FREQUENCY PARTICULARS

S. No.	Particulars	Aug-16		Sep-16	
1	**INTEGRATED OVER AN-HOUR**				
1.1	Maximum Frequency	50.14 Hz	Between 13.00 hrs & 14.00 Hrs on 01.08.16	50.09 Hz	Between 03.00 hrs & 04.00 Hrs on 01.09.16
1.2	Minimum Frequency	49.67 Hz	Between 13.00 hrs & 14.00 Hrs on 10.08.16	49.85 Hz	Between 14.00 hrs & 15.00 Hrs on 19.09.16
1.3	Average Frequency	50 Hz		50 Hz	
2	**INSTANTANEOUS FREQUENCY**				
2.1	Maximum Frequency	50.35 Hz	AT 13.03 HRS ON 10.08.16	50.24 Hz	AT 18.01 HRS ON 02.09.16
2.2	Minimum Frequency	49.65 Hz	AT 08.10 HRS ON 21.08.16	49.67 Hz	AT 18.53. HRS ON 19.09.16

3 Percentage of time when frequency was :-

	%age of time when frequency was	Aug-16	Sep-16
3.1	Below 48.5 Hz	0.00	0
3.2	Between 48.50 Hz and 48.8 Hz	0.00	0
3.3	Between 48.80 Hz and 49.2 Hz	0.00	0
3.4	Between 49.20 Hz and 49.5 Hz	0.00	0
3.5	Between 49.50 Hz and 49.7 Hz	0.11	0.1
3.6	Between 49.70 Hz and 49.9 Hz	5.83	5.75
3.7	Between 49.9 Hz and 50.05 Hz	73.73	75.15
3.8	Between 50.05 Hz AND 51.5 Hz	20.32	19
3.9	Above 51.5 Hz	0.00	0.00
4	No. of times frquency touched 48.80 Hz	0	0
4.1	No. of times frquency touched 48.60 Hz	0	0
4.2	No. of times frquency touched 51.0 Hz	0	0

ANNEXURE - 2.3.4.i

M.P POWER TRANSMISSION COMPANY LIMITED

TRANSMISSION WORKS COMPLETED DURING 2016-17 (UP TO 30.09.2016)

