transmission system of adequate capacity with the following infrastructure as on 31.03.2017;

S. No.	Voltage	EHV Lines (Ckt. Kms)	Net MVA Capacity	Net No. of Sub-stations
1.	400 KV	3074.45	7350	9
2.	220 KV	12324.12	21990	71
3.	132 KV	16909.82	24056	250
4.	66 KV	61.00	20	1
TOTAL -		32369.39	53416	331

Above Transmission system of MPPTCL is connected to the system of PGCIL, State Generating Stations and Sub-transmission network of Discoms and others through 944 interface points, having proper metering.

1.2 REGULATIONS ON REGULATORY COMPLIANCE -

Kind reference may be made to The Electricity Act 2003, whereby it may be observed that on one hand it provides for taking measures conducive to

development of Electricity Industry, promoting competition therein, protecting interest of consumers and on the other hand it provides for a Regulatory Authority to regulate the Licensees in the area of Cost, Tariff and quality of supply to the customers. Under the provisions of the Vidyut Sudhar Adhiniyam and the Electricity Act, 2003, the MP Electricity Regulatory Commission has been functioning in the State. The functions of the State Commission are described in Section-86 of the Act. One of the functions of the State Commission mentioned in Section 86(i-j) is to specify or enforce standards with respect to quality, continuity and reliability of service by the Licensees. Accordingly, Hon'ble State Commission notified Regulations on Transmission Performance Standards, Management Information System (MIS), License Conditions, State Grid Code etc. This required a continuous process of reporting by the Licensee and monitoring by the Hon'ble Commission. To facilitate this Hon'ble Commission in exercise of Powers conferred under Section 181 Sub-section (1) of the said Act notified the MPERC (Guidelines for Reporting of Regulatory Compliance) Regulations, 2005 on 13th May 2005. Regarding the objective of "Compliance Reporting System", it is mentioned that the Licensee should build a sound and effective Regulatory Compliance mechanism. The Regulations are applicable to all the Licensees in the State including the Transmission Licensee.

1.3 SALIENT FEATURES OF REGULATIONS -

Salient features of regulations direct;

- i. Ensure timely submission of periodical reports covering all the items under report.
- ii. Appointment of a Reporter of Compliance by each licensee, entrusted with the responsibility of reporting Regulatory Compliance.
- iii. Setting-up reporting procedures for formulation and submission of Half Yearly and Annual Reports by Reporter of Compliance, to the Commission.
- iv. Specify the periodical reports to be included and specific areas to be covered, under the report of the Reporter of Compliance.
- v. Taking cognizance of the reports by the Top Management/ Directors of the Company.

1.4 REPORTER OF COMPLIANCE -

Engagement of a full time Reporter of Compliance, as per the Regulations notified by Hon'ble State Commission, is under process. In the intermediate period, Shri Sameer Nagotia, Executive Director (CRA) has been entrusted with the duties of Reporter of Compliance by the Company.

1.5 REPORTING PROCEDURE -

Notified Regulation provides for submission of following reports by the Reporter of Compliance;

- i. Half Yearly Report for the period April to September; to be submitted by 31st December.
- ii. Annual Report of the financial year; to be submitted by 30th June of following year.

The reports are required to be fragmented in three parts;

- i. Reports on issues fully complied with.
- ii. Reports on issues partially complied with.
- iii. Reports on issues not complied with, along with reasons and future course of action.

1.6 REPORTS COVERED UNDER THE REGULATIONS -

Annexure 'A' appended with the Regulations of 2005, specify the periodical reports on which Reporter of Compliance has to base his report. The reports concerning the Transmission Licensee are shown in the following table;

MIS Report	To be submitted within 30 days of end of each quarter.
Compliance of MP Electricity Grid Code	Various compliances to be submitted on different dates.
Transmission Performance Standards	To be submitted within 45 days of end of each quarter.
Conditions of Licensee	Various compliances to be submitted on different dates.
Open Access Regulations	Various compliances to be submitted on different dates.
MPERC (SLDC fees and charges) Regulations	Various compliances to be submitted on different dates.
MPERC (Treatment of other business of licensee)	Various compliances to be submitted on different dates.

1.7 SUBMISSION OF EARLIER REPORTS BY REPORTER OF COMPLIANCE -

Ensuring compliance to the Regulations, following reports have been submitted by the Reporter of Compliance before Hon'ble Commission for the period covered under this report are as below:-

S. No.	Report	Reference of submission
1.	Annual Report for year 2015-16	Letter No. 04-01/ CRA Cell/F-6/ 5244 dtd. 27.06.2016
2.	Half Yearly Report for April-September 2016.	Letter No. 04-01/ CRA Cell/F-6/ 10425 dtd. 29.12.2016

1.8 ANNUAL REPORT FOR YEAR 2016-17 -

During the period of report, i.e. 2016-17, the Transmission Licensee has submitted the periodical reports covering all the four quarters of the year in time. The licensee has also reported compliance on other points to be covered under the report. The instant report is based on above mentioned reports, and discussions / analysis thereon.

2. MIS REPORTS -

2.1 MIS REGULATIONS -

Hon'ble Commission, on 2nd April 2004, notified the MP Electricity Regulatory Commission (Monitoring of performance of Licensee and Generating Companies) Regulations, 2004. Different sets of reports have been prescribed for Generation, Transmission and Distribution Licensees. Subsequently, Hon'ble Commission vide notification dtd. 31st October 2008, has made certain amendments in the reporting formats. The details to be furnished in revised formats are as under:-

S. No.	Format No.	Sub-Numbers	Details Covered
1	Tr-1	(i)	Energy Accounting
		(ii)	Voltage-wise Losses
2	Tr-1(a)	(i)	Details of top Ten congested EHV Lines
3	Tr-2	(i)	Transmission System Availability
		(ii)	Availability of Five critical Lines
		(iii)	Frequency Excursion
		(iv)	Maximum Demand met out
		(v)	Capacity addition of EHV Lines
		(vi)	Capacity addition of EHV Sub-stations
4	Tr-3	(i)	SLDC's Infrastructure.
		(ii)	Remote Terminal Units
		(iii)	Interface Meters
		(iv)	Backing down of Generating Units
		(v)	Voltage variations in EHV Sub-stations

2.2 SUBMISSION OF MIS REPORTS -

The Transmission Licensee is submitting the quarterly reports on MIS regularly. The reports for the year 2016-17 have been submitted as per the references mentioned hereunder;

S. N.	Period	Reference of submission to the Commission
1	April-June '16	Letter No. 04-01/CRA Cell/ F-15/ 6125 dtd. 30/07/2016
2	July - Sept.'16	Letter No. 04-01/CRA Cell/ F-15/ 8770 dtd. 29/10/2016
3	Oct.-Dec.'16	Letter No. 04-01/CRA Cell/ F-15/ 0846 dtd. 30/01/2017
4	Jan.-March'17	Letter No. 04-01/CRA Cell/F-15/ 3723 dtd. 27/04/2017

Thus, all MIS reports have been submitted by the licensee, i.e. MPPTCL, within specified time of one month from the end of the quarter, as per the formats prescribed for the purpose.

2.3 DATA CHECKS BY REPORTER OF COMPLIANCE –

It has been checked by the Reporter of Compliance from records that the reports submitted by the licensee are based on the data supplied by the different HODs, as mentioned hereunder;

(i)	Information of Energy Account and Computation of losses	CE (T&C), CE(LD) and C.E. (Planning & Design).
(ii)	Overloading on feeders	CE (T&C)/CE (Planning & Design)
(iii)	System/feeder/Transformer Availability	CE (T&C)/ C.E.(EHT- M&I)
(iv)	Max. Demand met out	C.E.(Load Despatch)
(v)	Capacity Addition	C.E. (Planning & Design).
(vi)	Frequency Excursion	C.E. (Load Despatch)
(vii)	SLDC's equipment's functioning, schedules and drawls.	C.E. (Load Despatch)
(viii)	Position of Interface meters & Voltage related information.	CE (T&C) & CE (Planning & Design)

2.4 STATUS OF COMPLIANCE ON REPORTING –

2.4.1 REPORTS FULLY COMPLIED –

Following reports have been fully complied in all the four quarters of the year 2016-17;

S. No.	Reports fully complied	Reference of Format
1	Energy received and sent out in the Transmission System with computation of Transmission Losses.	Tr-1
2	Voltage-wise Transmission Losses for 400 KV, 220 KV and 132 KV System.	Tr-1
3	Information of Top 10 lines with maximum congestion.	Tr-1-a
4	Voltage-wise and overall Transmission System Availability	Tr-2
5	Transmission System Availability of 5 major critical lines.	Tr-2
6	Frequency excursion	Tr-2
7	Demand met out during the quarter	Tr-2
8	Voltage-wise EHV lines added during the quarter	Tr-2
9	Voltage-wise Transformation Capacity added during quarter	Tr-2
10	Details of RTUs/Transducers in service for data acquisition by SLDC.	Tr-3
11	Inter-face points and Metering status	Tr-3
12	Voltage variation in 400 KV, 220 KV and 132 KV S/s.	Tr-3
13	Name of 5 Sub-stations which recorded lowest voltages at 33 KV level.	Tr-3
14	Name of 5 Sub-stations which recorded highest voltages at 33 KV level.	Tr-3

2.4.2 REPORTS PARTIALLY COMPLIED –

There is no report on which reporting is partial.

2.4.3 REPORTS NOT COMPLIED –

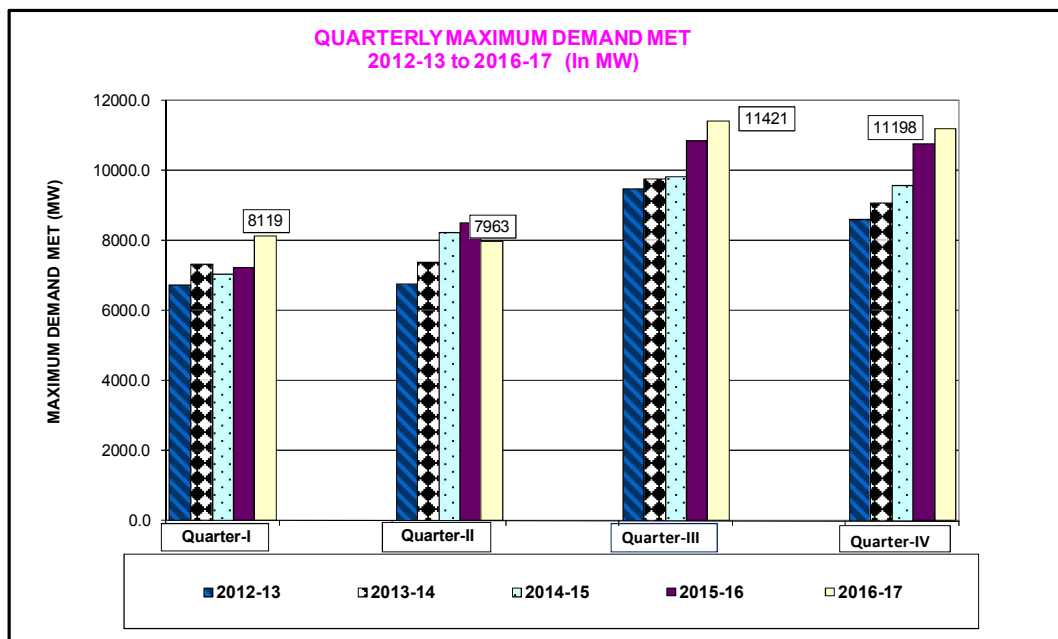
There is no aspect of the report which is not complied with.