I	**EHV TRANSMISSION LINES**					
S. No.	**NAME OF THE TRANSMISSION LINE / (FINANCED BY)**	**TYPE OF CIR CUITS**	**ROUTE LENGTH**	**CIRCUIT KMS.**	**DATE OF COMPL-ETION**	**DATE OF COMMI-SSIONING**
A.	**400 KV TRANSMISSION LINES**					
	NIL		**0**	**0**		
B.	**220 KV TRANSMISSION LINES**					
1	LILO of 220 KV Katni - Satna line at PGCIL, Satna	DCDS	0.7	1.40	April'16	09.04.2016
2	LILO of one Ckt of 220kv DCDS Bhopal - Ashta line at 220kv S/S Mugaliya chhap. (DCDS) (2x26.459) (JICA)	DCDS	26.46	52.92	June'16	18.06.2016
3	LILO of 220kV line Indore 400 -Pithampur at Pithampur-II 220Kv S/s in Indore (2x6.898) (PFCII)	DCDS	6.90	13.80	June'16	10.06.2016
4	220Kv DCDS line from 400Kv S/s Bina to plant of M/s Bharat Oman Refinaries Ltd. Agasod, Bina (2x18.197) (Contr.Works)	DCDS	18.197	36.394	Aug'16	01.08.2016
C.	**132 KV TRANSMISSION LINES**					
1	2nd Circuit of 132 Kv Gudgaon - Kukru Wind Power Ltd. Betul (Contributory work)	2nd ckt	22.5	22.50	Aprilo'16	07.04.2016
2	LILO of one circuit of Mandideep - Hoshangabad for 132 KV Sub-Station Tamot(2x1.686) (REC-I)	DCDS	1.686	3.37	Aprilo'16	30.04.2016
3	2nd Ckt. Of 132 Kv DCSS Gairatganj- Vidisha line (48.30) ADB-III	2nd ckt	48.27	48.27	May'16	10.05.2016
4	132Kv 2phase 2wire S/c line from 132Kv s/s Amla to GSS Bordehi of RVNL(1x23.5) Contrib	DCSS	23.29	23.29	May'16	06.05.2016
5	132Kv DCSS line from 132Kv S/s Madhotal to 11.5 MW Processing Plant of M/s Essel Jabalpur MSW Pvt.Ltd. at Kathonda Dist- Jabalpur Contrib.	DCSS	2.52	2.515	May'16	02.05.2016
6	2nd Ckt.of 132 KV Rewa - Mangawan line (Dist. Rewa) (JICA) approch section of mangawan end (4x2.079+1x6.75) (JICA) (Balance work)	2nd Ckt	8.829	15.066	June'16	27.06.2016
7	132 kv DCSS Datiya- Bhander line (1x34.038)ADB-III	DCSS	34.04	34.04	June'16	27.06.2016
8	132 kv DCSS Ashoknagar - Kothiya line (1x27.5+4x2.5) ADB-III	DCSS	37.50	37.50	June'16	09.06.2016
9	132 kv DCSS line from 132Kv S/s Lahar - 132Kv S/s Seondha (1x15.5) PFC-III	DCSS	16.70	16.70	June'16	24.06.2016
10	2nd ckt of Betul - Gudgaon line (1X57) ADB-III	2nd ckt	57.00	57.00	June'16	24.06.2016
11	132 kv DCDS line Panagar - Katangi (2x29.471) PFC-II	DCDS	29.47	58.94	JULY'16	04.07.2016
12	132 kv DCSS line from 132Kv S/s Porsa - 132Kv S/s Ambah (1x22.524) PFC-III	DCDS	22.52	22.52	Aug'16	11.08.2016
13	2nd Ckt.of 132Kv DCSS Katangi tap line tapped to one ckt. Of 132Kv Balaghat-Seoni line (1x0.5+35.67) ADB-III	DCDS	35.67	35.67	Aug'16	29.08.2016
14	132 kv DCSS line Mehgaon - Pratappura (1x29.74) ADB-III	DCDS	29.74	29.74	Aug'16	31.08.2016
15	132kv Jeerapur -Susner DCSS line (1x30.236) (JICA)	DCSS	30.24	30	Sept'16	21.09.2016
16	2nd ckt of 132kv Bairagarh - Shyampur line (1x0.5+4x1.9+19) (ADB-III)	2nd ckt	19.04	19.04	Sept'16	28.09.2016
17	132 kv Ashoknagar - Eshagarh DCSS line (1x37) (Transco) (Est.Sanc.-0281dtd. 17.03.2015 for Rs.1895.67)	DCSS	38.50	38.50	Sept'16	30.09.2016
18	132KV DCDS line from 132KV S/s Pithampur (to be upgrated) for Pithampur SEZ Phase-II of AKVN(2x0.54) (contr. work)	DCDS	0.54	1.08	Sept'16	10.09.2016

II.	EHV SUB - STATIONS					
S. No.	NAME OF SUBSTATION / (DISTRICT) / (FINANCED BY)	VOLTAGE RATIO (KV)	No.OF X-mer & Cap.(MVA)	EFFECTIVE CAPACITY MVA	DATE OF COMPL-ETION	DATE OF COMMI-SSIONING
A.	**400 KV SUBSTATIONS**					
1	1x125 MVAR 400 Kv Bus Reactor at existing 400Kv S/s Nagda ADB-III	400Kv			Aug'16	09.08.2016
	Nil			0.00		
B.	**220 KV SUBSTATIONS**					
a.	**220 KV NEW SUBSTATIONS**					
1	220kv switching S/s at Nagra Dist- Ratlam Contrib.	220/132 KV	0.00	0	May'16	30.05.2016
2	Mugaliachhap(Bhopal) 220kv (New S/s)(1x160+40) (JICA)	220/132 KV	1x160	160	June'16	20.06.2016
C.	**132 KV SUBSTATIONS**					
a.	**132KV NEW SUBSTATIONS**					
1	Pratappura 132 KV New S/s (1x40) ADB-III (Dist- Bhind)	132/33KV	1x40	40	April'16	12.04.2016 (fom 33 KV side) & 31.08.2016 (132KV side)
2	Tamot 132kv s/s (Distt. Raisen) 1x50MVA (Transco)	132/33KV	1x40	40	May'16	05.05.2016
3	Bhander 132kv s/s (Distt. Datia) 1x63 (ADB-II)	132/33KV	1x63	63	June'16	28.06.2016
4	Kothiya 132kv s/s (Distt. Guna) 1x40 MVA (ADB-III)	132/33KV	1x40	40	June'16	09.06.2016
5	Katangi 132kv s/s with 1 no. 132 kv feeder bay & 1x40 MVA (Distt. - Jabalpur) (PFC-III)	132/33KV	1x40	40	June'16	28.06.2016 from 33kV & 05.07.2016 from 132Kv
6	Pithampur SEZ- II 132kv s/s 1x63 MVA (Distt.Dhar) (contr.work)	132/33KV	1x63	63	Sept'16	19.09.2016

ANNEXURE - 2.3.4.ii

TRANSMISSION WORKS UNDER PROGRESS (AS ON 30.09.2016)

S. No.	NAME OF THE TRANSMISSION LINE	CKT. KMS.	PROGRESS IN %	Target for commis-sioning
A.	**400 KV TRANSMISSION LINES**			
1	NIL	0	0%	-
B.	**220 KV TRANSMISSION LINES**			
1	2nd Ckt of 220kv Satna - Chhatarpur line (152)	160	8%	2016-17
2	Upgradation of 132KV D/C Indore-II (Jaitpura) - Indore(N/Z) line on composite multi circuit monopole & LILO of one Ckt of 220kv Indore-II (Jaitpura) - Indore(400KV) line at 220kv S/S Indore(N/Z) (2x0.5+2x4+4x6.7)	35.8	31%	2018-19
3	220Kv DCDS line from Gwalior(Malanpur)- Morena (2X29.25)	58.5	27%	2016-17
4	LILO of one Ckt of 220kv DCDS Ashta - Dewas line at 220kv S/S Chapda (DCDS) (2x32.782)	66	3%	2017-18
5	220Kv DCDS line from Pithampur-Depalpur line (2X31)	62	37%	2017-18
6	220Kv FCFS line for LILO of both Ckt. Of Badnagar -Ratlam D/C line at 400Kv S/s Badnawar (2x1+4x8)	34	4%	2017-18
7	220Kv DCDS Julwaniya- Kukshi (2X58)	116	16%	2017-18
8	220Kv DCSS Shujalpur- Narsinghgarh line (1X43.6)	44	15%	2017-18
C.	**132 KV TRANSMISSION LINES**			
1	132kv Ichhawar -Sehore DCSS line (1x35.298)	35.298	33%	2017-18
2	132 kv DCDS Ujjain(220 kv) -Chandrawatiganj line (2x35.42)	70.84	79%	2016-17
3	132 kv DCSS Dewas-Barotha line (1x23)	23	60%	2016-17
4	132 kv DCSS Ghatabillod-Betama line (1x18)	18	29%	2016-17
5	132kv DCSS Gautampur -Depalpur line (1x19)	19	20%	2016-17
6	132kv Nagda(220kv)- Kachrod-Jaora DCSS line (1x64)	64	18%	2016-17
7	132kv DCSS Shujalpur(220kv) -Pachhore DCSS line (1x35.5)	35.5	55%	2017-18
8	132kv Mugaliya Chaap - Sehore DCSS line (1x24)	24	9%	2016-17
9	132 kv DCSS line between 132Kv S/s Nasrullaganj & 220KV Itarsi s/s(1x53.209)	53.209	34%	2017-18
10	LILO of S/C ckt of 132 KV Seoni-Lakhnadon line at 220kv S/S Seoni (2x20)	40	5%	2017-18
11	132 kv DCSS Guna-Eshagarh line (1x72)	72	32%	2017-18
12	132 kv DCSS Line from 220kv S/s Shivpuri-132Kv Bairad (1x32.859)	32.859	32%	2017-18
13	132 kv DCSS from 220Kv S/s Datiya-132kv S/s Indergarh (1x27.1)	27.1	49%	2017-18
14	132 kv DCSS line from 132Kv S/s Kymore-132Kv S/s Barhi (1x35)	35	4%	2017-18
15	132 kv Sirmour - Katra DCDS line (2x37.67)	75.34	18%	2017-18
16	132 kv DCSS line from220Kv S/s Chichli - 132Kv Karapgaon (1x31.059)	31.059	3%	2017-18
17	132 kv Sagar-Rahatgarh DCSS line (1x55)	55	13%	2016-17
18	132Kv DCSS line from 220Kv S/s Rajgarh to 132Kv S/s Jhabua (1x50)	50	23%	2016-17
19	LILO of Both circuit of 132 kv DCDS Gwalior(Mahalgaon) - Dabra/Karera line at 220 KV S/s Gwalior II) (2x2x7.87)	55.09	36%	2016-17
20	132 kv DCSS line Datiya - Dabra (1x30)	30	99%	2016-17
21	132Kv DCDS line for LILO of both circuit of 132Kv Banmore - Morena/Hetampur DCDS line for 220Kv S/s Morena(2x0.616+2x3.122)	7.476	70%	2016-17