2.5 POINTS RELATED TO PERFORMANCE OF THE COMPANY –

The MIS Reports of the four quarters of year 2016-17 indicates better performance of the MPPTCL on following points;

2.5.1 MAXIMUM DEMAND MET OUT–

With the enhancement of the Transmission system capacity and availability of power, it has been possible to meet a never before peak demand of 11421 MW during the third quarter of 2016-17. No Transmission constraint was observed in meeting this peak demand. Transmission system in MP caters maximum load during Rabi Season i.e. from October to March. Maximum demand met during the four quarters of year 2016-17 as compared to the previous four years (Quarter-wise), making it a five year pictorial display, is shown hereunder;



2.5.2 FREQUENCY EXCURSION –

MPPTCL cooperated in keeping system frequency in healthy zone most of the time. For the year 2016-17 as a whole, the frequency remained within the prescribed Target Range as set in the Performance Standards of Max (+) 1.0% or 50.5 Hz & Minimum (-) 2.0% or 49.0 Hz for most of the time; while as per the Statuary Acceptable Range given in the above referred Standards of Max (+) 3.0 % or 51.5 Hz & Minimum (-) 3.0 % or 48.5 Hz.

The frequency profile for 2016-17 is given below;

Frequency Excursion : 2016-17

Sr. No.	Frequency Ranges	% Time
a	ABOVE 50.05 Hz	20.11
b	49.9 TO 50.05 Hz	72.43
c	49.7 TO 49.9 Hz	7.40
d	49.5 TO 49.7 Hz	0.06
e	49.2 TO 49.5 Hz	0.00
f	BELOW 49.2 Hz	0.00

Here it is also to be mentioned that as per IEGC, the frequency band is specified between 49.90 to 50.05 Hz (w.e.f. 17.02.14).

2.5.3 CAPACITY ADDITION -

The Licensee has added the following EHV Lines and Sub-stations, after accounting for augmentation/ up-gradation etc., the figures as on 31.03.2017 is also indicated hereunder;

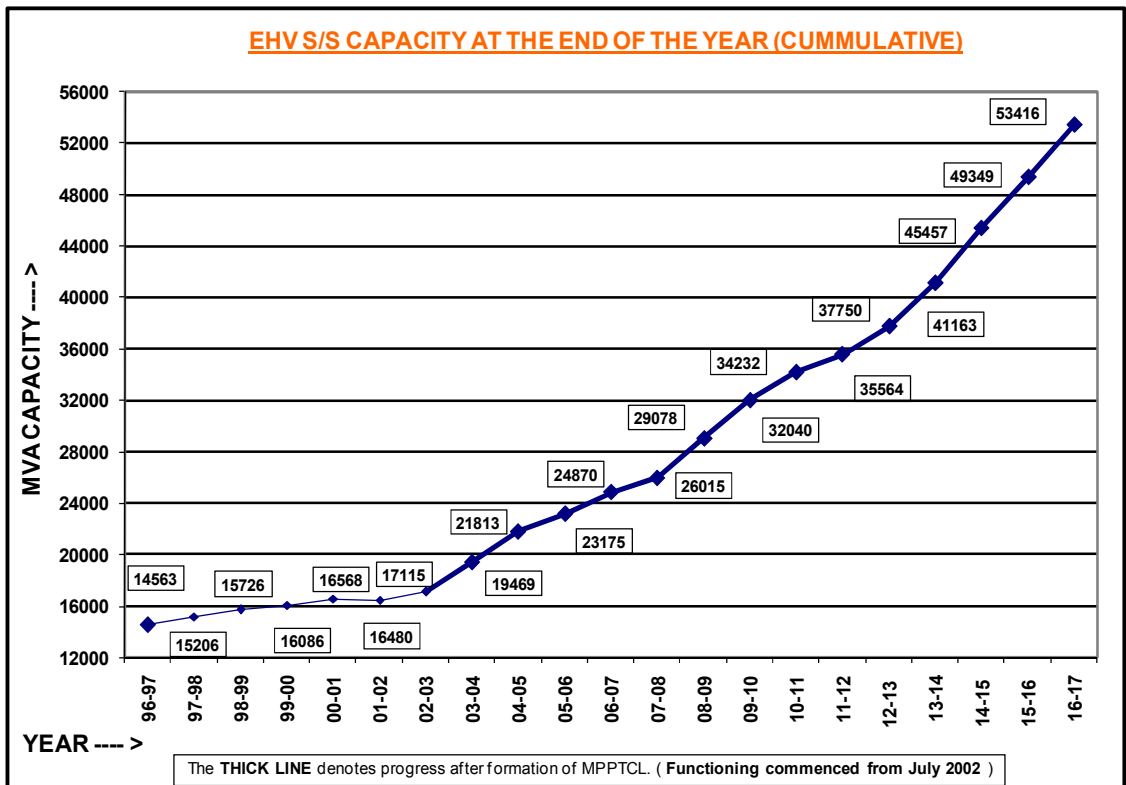
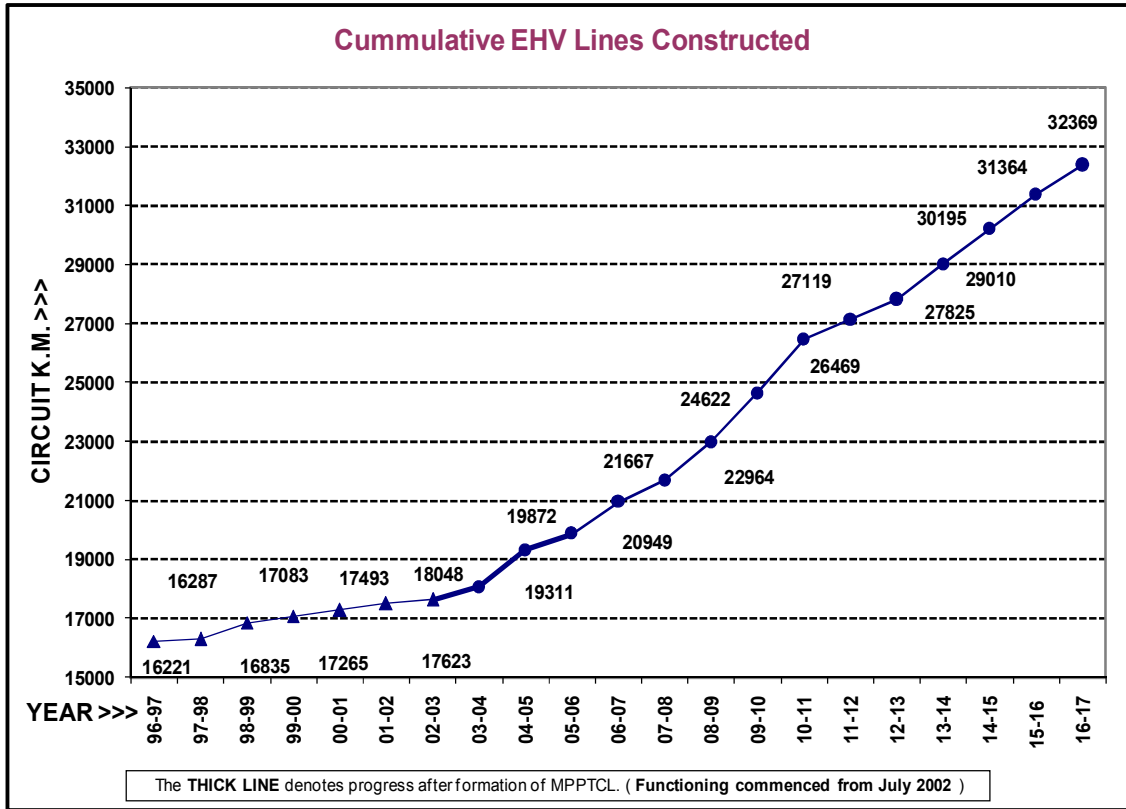
(a) EHV LINES -

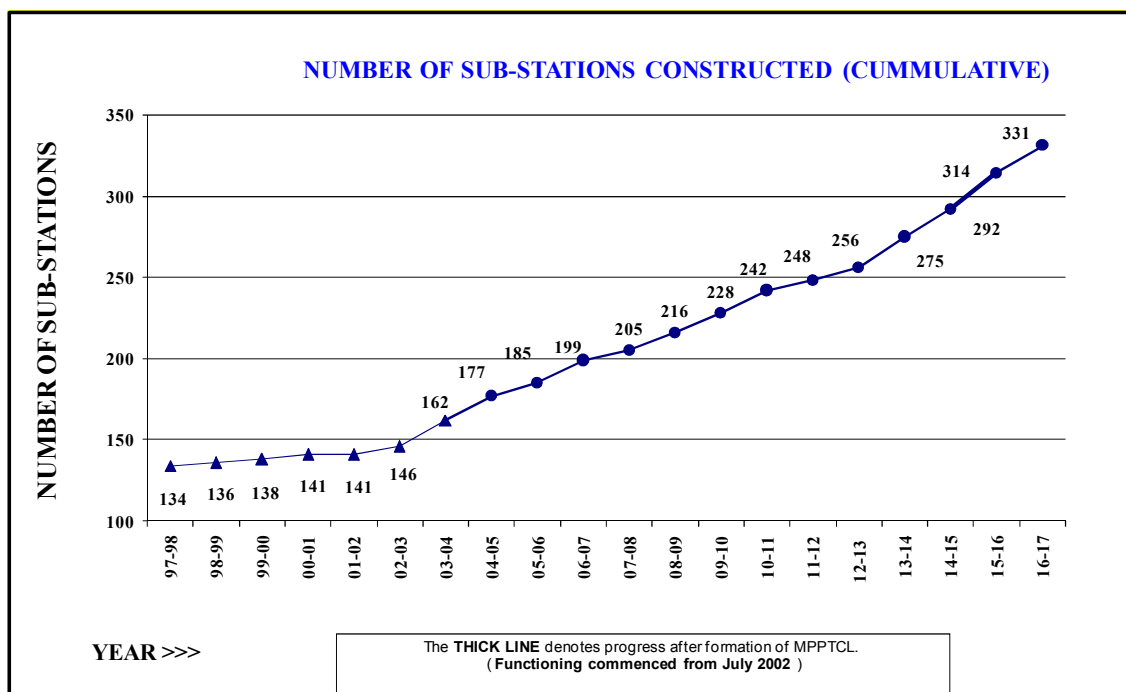
S. No.	Voltage	Total progress for 2016-17 only	Cumulative EHV Lines (Ckt-kms) as on 31.03.17
1	400 KV	0.0	3074.45
2	220 KV	184.36	12324.12
3	132 KV	820.96	16909.82
4	66 KV	0	61.00
TOTAL -		1005.32	32369.39

(b) SUB-STATION CAPACITY -

S No	Voltage	Total progress for 2016-17 only	Cumulative MVA (Net) as on 31.03.17
1	400 KV	0	7350
2	220 KV	1980	20010
3	132 KV	2087	21969
4	66 KV	0	20
TOTAL -		4067	49349

There has been consistent growth in the Transmission System, since the Transmission Licensee started functioning (July 2002), which is clear from the trend as seen from the curves given below;





2.5.4 TRANSMISSION SYSTEM AVAILABILITY –

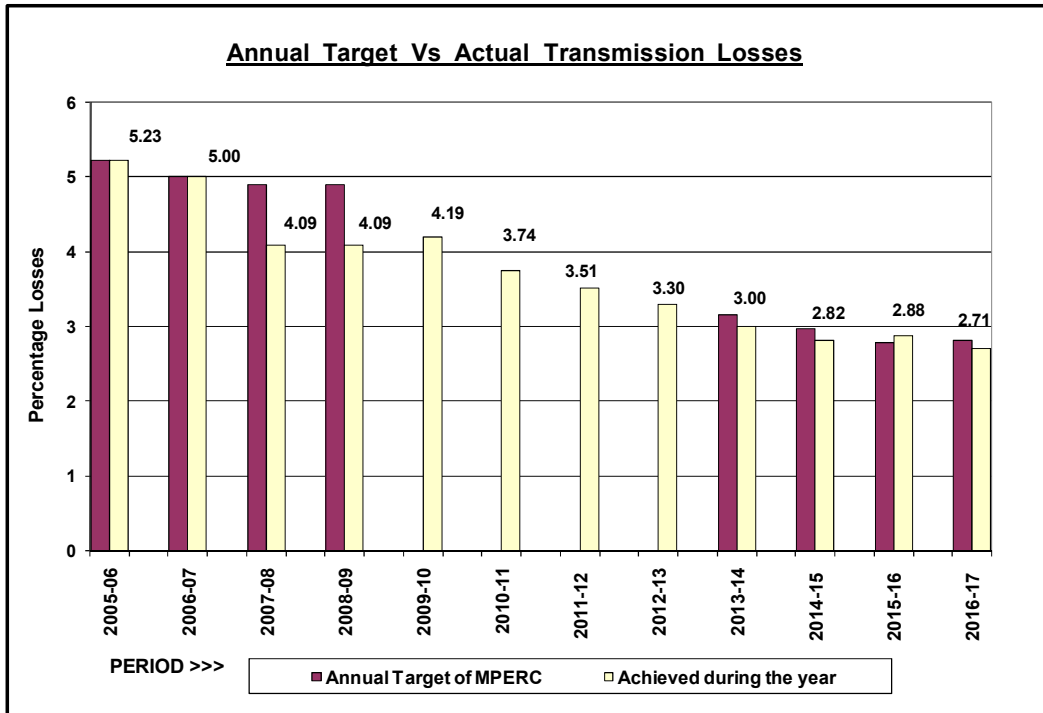
Hon’ble Commission has fixed a target of Transmission System Availability as 98.0% for year 2016-17 as per tariff Regulations. Although the Transmission System Availability achieved during the first two quarters were on the lower side primarily on account of outage of 3 nos. 315 MVA 400 KV Transformers; it increased subsequently in the subsequent next two quarters consequent to the repair/ replacement of 2 nos. damaged 400 KV Transformers. The third unit has been replaced in May 2017. It is, however, to be submitted that, the annual average Availability achieved for the year 2016-17 has been above the stipulated target of 98% determined by the Commission. The quarterly and annual achievement against the set target is tabulated below;

S. No.	Period	Target Fixed	Actual Achieved
1	April-June’16	98.0%	98.17 %
2	July-September’16	98.0%	97.99 %
3	October -December’16	98.0%	98.58 %
4	January-March’17	98.0%	98.83 %
5	Overall availability in 2016-17	98.0%	98.39 %

2.5.5 TRANSMISSION LOSSES –

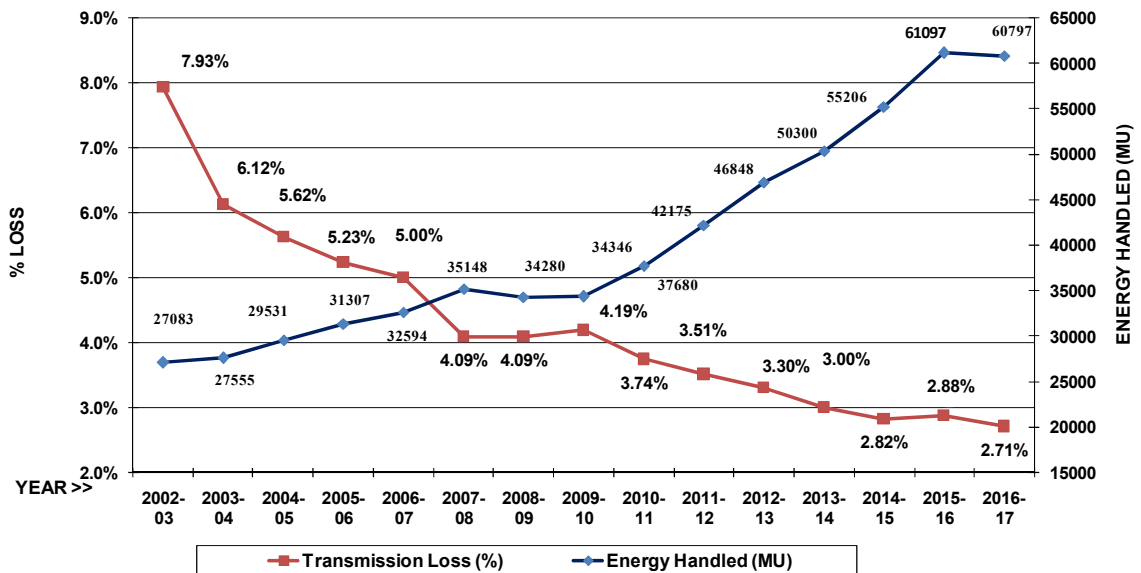
The Company has submitted that there are a number of factors contributing to Transmission Losses, which are not controllable by the Transmission Licensee and in spite of the increase in Energy handled by Intra-State Transmission System, MPPTCL has been able to reduce Transmission Losses continuously during the past years. Akin to the achievement of the past, during the period under report too, MPPTCL has recorded transmission losses as 2.71% as against the target of 2.82% set by the Hon. Commission.

It may please be perused that MPPTCL has always been able to limit its transmission losses within the target fixed by Hon'ble State Commission, except for the meager increase during the previous year, as may be viewed in the following chart;



It is to be submitted that MPPTCL has been able to limit Transmission Losses vis-à-vis the Target, as well as reduce losses continuously during the past years, in spite of the increase in Demand & Energy handled. The same is pictorially depicted below;

YEARWISE TREND OF TRANSMISSION LOSS & ENERGY HANDLED



2.5.6 VOLTAGE LEVEL-WISE LOSSES –

When MPPTCL took over the Intra-State Transmission activities, there was a concern over high Transmission losses in 220 KV System. This was due to the fact that the 220 KV feeders were the main power evacuation Lines carrying heavy load over long distances. Ergo, it can be safely assumed that execution of Plan has brought tangible results, which is evident from the following table indicating the voltage level-wise losses and overall system losses for a five year period;

S. No.	System Voltage	Transmission Losses in Percentage				
		2012-13	2013-14	2014-15	2015-16	2016-17
1	400 KV	1.22%	1.19%	1.01%	0.95%	1.13%
2	220 KV	2.11%	1.85%	1.75%	1.72%	1.92%
3	132 KV	0.92%	0.79%	0.81%	0.86%	0.44%
4	Total System	3.30%	3.00%	2.82%	2.88%	2.71%

2.6 SLDC CONTROL -

The SLDC at Jabalpur has been upgraded with the State of Art technology based equipments provided for Supervisory Control & Data Acquisition (SCADA) under the Unified Load Dispatch & Communication (ULDC) project of Western Region. SLDC is monitoring the activities through the SCADA & AMR System.

2.6.1 EQUIPMENTS -

Meters have been provided at all the 944 interface points for energy accounting and are generally in working condition. The total numbers of points where RTUs are to be installed at the end of year are - 231 Nos. Out of these, RTUs are provided at 217 Points and except for 19 points, all other RTUs provided for MW, MVAR, Voltage & Frequency measurement/ recordings are in working condition.

2.6.2 GENERATION SCHEDULE -

The SLDC is monitoring daily generation schedule and actual generation for Intra-State Thermal Generating Stations. There was no instance when back-down was required.

2.7 PERFORMANCE IMPROVEMENT THROUGH SYSTEM STRENGTHENING –

There are the areas where improvements are gradually coming up with the completion of works covered under Transmission Plan. The 5 year Investment Plan for the period 2012-2017, has already been approved by Hon'ble Commission which is under execution for the period of this report. Although an

immediate switch over to ideal conditions is not expected as these are linked to long term planning involving huge investments, the plan is expected to take care of the weaker areas . These are discussed hereunder;

2.7.1 OVER LOADING OF EHV LINES –

MPPTCL has a system of monitoring the loading on EHV Lines and to take remedial measures, both Short Term as well as Long Term, in case of persistent overloading. The 10 lines with maximum congestion during a quarter are reported under quarterly MIS reporting to the Hon’ble Commission.

Here it would be proper to mention that as per CEA’s “Manual On Transmission Planning Criteria (January 2013)” the loading limit for a transmission line is to be its thermal loading limit and not calculated on the basis of SIL. Therefore, it may be appreciated that, in lines with the CEA’s document, the loading on nearly all the lines is within the prescribed limits. However, looking to the prevailing regulation, the report in this regard for the four quarters and the reasons for overloading and remedial measures as discussed with concerned HoDs are tabulated hereunder;

Quarter - April 2016 To June 2016

Name of top 10 lines with Max. congestion in terms of MW for continuously 2 hrs.		Max. Load MW	% loading with ref. to SIL	Avg. Max. Load	Remarks
1	132 KV South Zone-SatyaSai	95	190	66	To overcome the overloading problem, up-gradation of 132 kV S/s North Zone has been proposed for 2019.
2	132 KV Jetpur-NorthZone-I	86	172	48	Although the average maximum load is within limits, however to overcome such future problems, up-gradation of 132 kV S/s North Zone has been proposed for 2019-20.
3	132 KV Jetpur-NorthZone-II	86	172	48	Although the average maximum load is within limits, however to overcome such future problems, up-gradation of 132 kV S/s North Zone has been proposed for 2019-20..
4	132 KV Bhopal - Amarawadkhurd	85	170	66	To overcome the problem, an 132 KV Interconnector from 220 Kv S/s Mugalia -Chhap to 132 Kv S/s MACT proposed for 2018-19.
5	132 KV Chambal-NorthZone	83	166	40	Although the average maximum load is well within limits, to overcome such future problems, up-gradation of 132 kV S/s North Zone has been proposed for 2019-20.
6	132 KV Mahalgaon-Tighra	71	142	62	To overcome the problem a 220 Kv S/s at Morena is under construction (has been now commissioned on 18.03.17)

Name of top 10 lines with Max. congestion in terms of MW for continuously 2 hrs.		Max. Load MW	% loading with ref. to SIL	Avg. Max. Load	Remarks
7	132 KV Rewa-Mangawan	70	140	58	To overcome the problem Second circuit stringing was proposed, the same has been completed on 27.06.16.
8	132 KV Datia-Dabra	70	140	32	The average maximum load is well within limits, the overloading was due to certain contingency only.
9	132 KV Mahalgaon-Motijheel	69	138	56	To overcome the problem, 220 Kv S/s Morena is proposed. The position is expected to improve on commissioning of the above S/s & the same is presently under construction and is expected to be completed in 2016-17 (has been subsequently commissioned on 18.03.17)
10	132 KV Malanpur-Banmore-I	68	136	42	Although the average maximum load is within limits, to overcome such future problems, 220 Kv S/s Morena is proposed. The position is expected to improve on commissioning of the above S/s & the same is presently under construction and is expected to be completed in 2016-17 (has been subsequently commissioned on 18.03.17).