22	2nd ckt of 132Kv Chhatarpur- Khajuraho line (1x0.5+33.2)	33.7	65%	2016-17
23	132 kv DCSS Dewas-Agrod line (1x20.76)	20.76	10%	2017-18
24	2nd Ckt. Of 132 Kv DCSS Tikamgarh- Budhera line (32.46)	32.46	90%	2016-17
25	132 kv DCSS Khurai- Khimlasa line (1x20.937)	20.937	19%	2017-18
26	LILO of 132Kv Mungaoli Traction feeder at 132Kv S/s Mungaoli (4x7.8+2x0.7) **Note**: (4x7.8ckt.km line charged on 30.12.2015 by tapping)	32.6	96%	2017-18
27	LILO of 132Kv Vidisha- Bairasiya line at salamatpurr (2x0.162)	0.324	46%	2016-17
28	132 kv DCDS Line Chichli - Udaypura (2x47) (On 220Kv Tower)	94	28%	2018-19
29	132 kv DCSS Panagar - Patan line (1x22.749)	22.749	7%	2017-18
30	132 kv DCSS Badnagar - Chhayan Line (1x31)	31	17%	2016-17
31	2nd ckt of 132kv Kukshi - Alirajpur line (1x1+36)	37	89%	2018-19
32	132 kv DCSS Dhar - Teesgaon line (1x15.35)	15.35	16%	2017-18
33	LILO of 132 kv Chhegaon - Nepanagar Line at 132Kv S/s Pandhana(2x1.895) (This line is proposed in place of Chhegaon - Pandhana Estt. Sanc.no. 0121dtd.06.08.2014)	3.79	60%	2016-17
34	LILO of 132 kv Manawar - Kukshi Line at 132Kv S/s Singhana(2x3.1)	6.2	60%	2016-17
35	LILO of Khargone - Julwaniya DP line(132Kv) at Talakpura (2x1.1+1x0.8)(This line is proposed in place of Julwaniya-Talakpura line Rev. Estt. Sanc.no. 0245 dtd.15.01.2016 for Rs.185.40lac.)	3	60%	2017-18
36	LILO of 132 kv Ratlam - Meghnagar line at 132Kv S/s Petlawad (2x7.4)	14.8	2%	
37	132 kv DCDS Beragarh - Intkhedi (2x8.7+4x1.5)	23.4	43%	2017-18
38	132 kv DCSS Udaipura - Silvani line (1x25.8)	25.8	38%	2017-18
39	132 kv DCSS Narsinghpur - Devnagar (1x23)	23	13%	2017-18
40	132 kv DCSS Karakbel - Belkheda (1x24.445)	24.445	11%	2017-18
41	132 kv DCDS Narsinghpur - Karakbel line (2x23)	46	15%	2017-18
42	132KV DCSS Sabalgarh - Kelaras line (1x25)	25	4%	2016-17
43	132kv Birsinghpur -Shahdol DCSS line (1x48)	48	4%	2018-19
44	132 kv DCSS Line from 220Kv S/s Barwaha - 132Kv S/s Kishangarh (1x57.139)	57.139	63%	2016-17
45	2nd ckt of 132kv RTS Mangliyagaon line	8.852	96%	
46	132Kv 2 phase 2wire line from 132Kv s/s Semri-Harchan for PS to RTS Bagra Tawa(1x4.3)	4.3	98%	
47	132Kv DCSS 2 phase 2wire line from 132Kv s/s Majhgawan for PS to TSS Majhgawan(1x0.19)	0.19	89%	
48	132Kv DCSS 2 phase 2wire line from 132Kv s/s Rewa for PS to TSS Rewa(1x0.4)	0.4	73%	
49	132Kv DCSS line from proposed 132Kv s/s Tamot to Sagar Yarn plant of M/s Sagar Manufacturer (P) Ltd.(1x3.1)	3.1	30%	
S. No.	**NAME OF THE SUBSTATION**	**EFFECTIVE CAPACITY MVA**	**PROGRESS IN %**	**Target for commis-sioning**
A.	**400 KV SUBSTATIONS**			
1	400 KV sub-station Balaghat/Kirnapur with 2x100MVA 400/220 kv x-MER+ 1X40 MVA X-mer (Distt.Balaghat)	200	9%	2017-18
2	400 KV sub-station Badnawar with 2x315MVA 400/220 KV X-mer (Distt.Balaghat)	630	4%	2017-18
3	Bhopal (Sukhi Sewaniya) 400/220 kv s/s Addl. 315 MVA X-mer (Distt.Bhopal)	315	19%	2016-17
4	Chhegaon 400/220 kv s/s Addl. 315 MVA X-mer (Distt.Khandwa)	315	30%	2016-17