Quarter - July 2016 To September 2016

Name of top 10 lines with Max. congestion in terms of MW for continuously 2 hrs.		Max. Load MW	% loading with ref. to SIL	Avg. Max. Load	Remarks
1	132 KV Mahalgaon - Tighra	90	181	66	To overcome the problem, 220 Kv S/s Morena was proposed. The position is expected to improve on commissioning of the above S/s & the same is presently under construction and is expected to be completed in 2016-17 (has been subsequently commissioned on 18.3.17).
2	132 KV Dabra-Gwalior	89	177	56	To mitigate the overloading factor, 132 Kv Datia-Dabra line from 220 kv S/s Datia was proposed, the work of same has now been completed on 10.10.2016
3	132 KV Sabalgargh - Sheopur-I	88	175	71	To overcome the problem,, up-gradation of 132 kV S/s Sheopur has been proposed for 2020.
4	132 KV Sabalgargh - Sheopur-II	87	173	71	To overcome the problem,, up-gradation of 132 kV S/s Sheopur has been proposed for 2020.

Name of top 10 lines with Max. congestion in terms of MW for continuously 2 hrs.		Max. Load MW	% loading with ref. to SIL	Avg. Max Load	Remarks
5	132 KV Mahalgaon-Motijheel	83	165	57	To overcome the problem, 220 Kv S/s Morena is proposed. The position is expected to improve on commissioning of the above S/s & the same is presently under construction and is expected to be completed in 2016-17 (has been subsequently commissioned on 18.03.17).
6	132KV Satya Sai- South Zone	78	156	56	Although the average maximum load is within limits, to overcome such future problems, up-gradation of 132 kV S/s North Zone has been proposed for 2019-20.
7	132 KV Mehgaon - Bhind	77	153	73	New 132KV S/s Pratappura is proposed so that such problems could be avoided in future, which has now been charged and load taken in October 2016.
8	132 KV Bina-Chanderi	72	144	45	Although the average maximum load is within limits, to overcome the problem,, up-gradation of 132 kV S/s Pichhore has been proposed for 2020.
9	220 KV Bina - Shivpuri	166	126	118	Although the average maximum load is within limits, to overcome the problem in future, up-gradation of 132 kV S/s Pichhore has been proposed for 2020.
10	132 KV Electronics Complex - South Zone	62	124	41	Although the average maximum load is within limits, to overcome such future problems, up-gradation of 132 kV S/s North Zone has been proposed for 2019-20.

Quarter - October 2016 To December 2016

Name of top 10 lines with Max. congestion in terms of MW for continuously 2 hrs.		Max. Load MW	% loading with ref. to SIL	Avg. Max Load	Remarks
1	132KV Mahalgaon-Tighra	89.4	178.8	51.5	To mitigate the overload situation, a 220 Kv S/s at Morena was proposed, the same is under construction (has been subsequently commissioned on 18.03.17).
2	132KV Mahalgaon-Motijheel	81.6	163.2	46.0	To mitigate the overload situation, a 220 Kv S/s at Morena was proposed, the same is under construction (has been subsequently commissioned on 18.03.17).

Name of top 10 lines with Max. congestion in terms of MW for continuously 2 hrs.		Max. Load MW	% loading with ref. to SIL	Avg. Max Load	Remarks
3	220KV Indore-Jetpura-II	203.0	153.8	116.0	Although the average maximum load is within limits, to overcome such future problems and also get flexibility, LILO of 220 Kv Ujjain - Jetpura Ckt-I & II at 765 kV S/s PGCIL is proposed for 2018-19.
4	220KV Indore-Jetpura-I	182.0	137.9	110.0	Although the average maximum load is within limits, to overcome such future problems and also get flexibility, LILO of 220 Kv Ujjain - Jetpura Ckt-I & II at 765 kV S/s PGCIL is proposed for 2018-19.
5	132KV South Zone-Mangalia- Raukhedi	74.0	148.0	39.0	Although the average maximum load is within limits, to overcome such future problems, up-gradation of 132 kV S/s Mangalia has been proposed for 2017-18.
6	132KV South Zone-Satya Sai	74.0	148.0	41.0	Although the average maximum load is within limits, to overcome such future problems, up-gradation of 132 kV S/s North Zone has been proposed for 2019-20.
7	132KV Sabalgarh-Sheopur-I	73.6	147.2	46.1	The average maximum load is within limits, however to overcome future problems, New 220KV S/s Sheopur has been proposed for 2020-21.
8	132KV Sabalgarh-Sheopur-II	73.6	147.2	46.1	The average maximum load is within limits, however to overcome future problems, New 220KV S/s Sheopur has been proposed for 2020-21.
9	132 KV Rewa-Mangawan	72.8	145.6	57.0	To mitigate the overload situation, a Second circuiting work has been taken up and is under commissioning.
10	132KV Electronic Complex-South Zone	69	138.0	36.0	Although the average maximum load is within limits, however to overcome such future problems, up-gradation of 132 kV S/s North Zone has been proposed for 2019-20.

Quarterly MIS - January 2017 To March 2017

Name of top 10 lines with Max. congestion in terms of MW for continuously 2 hrs.		Max. Load MW	% loading wrt SIL	Avg. Max Load	Remarks
1	132KV Satya Sai - South Zone	91	182	45	Although the average maximum load is within limits, however to overcome such future problems, up-gradation of 132 kV S/s North Zone has been proposed for 2019-20.
2	132 KV Electronic Complex - South Zone	83	166	34	Although the average maximum load is within limits, to overcome such future problems, up-gradation of 132 kV S/s N. Z. has been proposed for 2019-20.
3	132 KV Guna-Bhoura	80	160	40	To mitigate the overload situation, a Second circuit stringing work of 132 KV Guna-Bhoura DCSS Line has been proposed for 2019-20.
4	132KV Mehgaon-Bhind	77	154	69	The overloading was due to certain contingency only.
5	220 KV Indore-Jetpura-II	192	145	74	To mitigate the overload situation, LILO of 220 Kv Ujjain - Jetpura Ckt-I & II at 765 kV S/s PGCIL is proposed for 2018-19.
6	220KV Indore-South Zone-II	190	144	128	Although the average maximum load is within limits, to overcome such future over loading situation, Conductor Augmentation with HTLS conductor is proposed for 2021.
7	132 KV Mandsour-Daloda	70	140	46	Although the average maximum load is within limits, to overcome such future problems, and also for flexibility, LILO of both Ckt. Of 132KV Mandsour-Neemuch Line at 400KV S/s Mandsour has been proposed in 2021.
8	132 KV Nagda-Khachrod	67	134	50	To mitigate the overload situation, a New 132KV Nagda-Khachrod-Jaora DCSS Line was sanctioned, it is presently under construction.
9	220KV Indore-South Zone-I	175	133	119	Although the average maximum load is within limits, to overcome such future problems, and for easing of load, conductor augmentation with HTLS conductor has been proposed for 2021.
10	220 KV Indore-Jetpura-I	173	131	82	Although the average maximum load is within limits, to overcome such future problems and to mitigate the overload situation, LILO of 220 Kv Ujjain - Jetpura Ckt-I & II at 765 kV S/s PGCIL is proposed in 2018-19.

Note –Average Max. load indicates average of daily maximum load.

2.8 VOLTAGE VARIATION IN SUB-STATIONS –

The Transmission Licensee devised a system to study the load conditions, which in turn culminated to strengthening of transmission system at every voltage level. This has resulted in tangible improvement in the Voltage Profile. Although, there have been incidences of voltage deviations beyond the upper limit prescribed in 400 KV System connected to Inter-State Grid; to mitigate the problem, 400 KV reactors were installed by MPPTCL at Nagda and Katni 400 KV Sub-stations during the year and it has been intimated that provision for installation of Reactors at all proposed new 400 KV Sub-stations are being pursued. These works may prove to be effective in controlling over voltages. It is worthwhile to mention that in none of the quarters the voltage has gone below the lower designated limit in case of 400 KV systems in any of the Sub-stations.

Regarding 220 KV, 132 KV or 33 KV systems, it is to be brought to the kind notice of the Hon'ble Commission that no voltages beyond the upper or lower limits were reported during the year.

Apart from the above, for voltage control, capacitor banks of 5578 MVAR capacities were in operation during the year.

It is evident from the following tables that the low voltage problem has been practically eliminated. The quarterly details of voltage deviations, where measurement was possible, occurring beyond the upper and lower limits during 2015-16 & 2016-17 in terms of no. of Sub-stations are indicated as hereunder:

IST QUARTER

S. No.	Voltage class of Sub-station	Quarter ending June '15			Quarter ending June '16		
		No. of S/s	Voltage deviation beyond		No. of S/s	Voltage deviation beyond	
			Upper Limit	Lower Limit		Upper Limit	Lower Limit
1	400 KV	9	6	NIL	9	4	NIL
2	220 KV	62	NIL	NIL	67	NIL	NIL
3	132 KV	218	NIL	NIL	240	NIL	NIL
TOTAL -		289	6	NIL	316	4	NIL

IIND QUARTER

S. No.	Voltage class of Sub-station	Quarter ending Sept.'15			Quarter ending Sept. '16		
		No. of S/s	Voltage deviation beyond		No. of S/s	Voltage deviation beyond	
			Upper Limit	Lower Limit		Upper Limit	Lower Limit
1	400 KV	9	7	NIL	9	4	NIL
2	220 KV	62	NIL	NIL	68	NIL	NIL
3	132 KV	218	NIL	NIL	240	NIL	NIL
TOTAL -		289	7	NIL	317	4	NIL

IIIRD QUARTER

S. No.	Voltage class of Sub-station	Quarter ending Dec.'15		Quarter ending Dec. '16			
		No. of S/s	Voltage deviation beyond		No. of S/s	Voltage deviation beyond	
			Upper Limit	Lower Limit		Upper Limit	Lower Limit
1	400 KV	9	3	NIL	9	6	NIL
2	220 KV	63	NIL	NIL	67	NIL	NIL
3	132 KV	232	NIL	4	244	NIL	NIL
TOTAL -		304	3	4	320	6	NIL

IVth QUARTER

S. No.	Voltage class of Sub-station	Quarter ending Mar.'16		Quarter ending Mar. '17			
		No. of S/s	Voltage deviation beyond		No. of S/s	Voltage deviation beyond	
			Upper Limit	Lower Limit		Upper Limit	Lower Limit
1	400 KV	9	4	NIL	9	6	NIL
2	220 KV	66	NIL	NIL	67	NIL	NIL
3	132 KV	235	NIL	NIL	249	NIL	NIL
TOTAL -		310	4	NIL	325	6	NIL

2.09 IMPACT OF CAPITAL WORKS EXECUTED DURING 2016-17 –

It has been noted that the important works completed during 2016-17 were commissioned in the second half of year, therefore, their impact on associated Lines / Sub-station will be known in the subsequent quarters.

2.10 OBSERVATIONS OF THE COMMISSION –

Apropos to the monthly report submitted to Hon'ble Commission, vide its letter No. MPERC/D(T)/2016/ 1861 dtd. 25.11.2016, made some observation regarding delay in rectification of failed EHV transformers at 400KV S/s Bina & 400KV S/s Julwania and sought the Company's response.

In the above context, MPPTCL submitted its response vide letter No. 9996 dated 15.12.2016 to Hon'ble Commission, stating that :-

- 1) The repairing of 315 MVA, 400/220 KV Transformers of Bina has been delayed by M/s BHEL, after repairing the transformer is likely to be commissioned by January 2017.
- 2) Orders for a new 315 MVA Transformer have been placed and Despatch Instruction for this 315 MVA, 400/ 220 KV Transformers for Julwania has also been issued; the transformer is likely to be commissioned by February 2017.

In light of the above, it has now been intimated by MPPTCL that the 400 KV Transformer at Bina has been repaired and re-commissioned on 09.05.2017. The 315 MVA, 400/ 220 KV Transformers at Julwania has also been commissioned on 14.02.2017.

Here it is also to be mentioned that during the period of outage of the above two transformers supply was maintained through alternate routes.

2.12 ADDITIONAL INSTRUCTION OF HON. MPERC –

Hon'ble Commission vide letter No. MPERC/D(T)/2015/1242 dtd. 10.07.2015, has directed MPPTCL to submit along with the next Half-yearly and Annual Regulatory Compliance Reports, the details on the following matters also;

- a) *Total Nos. of Bays at each Voltage level*
- b) *Total No. of EHV Transformers at each Voltage level*
- c) *Details of failed EHV Transformers duly filled up, in the format prescribed.*

In compliance to the directives thus received the details are as under:-

a) **Total Nos. of Bays at each Voltage level**

S. No.	Voltage level	As on 31.03.16	Net addition during the Year 2016-17	Total As on 31.03.2017 (Nos.)
1	400 KV	121	1	122
2	220 KV	606	28	634
3	132 KV	1986	144	2130

b) **Total Nos. of EHV Transformers at each Voltage level**

S. No.	Voltage level	As on 31.03.16	Net addition during the Year 2015-16	Total As on 31.03.2017 (Nos.)
1	400 KV*	28	-2	26
2	220 KV	159	13	172
3	132 KV	569	36	605
4	66 KV	4	0	4
	Total	760	47	807

* *Inclusive of individual units of a bank.*

c) Details of failed EHV Transformers is provided in the format prescribed by the Commission, is as under;

Statement Showing the Current status of Power Transformers declared failed during 2016 -17

S · N o .	Date of failure	Capacity in MVA	Volta ge Ratio	M a k e	Location/ Sub-station where failed	(BGP/ WGP) Whether it was within Guarantee period or beyond it	whethe r New/ Repair ed	Year of Manu- facture	Name of Repairer & when last repaired	Date of Replace- ment	Capa- city of replac- ed X-mer MVA	Load/ on the Trans- former Old/ New	Reasons for failure & Action taken if any, for non- reoccurrence of failure **
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	11-May-2016	40	132 /33 kV	E M C O	132 KV Ashta	BGP	Repair ed	1995	Emco (95-96)	18- Nov-2016	50	50/ 107 Amp	Old transformer failed due to shorting of LV winding with core
2	16-May-2016	20	132 /33 kV	A P E X	220 KV Nepa- nagar	BGP	Old	1988	NA	28- Sep-2016	50	53 / 44 Amp	Transformer tripped on Differential trip indications, Y- ph current high
3	14-June-2016	40	132 /33 kV	E C E	132 KV Shaja- pur	BGP	New	2007	NA	22- Dec-2016	40	87 / 75 Amp	Transformer tripped on Differential trip indications, decl. failed
4	27-June-2016	12.5	132 /33 kV	B B L	132 KV Chapda	BGP	Old	1976	NA	Under decom- missioning	NA	30 / - Amp	Transformer tripped on Differential trip indications, decl. failed
5	08-Jul-2016	20	132 /33 kV	B B L	132 KV Katangi	BGP	New	1981	NA	09- Nov-2016	16	31 / 35 Amp	Transformer tripped on Buchholz and Differential trip indications due to 33 KV side Y-ph winding problem
6	17-Aug-2016	40	132 /33 kV	A P E X	220 KV Indore SZ	BGP	Repair ed	1995	Apex (MGN)	20-Oct-2016	50	119/ 127 Amp	Transformer tripped on PRV, Buchholz and Differential trip indications due to failure of HV side R& Y- ph winding
7	25-Sep-2016	40	132 /33 kV	B B L	132 KV Chourai	BGP	New	1991	NA	10- Nov -2016	50	63/ 105 Amp	Transformer tripped on Buchholz and Differential trip indications due to inter-turn shorting

** 1. Regular Periodical maintenance of Sub-Stations are being carried out as preventive maintenance.
2. During the period of outages supply is made available from alternate means.

2.13 **IMPACT OF THE REPORT** –

Compilation of the MIS Report, and its close monitoring by the MD, MPPTCL has resulted in the following positive impacts;

- i. Data reported under MIS report have given valuable feedback for chalking out Capital Investment Plan, and its modification during annual review, after seeking approval from Hon'ble State Commission.
- ii. Works completed helped in reduction of congestion on EHV lines and improved voltage profile.
- iii. On account of constant monitoring system strengthening works have been carried out.
- iv. Low voltage problem at EHV buses have been practically eliminated.
- v. During the process of data reporting and subsequent discussions, the field executive get an opportunity for path correction, if they lack in certain areas.

3. TRANSMISSION PERFORMANCE STANDARDS -

3.1 PROVISION IN ACT AND REGULATIONS –

Section 57 (1) of Electricity Act 2003, provide that the Appropriate Commission may after consultation with the Licensees and persons likely to be affected, specify the Standards of Performance of a Licensee or a class of Licensees. Accordingly, Section 181(2-za) of the said act confers the powers to the State Commission to make Regulation in this regard. Hon'ble State Commission notified the MPERC (Transmission Performance Standards) Regulations 2004 on 16th July 2004. Looking to the importance, the Standards have been classified in two categories;

Category – A (Mandatory Standards) –

- (a). Voltage variation.
- (b). Frequency Variation.
- (c). Safety standards.

Category – B

- a. System Availability
- b. Feeder Availability.
- c. Transformer Availability.
- d. Voltage Unbalance.
- e. Neutral Voltage Displacement.
- f. Voltage Variation Index.
- g. Frequency Variation Index.
- h. Harmonics in supply voltage.
- i. System Adequacy.
- j. System Security.

The above mentioned standards were fine tuned with reporting formats vide notification dated 6th June 2005. Permissible limits have been prescribed in three phases i.e. preliminary stage, intermediate stage and final stage.

Year 2016-17 falls under the **FINAL stage** and reporting requirements are as follows;

S. No.	Parameter	Category	Permissible limits in final stage
1	Voltage Variation	A	400 KV + 5% - 10% 220 KV & 132 KV ± 10%
2.	Frequency Variation	A	+1% & - 2%
3.	Safety Standards	A	As per IE Rules 1956.
4.	System Availability	B	98.0%
5.	Feeder Availability	B	98.0%
6.	Transformer Availability	B	98.0%
7.	Voltage Unbalance	B	400 KV & 220 KV → 2% 132 KV → 3%

S. No.	Parameter	Category	Permissible limits in final stage
8.	Neutral Voltage Displacement	B	2% of full load current
9.	Voltage Variation Index	B	Less than or equal to 4 % for minimum 90% of buses
10.	Frequency Variation Index	B	Less than or equal to 0.5%
11.	System Adequacy	B	8664 Hours.
12.	Harmonics	B	Less than 1%
13.	System Security	B	1 % of system peak.

3.2 REPORTING BY THE LICENSEE –

MPPTCL submitted the quarterly reports for all the four quarters of 2016-17 within prescribed time limit of 45 days from the end of the quarter as mentioned hereunder;

SN	Period	Reference of submission
i.	April-June'16	Letter No.04-01/CRA Cell/ F-7/ 6454 dtd. 11.08.2016
ii.	July-Sept. '16	Letter No.04-01/CRA Cell/ F-7/ 9094 dtd. 11.11.2016
iii.	October-December'16	Letter No.04-01/CRA Cell/ F-7/ 1321 dtd. 13.02.2017
iv.	January-March'17	Letter No.04-01/CRA Cell /F-7/ 4132 dtd. 11.05.2017

3.3 REPORTS FULLY COMPLIED –

The following reports are fully complied during all the four quarters;

i.	Voltage Variation
ii.	Frequency Variation
iii.	Safety Standards
iv.	System Availability
v.	Feeder Availability
vi.	Transformer Availability
vii.	Voltage Unbalance
viii.	Neutral Voltage Displacement
ix.	Voltage Variation Index
x.	Frequency Variation Index
xi.	System Adequacy
xii.	System Security
xiii.	Harmonics

3.4 REPORTS PARTIALLY COMPLIED –

There is no report on which reporting is partial.

3.5 REPORTS NOT COMPLIED WITH –

There is no report which is not complied with.

3.6 POINTS OF BETTER PERFORMANCE –

MPPTCL has shown better performance, in majority of the operational areas. These have been discussed under the MIS reports. Few of them are further illustrated hereunder;

3.6.1 TACKLING OF LOW VOLTAGE PROBLEM –

Transmission Performance Standards report specifically mention the maximum & minimum voltages at 400 KV, 220 KV, 132 KV and 33 KV buses of EHV Sub-stations for the regulatory minimum time period.

Although there are incidences where voltage levels have exceeded the upper limit in case of 400 KV system, it is seen from the reports that in all the quarters, the voltage in none of the 400 KV buses have gone below 1.8 % as against the permissible lower limit of 10%. Similarly, in case of all buses regarding 220 KV & 132 KV system, no incidence of violation of the upper or lower limits, as set by the Hon. Commission, has been recorded. In case of 33 KV buses too, almost in all the cases, the voltage variation was practically within the permissible limits.

During the year, MPPTCL has installed 400 KV reactors at Nagda & Katni 400 KV Sub-stations, also installation of Reactors/ Capacitor Banks is a continuous process based on certain load parameters. Apart from the reactors, capacitor banks of 5578 MVAR capacity has also been commissioned by MPPTCL till the end of 2016-17.

3.6.2 VOLTAGE-WISE SYSTEM AVAILABILITY –

The overall Voltage-wise Availability for Transmission system has been found to be above the target of 98% fixed for 2016-17, as shown hereunder;

S. No.	System Voltage	Voltage-wise Transmission System Availability in %				
		2012-13	2013-14	2014-15	2015-16	2016-17
1	400 KV	99.37%	99.26%	99.30%	94.52%	95.46%
2	220 KV	99.43%	99.48%	99.32%	98.64%	99.02%
3	132 KV	99.46%	99.44%	99.39%	99.21%	99.23%
4	Target	98.00%	98.00%	98.00%	98.00%	98.00%
5	Total Achieved	99.44%	99.43%	99.35%	98.16%	99.39%

3.6.3 VOLTAGE UNBALANCE –

Hon'ble Commission has prescribed standard limits for voltage unbalance in final stage as 2% for 220 KV & above and 3% for 132 KV. The achievements of the licensee are shown hereunder;

(i).	Quarter April-June '16	For none of the transformer bus, the voltage unbalance was found beyond prescribed limit.
(ii).	Quarter July-Sept.'16	-do-
(iii).	Quarter Oct.-Dec. '16	-do-
(iv).	Quarter Jan.-March '17	-do-

3.6.4 NEUTRAL VOLTAGE DISPLACEMENT –

In none of the transformers, the Neutral Voltage Displacement was found above the limits prescribed, in all the four quarters of the year.

3.6.5 VOLTAGE VARIATION INDEX –

In case of 400 KV buses, the VVI for all the buses were within limit, where as for 220 KV and 132 KV more than 90% buses, as is the requirement, complied with the provisions of VVI limits. Details of which are given in the following table;

S. No.	Quarter	Total No. of Buses checked	No. of Buses where VVI is within limit	Percentage
220 KV -				
1	April-June '16	72	68	94.44 %
2	July-Sept. '16	72	66	91.67 %
3	Oct.-Dec.'16	73	66	90.41 %
4	Jan.-March'17	73	67	91.78 %
132 KV -				
1	April-June '16	291	287	98.62 %
2	July-Sept. '16	291	287	98.62 %
3	Oct.-Dec.'16	299	292	97.66 %
4	Jan.-March'17	303	296	97.69 %

As per Regulations, at least for 90% buses, VVI should be within limit (i.e. maximum 4% deviation). This condition has been fulfilled as seen from the table cited above.

3.7 IMPROVEMENTS RELATED TO INVESTMENT PLAN –

System Security is basically a planning criteria. In accordance with the Clause 6 of “Manual on transmission planning criteria” of CEA, and the Performance Standard Regulations, the State transmission system shall be able to withstand the n-1 contingency state. Presently, the transmission system of

MPPTCL is capable of handling single contingency (1 element out) with the little negative effect (under voltage, or increased line loadings) and no loss of supply to any consumer has been observed with the single element (generator, line or transformer) outage condition. In this regard, Hon. MPERC has also been apprised of the present conditions and system of reporting.

Improvement in System Security is linked to completion of Capital works under Transmission Plan, which are being executed by the MPPTCL. In this context, future planning for strengthening the system to withstand the n-1 contingency and to assess the transmission requirement for the purpose is carried out by MPPTCL. To strengthen the transmission system to match with the specific criteria of the system security, MPPTCL has been continuously doing system studies to cop-up the load growth, and reviewing its Capital Works Plan.

It is reported by the licensee that after major failures of transformers the loads are transferred to the adjoining substations through the interconnecting lines and there has been no interruptions of supply to any area due to outage of above transmission elements. As per the load scenario of FY 2016-17 the maximum demand of the system was 11421 MW and this load of the system could be managed easily without any threat to system security. In the process no negative effect was experienced due to outage of any transmission system element during the period under report and the system remained stable.

Further, plan for the period 2016-17, is covered in the 5 Year Plan for 2012-13 to 2016-17, approved by the Hon. Commission. It has been intimated that the 5-Year Plan for the period 2017-18 to 2021-22 is under preparation and MPPTCL shall submit the same to the Commission, for its approval, by the end of the first quarter of 2017-18.

3.8 IMPACT OF REPORT –

The information gives valuable feed back to Transmission and Distribution Licensees to plan their works/ different activities for improvement and better services to consumers. It may be seen that the works planned and completed have resulted in relaxing the congestion and improvement in voltage profile. The quarterly reports and its review are helpful in advising the field units to improve System Availability.

4. MP ELECTRICITY GRID CODE -

The Electricity Act 2003 [section 86 (1) (h)] requires that State Commission should specify a State Grid Code that is consistent with the Indian Electricity Grid Code (IEGC) specified by the Central Commission under Section 79-1(h) of the Act.. This Grid Code shall be a legally enforceable interface document agreed upon and to be complied with by all the State Sector Generating Stations, Discoms (including their HV/EHV consumers directly connected to State Transmission System) and open access customers interconnected to State Transmission System. The Grid Code has been designed to operate and maintain an efficient and coordinated State Transmission System and allow STU to comply with its obligations in relation to the inter-state transmission of power and to operate the system in integration with the Western Grid as per the provisions of Indian Electricity Grid Code. The Grid Code lays down what is technically optimal with respect to operation and defines standards and common terms to reduce ambiguity and avoid discrimination. Accordingly, the Hon'ble State Commission on 20th August 2004 notified the MP Electricity Grid Code. Subsequently, in exercise of powers under Section 86(1) (h) of the Electricity Act 2003, Hon. MPERC specified the Madhya Pradesh Electricity Grid Code (Revision 1), 2005 on 24th October 2005.

MP Electricity Grid code has been designed to operate and maintain an appropriate and coordinated state transmission system. The grid code contains procedures to permit equitable management of day to day technical situations in the Electricity Supply System taking into account a wide range of operational conditions likely to be encountered under both normal and abnormal circumstances. The Grid code review is required to address all possible operational conditions.

4.1 COMPLIANCE UNDER MP ELECTRICITY GRID CODE -

The following compliances have been prescribed to be reported by the Reporter of Compliance under Grid Code.

- i. Constitution of Grid Code Review Committee.
- ii. Meetings of the Grid Code Review Committee.
- iii. Prospective Transmission Plan.
- iv. Demand Forecast for 10 years.
- v. Reactive Power Planning.
- vi. Reporting of Major Failure.

4.1.1 CONSTITUTION OF COMMITTEE AND ITS MEETINGS -

The Grid Code Review Committee as well as the Functional Committees to be constituted as per MP Electricity Grid Code have been constituted and are functioning by conducting their meetings. Meetings conducted during FY 2016-17 are listed hereunder;

S. No.	Name of Committee	Constituted on	Dates of Meeting held during April'15 to March'16
1	Grid Code Review Committee	3.2.05	14 th meeting – 27.03.17
2	Operation Coordination Committee	12.7.05	51 st meeting – 26.04.16 52 nd meeting – 27.06.16 53 rd meeting – 27.08.16 54 th meeting – 22.10.16 55 th meeting – 22.12.16 56 th meeting – 08.03.17
3	Protection Coordination Committee	12.7.05	38 th meeting – 04.07.16 39 th meeting – 07.12.16 40 th meeting – 24.03.17
4	Transmission Metering Committee	12.7.05	14 th meeting – 06.12.16 15 th meeting – 18.03.17

The minutes of the 14th meeting of MP Electricity Grid Code Review Committee held on 27th March 2017 has been circulated vide Letter no. 0402/P&D/ MPEGCRC/ 1103 Dated 26.04.2017.

4.2 **TRANSMISSION PLAN** -

4.2.1 **12TH PLAN** -

The period of 11th Plan was over in FY 2011-12. Therefore, the Transmission Licensee filed a Plan of Rs 7370.22 Crores for FY 2012-13 to FY 2016-17, before Hon'ble Commission for approval on 02.11.2011. After taking note of views in Public hearing on Plan Petition, Hon'ble Commission approved the Plan in principle on 30th July 2012. The salient provisions of Plan are mentioned hereunder;

i.	Addition in EHV Lines	10667 Ckt. KM
ii.	Addition in Transformation Capacity	19698 MVA
iii.	Addition in EHV Sub-stations	94 Nos.
iv.	Total Investment	Rs 7370.22Crores

The report on annual review of plan is submitted to Hon'ble Commission each year, by the Licensee. Progress for 2016-17 has been submitted by the Licensee to Hon'ble Commission vides letter No. No. 04-01/ CRA Cell/ F-8/ 4846 dtd. 31.5.2017.

It has been intimated by the Company that the next 5-Year plan for the period 2017-18 to 2021-22 shall be guided by the Transmission Planning criteria and the guidelines for the capital expenditure and other conditions laid down by the Commission; and, will be shortly submitted by the Company for the kind approval of the Hon. Commission.

4.3 DEMAND FORECAST -

The Demand Forecast has been incorporated by the MPPTCL as an integral part of the Transmission Plan.

4.4 REACTIVE POWER PLANNING EXERCISE –

While proposing the additional lines and sub-stations, the licensee has taken into consideration the handling of reactive power, as a Planning Exercise.

4.5 REPORTING BY SLDC –

In compliance of the Clause No. 14.1.1 of the MP Electricity Grid Code, the C.E.(Load Despatch) is submitting a monthly report to the Hon'ble Commission covering the following parameters;

- i. Frequency Profile.
- ii. Voltage Profile.
- iii. Major Generation and Transmission Outages.
- iv. Transmission Constraints.
- v. Instances of Persistent / Significant Non-compliance of Grid Code.

All the monthly reports for the year 2016-17 have been submitted by the SLDC to the Hon'ble Commission.

No non-compliance of Grid Code has been reported in the SLDC's above reports.

5. LICENSE CONDITIONS –

License conditions have been specified under section 16 of the Electricity Act 2003. Hon. MPERC has also issued – “The Condition of Transmission License for Transmission Licensee Regulations”.

5.1 The MPPTCL has complied with the conditions of License prescribed by the Hon’ble Commission. The status of compliance has been updated time to time. The current position is tabulated hereunder;

Clause No.	Particulars	Whether the condition under clause has been fulfilled by Company (Yes/No)	If yes, the reference of the compliance report should be given	If no, Reasons for not fulfilling the condition	The expected date of which it shall be complied	REMARKS
7.2 (b) (ii) and (iv)	Submission of interim profit and loss account, cash flow statement and balance sheet for first/second six months of financial year.	Yes	Annual Accounts for 2015-16 submitted vide reference No. CFO/ ACC/111/ TU 15-16/ 2886 dated 03.11.2016.	N.A.	N.A.	Complied
7.2(b) (ii)& (iv)	Submission of financial statement (Annual)					
9.1	Submission of information in the prescribed formats of Condition of license	Yes	Submitted vide No. 04-01/ CRA Cell/ F-8/ 3580 dtd. 22.04.2016.	N.A.	N.A.	Complied.
9.3	Information of incident affecting any part of the Transmission system.	Yes	Reported by SLDC on monthly basis – The monthly reports have been submitted regularly for 2016-17	N.A.	N.A.	No major incident occurred during the period
9.9	Submission of 5 year Business Plan	Yes	Investment Plan approved by Hon’ble Commission dated 30.07.2012.	N.A.	N.A.	Complied.
10.2	Submission of 5 Year Investment Plan (Correlated with the Business Plan)	Yes	Petition for Investment Plan for the 5 years i.e. 2012-2017 have been filed vide 04-01/ CRA Cell/ F-65/ 8015 dtd. 2.11.2011.	N.A.	N.A.	The investment plan approved for 2012-13 to 2016-17 on 30.07.2012. Complied.

Clause No.	Particulars	Whether the condition under clause has been fulfilled by Company (Yes/No)	If yes, the reference of the compliance report should be given	If no, Reasons for not fulfilling the condition	The expected date of which it shall be complied	REMARKS
10.2 (a)	Annual Investment plan with details of investment schemes to be carried out during the financial year, subsequently the progress of Investment plan of previous year along with the proposal for updating the Business Plan for next 5 year.	Yes,	Progress submitted vides letter No. 04-01/ CRA Cell/ F-8/ 4846 dtd. 31.5.2017.	N.A.	N.A.	Complied
10.4	Existing tendering procedure for approval of the Commission	Yes	Submitted	N.A.	N.A.	Tendering procedures new procurement system under KfW Loan has been submitted on 31.5.17.
17	Implementation & compliance of Grid Code	Yes	Monthly report being submitted by SLDC on regular basis.	N.A.	N.A.	Complied
18.2	The Licensee to submit the existing Planning and Security Standards and the Operating Standards for the Transmission for the approval of the Commission.	Yes	Submitted vide No. 04-01/ Const. Tariff/4935 dtd. 21.7.2005.	N.A.	N.A.	The MPPTCL is using the Planning & Security code prescribed by the CEA, which has been submitted to Hon'ble Commission.
18.3 (a)	The Licensee to submit the proposal for Transmission Planning and Security Standards and Transmission Operating Standards for approval of the Commission	Yes	Transmission operating standards defined in Transmission Performance Standards submitted on quarterly basis.	N.A.	N.A.	Transmission plan is formulated as per CEA's standards.

Clause No.	Particulars	Whether the condition under clause has been fulfilled by Company (Yes/No)	If yes, the reference of the compliance report should be given	If no, Reasons for not fulfilling the condition	The expected date of which it shall be complied	REMARKS
18.10 (a)	The Licensee shall on an annual basis forecast the quantum of power to be wheeled through its transmission system based on the forecast made available by Users within the Area of Transmission in each of the next succeeding five years.	Yes	Covered in transmission plan energy requirement for next 5 years.	N.A.	N.A.	Complied.
18.10 (b)	The Licensee shall estimate the quantum of Inter-State transmission that will occur through its wires in each of the succeeding 5 years.	Yes	Incorporated in Plan	N.A.	N.A.	Complied. No major contribution in Inter-state transmission.
18.10 (c)	The Licensee shall prepare and submit forecasts to the Commission in accordance with the guidelines issued from time to time.	Yes	Submitted in Transmission Plan.	N.A.	N.A.	Complied.
18.11	The Licensee shall submit to the Commission a report indicating the performance of the Transmission System during the previous financial year.	Yes.	Report for the year 2016-17 Submitted vide No. 04-01/ CRA Cell/ F-8/ 4846 dtd. 31.05.2017	N.A.	N.A.	Complied.
19.4	The Licensee shall submit to the commission on annual basis, a statement showing in respect of each of the 5 succeeding financial years forecasts of circuit capacity, power flows and loading on the Transmission System under standard planning criteria, together with:	Yes	Incorporated in Transmission Plan	N.A.	N.A.	Complied.

Clause No.	Particulars	Whether the condition under clause has been fulfilled by Company (Yes/No)	If yes, the reference of the compliance report should be given	If no, Reasons for not fulfilling the condition	The expected date of which it shall be complied	REMARKS
	(a) such further information as shall be reasonably necessary to enable any person seeking use of System to identify and evaluate the opportunities available when connecting to & making use of such system; and	Yes	Submitted vide No. 04-01/ CRA-Cell/F-8/4846 dtd. 31.05.2017	N.A.	N.A.	Complied.
	(b) A commentary prepared by the Licensee indicating its views as to those parts of its Transmission System most suited to new connections and transport of further quantities of electricity.	Yes	Submitted vide No. 04-01/ CRA-Cell/F-8/4846 dtd. 31.05.2017	N.A.	N.A.	Complied.
20	Submission of ARR	Yes	MYT Petition for FY-2013-14 to FY2015-16 submitted on 19.01.2013.	N.A.	N.A.	Tariff orders issued by Hon. MPERC on 02.04.2013.
		Yes	True-up Petition for FY 2012-13.	N.A.	N.A.	True-up order issued by Hon. MPERC on 21.08.2014.
		Yes	True-up Petition for FY 2013-14.	N.A.	N.A.	True-up order issued by Hon. MPERC on 28.04.2015.
		Yes	MYT Petition for FY-2016-17 to FY2018-19 submitted on 30.12.2015.	N.A.	N.A.	Tariff orders issued by Hon'ble MPERC on 10.06.2016.
		Yes	True-up Petition for FY 2014-2015.	N.A.	N.A.	True-up order issued by Hon'ble MPERC on 18.04.2016.
		Yes	True-up Petition for FY 2015-16.	N.A.	N.A.	True-up order issued by Hon. MPERC on 15.05.2017

5.2 As per the above mentioned table, it may be perceived that practically all the issues have been complied by the Transmission Licensee.

6. OPEN ACCESS REGULATIONS –

Under the Open Access Regulations notified by the Hon'ble Commission on 24.6.05, the MPPTCL has taken following actions in compliance of the regulations;

- i. Nodal Officers have been appointed for Long Term as well as Short Term Open Access and their offices are functional. The Office of the Chief Engineer (Panning & Design) is officiating as the Nodal Office dealing with the functions related to Long Term Open Access Customers, while the mantle for that of the Short Term Open Access Consumers have been bequeathed on the office of the Chief Engineer SLDC.
- ii. Committee to decide the Open Access at the level of the licensee has been constituted.
- iii. The guidelines on Long Term Open Access drafted and submitted by MPPTCL have been approved by the Hon'ble Commission and these have been displayed on the Website of the MPPTCL.
- iv. The draft of the Transmission Service Agreement for Open Access customers has also been approved by the Hon'ble Commission and displayed on the Website.
- v. **Agreement between Nodal Agency and Open Access Customers-**

The Transmission Service Agreements between MPPTCL and the three Distribution Companies of Madhya Pradesh have been executed in November 2006.

At present there are two Long Term Open Access customer i.e. M/s Indian Railways and SEZ, Pithampur - other than the 3 Discoms. Agreement has been executed with SEZ on 29.1.2005 and a copy of the agreement has been submitted to the Hon'ble Commission on 23.2.2005. Supplementary agreements were then executed on 11.10.2010, 05.10.2013 and 29.03.2016; since then, another supplementary agreement has also been executed on 15.04.2017. In addition to above, M/s WCR on behalf of Indian Railways has also entered in to an agreement with MPPTCL on 07.10.2016 & 26.04.2017.

The cumulative statuses of other Long Term Open Access Applications as on 31.03.2017 are as follows;

- | | | |
|----|---|------------|
| a) | LTOA Applications received | - 191 nos. |
| b) | LTOA cases approved | - 161 nos. |
| c) | LTOA cases implemented | - 150 nos. |
| d) | LTOA cases withdrawn by customer after approval | - 011 nos. |
| e) | LTOA cases rejected/ cancelled | - 014 nos. |
| f) | LTOA cases pending | - 016 nos. |

vi. **Relinquishment or transfer of Long Term Open Access right -**

There has been no such case; however till date 11 nos. cases of consumers withdrawing application / expiry of plant life after sanction.

vii. **CERC's Regulations Dated 25th January 2008 -**

Hon'ble Central Commission has notified CERC (Open Access in Inter-State Transmission) Regulations, 2008 on 25.01.2008. The Regulations are mainly applicable to the Short Term Open Access. The Regulations provide transmission charges in Rs./MWH for Short Term Open Access customers, who avail Short Term Open Access in continuation to Inter-State system.

The CERC has amended above Regulations, which are applicable since 15th June 2009. In line with the above, Hon. MPERC is also following the same for Inter-state open access consumers.

6.1 TRANSMISSION TARIFF –

Hon'ble MPERC has notified Terms and Conditions for Determination of Transmission Tariff (Revision-III) Regulations, 2015 on 15.01.2016 – for the control period FY 2016-17, 2017-18 & 2018-19. Based on this regulation Multi-Year Tariff order for 2016-17, 2017-18 & 2018-19 has also been issued on 10.06.2016. Apart from it True-up order for FY 2015-16 has also been issued by the Hon. Commission on 15.05.2017. The petitions for the same were submitted within the stipulated time frame by the Licencee.

6.2 Actual Energy Losses In Intra-State Transmission System –

The energy handled and percentage transmission losses during the past 14 years indicating a reducing trend of transmission losses, in spite of increase in energy handled every year, are as under;

S No.	YEAR	Energy Handled (MU)	Transmission Loss (%)
1	2003-04	27555	6.12%
2	2004-05	29531	5.62%
3	2005-06	31307	5.23%
4	2006-07	32594	5.00%
5	2007-08	35148	4.09%
6	2008-09	34280	4.09%
7	2009-10	34346	4.19%
8	2010-11	37680	3.74%
9	2011-12	42175	3.51%
10	2012-13	46848	3.30%
11	2013-14	50300	3.00%
12	2014-15	55206	2.82%
13	2015-16	61097	2.88%
14	2016-17	60797	2.71%

7. SLDC & SCADA FUNCTIONS -

7.1 SLDC FEES AND CHARGES –

Hon'ble Commission notified the Regulations on Fees & Charges for SLDC On 21st September 2004. The State Government has also declared the Load Despatch Center at Jabalpur as SLDC on 17.05.2004. The Opening Balance Sheet notified on 12th June 2008, does not allocate the Assets & Liabilities to SLDC. The ARR for SLDC is therefore based on O&M Expenses. The position of approval of the ARR of SLDC is indicated hereunder;

S. No.	Financial Year	Date of Approval of ARR by Hon'ble Commission
1	2007-08	Order dated 18.01.2008
2	2008-09	Order dated 20.02.2009
3	2009-10	Order dated 26.11.2009
4	2010-11	Order dated 20.05.2010
5	2011-12	Order dated 31.05.2011
6	2012-13	Order dated 16.03.2012
7	2013-14	Order dated 10.04.2013
8	2014-15	Order dated 18.06.2014
9	2015-16	Order dated 31.03.2015
10	2016-17	Order dated 05.04.2016
11	2017-18	Order dated 26.04.2017

7.2 SEPARATE FINANCIAL ACCOUNT FOR SLDC -

The separate account in the name of RAO, MPPTCL – SLDC has been opened in State Bank of India, Jabalpur in July '05.

The final Opening Balance Sheet notified on 12.06.08 does not provide separate Balance Sheet for SLDC. However, value of Assets of SLDC is separately indicated. The portion covering the accounts related to SLDC is also being maintained separately and that the same for the year 2015-16 has been submitted to MPERC on 29.11.2016 by SLDC.

7.3 APPLICATION FOR CONNECTION TO STATE GRID –

The generation system of MP GENCO and transmission system of MPPTCL is already connected to the State Grid. NHDC has also been connected to the State Grid. Apart from the above, Non-conventional generators supplying at 132 KV and above have been also connected to the transmission grid.

7.4 Implementation Of Intra-State ABT/ AMR/ SCADA & ADMS –

Pursuant to the requirements of the MPERC Balancing & Settlement Code, notified on 23rd October 2009, SLDC is regularly preparing Intra-state

energy accounts since November 2009, based on Availability Based Tariff mechanism and issuing bills to the relevant customers. Further, functions as given below are also being successfully pursued –

- i) Preparation of State Energy accounts
- ii) Deviation Settlement Mechanism accounting
- iii) State Reactive energy accounting
- iv) MP loss computation for the purpose of scheduling of power

ABT mechanism is in operation at 944 inter-face locations, out of which around 90% points have been integrated with AMR facilities, thereby, consequent to prompt downloading of data at remote interface points, Automatic Meter Reading (AMR) system has also started functioning at these locations.

Presently, the SLDC SCADA System consists of 225 nos. RTUs for MPPTCL/ Generation plants of MP, in addition to the same PGCIL, Inter-state points are also monitored. The SLDC SCADA System is used for demand management, load control and real time shutdown analysis for proper energy management. With the help of the two SCADA systems of MPPTCL, ADMS system is used for automatic demand management through frequency control.

In addition to the SLDC SCADA system, a separate Transmission SCADA system is also in operation. MPPTCL has established 3 Nos. SCADA Control Centers at Jabalpur, Bhopal and Indore. As on 31.03.2017, these three centers have been integrated with 314 RTUs of 9 Nos. 400 KV Sub-stations, 66 Nos. 220 KV Sub-stations and 239 Nos. 132 KV Sub-stations.

Apart from the above, installation and testing of ADMS units have been completed at 302 locations across the state during the period under report. These 302 points can be further broken in to - 1 Nos. 400 KV Sub-stations, 64 Nos. 220 KV Sub-stations and 237 Nos. 132 KV Sub-station locations. The balance location points are expected to be commissioned for operation in 2017-18. This ADMS system, along with the SLDC system, helps in prompt demand management processes.

7.5 TREATMENT OF OTHER BUSINESS OF LICENSEE –

The Regulations in this regard have been notified by the Hon'ble Commission on 1.6.2004. However, MPPTCL has not carried out any other business during the period under report.

OBSERVATIONS OF THE MD (MPPTCL) ON COMPLIANCE OF VARIOUS REPORTS BY MPPTCL

The various reports submitted under Regulatory Compliance have been subjected to deliberation with MD, MPPTCL by the Reporter of Compliance. The resulting proceedings of observations in the light of the contemplations of the MD are cited hereunder;

8.1 TIMELY SUBMISSION -

The MD was pleased to note that all the periodical reports and other compliances have been submitted regularly, in time. He lauded this achievement and desired that the same should be ensured in future too.

8.2 MIS REPORTS -

The MIS reports for all the four quarters of the year have been submitted within the stipulated time frame, covering all the items. Observations in the following regards are of significance;

8.2.1 Intra-State Transmission Losses -

It was observed that the transmission losses during 2016-17 have been computed as 2.71%, which is well below the target of 2.82% set by Hon. MPERC. It is pertinent to mention, that the system has also been able to successfully handle the energy of the order of 60797 MUs during the year while meeting a never before maximum demand of 11421 MW.

Here it is also to be submitted that transmission losses are not entirely in the control of the Company. It would be worthwhile to mention that transmission losses are also dependent on various factors beyond the control of the Transmission Company, such as the quantum and location of Generating units, discrete quantity of energy injection from generating plants, nearness to load centers, climatic conditions, loading pattern etc. In other words the intrinsic characteristic of demand and external factors such as monsoon and other local conditions also play the significant role.

To confine the transmission losses within the realms of target, system strengthening works under various schemes, viz., PFC, ADB, JICA etc. have been identified and works regarding many of these are under progress. The MD was hopeful in his expectations that the losses for next year too could be confined to the desired level of 2.82% as targeted by Hon. MPERC for 2017-18.

8.2.2 Overloading of EHV Lines -

M.D. was overwhelmed by the outcome of the commissioning of new EHV lines and Sub-stations. He was pleased to note that, based on the same, to a certain degree the quantum of overloading of lines have reduced. The Top Ten congested Lines during the four quarters, are taken into consideration for planning purposes and he was pleased to note that remedial works of majority of them are covered under the approved Plan.

It was also heartening for the MD to note that if the thermal loading limit, as defined in CEA's "Manual On Transmission Planning Criteria (January 2013)", is considered for determining the loading limit for a transmission line, the loading on most of the lines, in the current situations, is within the prescribed limits. However, looking to the prevailing regulation, wherein the report of the four quarters of 2016-17 are based on SIL loading, and by which the top Ten congested Lines during all the four quarters have been identified. Remedial measures in the form of incorporating them in the load flow studies and thereby directing the concerned to take necessary action for removal of overloading have been followed as a rule of custom.

8.2.3 Transmission System Availability -

Transmission System Availability for 2016-17, which de facto is a measure of asset availability only, has been worked out as 98.39 %, which incidentally is higher than the target of 98.00%, set by the Hon. Commission, enabling the Company to earn incentives. This achievement beyond the target, when viewed in the backdrop of major transformer defects of higher voltage class, becomes worthy of applause. The M.D. also appreciated the fact that although the transmission elements are around 1600 in numbers, the monthly Transmission System Availability is being calculated in time.

He also advised the relevant wings for implementation of stringent coordinated planned operations for maintenance and continuation of the tradition of prompt attendance of outages so that even better Availability in the coming year could be achieved.

8.2.4 Capacity Addition -

The MD expressed satisfaction that in spite of the slow progress in first half of the year, where slippages were primarily on account of rainy season and bad weather conditions, all the balance works have been completed in the next two quarters. The execution of capital works resulted in addition of 1005 Ckt. KMs of EHV lines and 4067 MVA of Transformation capacity during the year. It was also heartening to note that 17 Nos. Sub-stations have also been commissioned during the year 2016-17.

He also noted that the tenure of the existing 5-years Plan is over on 31.03.2017. He desired that efforts for framing of the next plan and submission of the same to MPERC be effected on priority basis.

8.3 TRANSMISSION PERFORMANCE STANDARDS –

The MD, MPPTCL observed that the performance of the Company in case of voltage-wise System Availability, Voltage Unbalance, Neutral Voltage Displacement and Voltage Variation Index is above the Performance Standards fixed under the Performance Standard Regulations. This indicates better quality of supply made available by TRANSCO to the Distribution Licensees through its transmission system.

The MD, also, observed that a marked improvement has been obtained in voltage profile, whereby voltage variations below the lower limit have been practically eliminated. However, on the other hand, it was also observed that in a few cases, the voltage has gone above the upper limit, specifically in case of 400 KV buses. Here it is to be mentioned that apart from the Generating Stations, the 400 KV System is directly linked to the Inter-State System. He also remarked that MPPTCL has devised a system to study the load conditions, which in turn culminated to strengthening of transmission system at every voltage level. This has resulted in tangible improvement in the Voltage Profile. To curb such

incidences of voltage deviations beyond the prescribed upper limit for 400 KV System connected to Inter-State Grid; during the year 400 KV reactors have been installed by the Company at Nagda & Katni 400 KV Sub-stations.

Also, to improve the load power factor during the irrigation season, after due analysis, installation of Capacitor Banks is also being resorted to. A total capacitor capacity of 5578 MVAR has been installed by the Company.

It was hoped that these works may prove to be effective in controlling over voltages. It would be worthwhile to mention that in none of the quarters, the voltage has gone below the lower designated limit in case of 400 KV, 220 KV & 132 KV systems in any of the Sub-stations.

The MD counseled the concerned to carry out further load flow studies, so that remedial action could be proposed in advance for providing quality supply.

8.4 MP ELECTRICITY GRID CODE -

It was observed by the MD that the 14th meeting of 'Grid Code Review Committee' was convened on 27.03.2017. The meetings of Functional Committees are also being convened regularly. He also advised that in case sufficient Agenda Items are there, the number of meetings related to the Transmission Metering Committee be raised from the present two meetings, in accordance with the spirit of the 'The Madhya Pradesh Electricity Grid Code (Revision-I), 2005 as specified by the Hon. MPERC.

8.5 SLDC's ACTIVITIES –

It was observed by the MD with contentment that pursuant to the requirements of the MPERC Balancing & Settlement Code, notified on 23rd October 2009, SLDC is regularly preparing Intra-state energy accounts, State Reactive energy & DSM accounts, based on Availability Based Tariff mechanism and issuing bills to the relevant customers. Apart from it, SLDC is regularly submitting the monthly reports to the Hon'ble Commission.

The MD was happy to know that SLDC is implementing and monitoring the Intra-State ABT in the State through ABT meters at 944 inter-face locations, out of which around 90% points have been integrated with AMR facilities. Side by side the SLDC SCADA System consisting of 225 nos. RTUs for MPPTCL/

Generation plants of MP, in addition to the same, PGCIL & Inter-state points are also monitored.

He also mentioned that a 'Maximum Demand' of 11421 MW was met during the year, which also is the all time highest ever. No transmission constraint has been reported by the SLDC. In course of meeting this demand, 219.26 MU were catered on 23.12.2016, which incidentally was the highest ever units transmitted in a single day in 2016-17.

8.6 REGULATORY AFFAIRS –

The MD was happy to note that all information related to the Commission was submitted timely. Further, he was pleased to note that the True-up Petition for 2015-16 was filed before the due date and the Hon. Commission has issued the orders. It was viewed with pleasure to note that regarding tariff petitions presently there is no pendency.

Further, the MD offered his gratitude towards the Hon. MPERC for the approval accorded towards the petition filed for reallocation of Transmission capacity under MYT order for FY 2016-17 to FY 2018-19 on account of allocation of 200 MW power to Indian Railways (Deemed Licensee) through West Central Railways on its own and on behalf of other Zonal Railways, for allocation of 200 MW Transmission Capacity.

He was also pleased to know that consequent to the Company's petition in the matter of PoC charges for deemed Inter-state lines belonging to MPPTCL and subsequently on account of Hon. CERC's approval, M/s PGCIL has made a payment for an amount of ₹ 115 Crores during the year. This order bears significance, to the extent that this amount shall in turn provide relief to the consumers of MP by an equivalent sum.

8.7 IMPLEMENTATION OF SCADA & ADMS –

The MD mentioned that the Transmission network of State of Madhya Pradesh is growing rapidly both in terms of size & complexity. This expansion is mainly driven by the phenomenal growth of demand of electric power, increasing no. of players, location of generation pockets and implementation of Open

Access Policy. While these factors necessitate the expansion of the State Transmission Network, the necessity of on-line monitoring, measurement and control of complex transmission system network is undeniable.

Some of the important gains from establishing the SCADA system are accurate centralized information gathering and generation of precise reports for future planning of State Transmission System, along with effective load control, operation and quality monitoring of all EHV substations through real time information and control of reactive power flow.

The SLDC SCADA System is used for demand management, load control and real time shutdown analysis for proper energy management.

In addition to the SLDC SCADA system, a separate Transmission SCADA system is also in operation. MPPTCL has established 3 Nos. SCADA Control Centers at Jabalpur, Bhopal and Indore. As on 31.03.2017, these three centers have been integrated with 314 RTUs. The progress is significant when compared with the National/ International Standards and Norms for execution of similar works. It is also a matter of honour to state that MPPTCL, at times, is being considered as a pioneer among state entities in implementation of SCADA system and also is being referred to as a role model.

In addition to the above, installation and testing of ADMS units have been completed at 302 locations across the state during the period under report. Work for other balance locations is expected to be commissioned for operation by the end of the current year.

With the help of the two SCADA systems of MPPTCL, ADMS system is used for automatic demand management through frequency control, which is the first ADMS System in the Country implemented using multiple SCADA System. This ADMS system, along with the SLDC system, helps in prompt demand management processes and thereby helps in greatly reducing the possibilities of grid failures.

MD MPPTCL also took the opportunity to reiterate that for the period of report, apart from the 3 Nos. SCADA Control Centers, for proper control of the

Transmission System during the Simhasth-2016 held during April-May 2016, an additional temporary SCADA Control Centre was set up in Ujjain in record time. This centre later proved to be of immense value while providing ready information and assistance in controlling electrical parameters to West Discom, Transco and Power Management Company for managing load of Simhasth during the Simhasth congregation.

8.8 ACKNOWLEDGEMENT BY THE MD –

It is a matter of great pride and honor to state that in spite of climatic hazards faced during the Singhasth congregation, the Company – consequent to appropriate planning, execution, technical competence and hard labour – was able to provide quality service during the Ujjain Mahakumbh held in April-May 2016. Our efforts were lauded by the Chief Minister GoMP, Energy Minister, Energy Secretary, Administration and the devotees.

Further, the Transmission Licensee not only ensured the stipulated compliance of practically all the Regulatory requirements in time, but also achieved a never before level of energy handled i.e. 61097 MU during the year, in the course of this action MPPTCL successfully handled 219.26 MU on 23.12.2016 which was the highest ever in a single day for 2016-17. The Company also achieved an Availability figure of 98.39% which is higher than the target of 98% set by the Hon. Commission. Also, a ‘Maximum Demand’ of 11421 MW has been successfully met on 23.12.2016, which is highest in the history of the State. While meeting out this Maximum Demand no transmission constraints were faced.

Whereas the dedication and motivation of the team of officers and employees of the Company is continuously enabling the Licensee to attain a high level of performance, the active support by the State Government & Hon’ble MPERC and the guiding beacon provided by the Company’s Board of Directors towards achieving the goals set for the Company is acknowledged with a grateful heart.

ANNUAL REGULATORY COMPLIANCE REPORT
YEAR 2016-2017

To,

The Madhya Pradesh Electricity Regulatory Commission,
5th Floor, Metro Plaza,
E-5, Arera Colony, Bittan Market,
BHOPAL – 462016.

M.P. Power Transmission Company Ltd., Jabalpur reports as follows:-

1. The enclosed report is ‘Annual Regulatory Compliance Report’ for the year 2016-17 and has been prepared in a manner that meets the requirement of the compliance systems and reporting.
2. The enclosed report covers information about all the details that were to be furnished to the Commission during the period specified at Serial No. 1 above.
3. Enclosed report is being submitted to the Board of Directors of MPPTCL, for their approval.
4. The licensee having made due enquiry, is not aware of any breach of any of the obligations of license conditions or regulations.

Dated the 27th Day of June 2017.

Signed/-

(Sameer Kumar Nagotia)
Reporter of Compliance

Signed/-

(P.A.R. Bende)
Managing Director