B. a	**220 KV SUBSTATIONS**			
1	Julwaniya 220/132kv S/s at 400kv s/s (Distt. Badwani) (2x160+40 MVA) (1No. 160MVA Charged on 21.08.2015)	320	79%	2016-17
2	Gwalior-II 220kv (New S/s)(2x160+40) (1x160 charged on31.3.2015)	160	95%	2016-17
3	Upgradation of Chapda 132Kv S/s to 220kv with 1x160MVA (Distt.)	160	2%	2017-18
4	Upgradation of Depalpur 132Kv S/s to 220kv with 1x160MVA(Distt.)	160	9%	2017-18
5	Adampur 220/33kv S/s 2x50MVA	100	6%	2017-18
6	Upgradation of Kukshi 132Kv S/s to 220kv with 1x160MVA (Distt.)	160	11%	2017-18
7	Morena 220/132kv S/s 1x160 +1x63 MVA +2No.220Kv FB +4No.132Kv FB+6No.33Kv FB+BC +Capacitor Bank	160	66%	2016-17
C.	**132 KV SUBSTATIONS**			
(a)	**NEW SUBSTATIONS**			
1	Rahatgarh132kv s/s (Distt.Sagar)	40	58%	2016-17
2	Bairad 132kv s/s(Dist.-Shivpuri)	40	13%	2017-18
3	Barahi 132kv s/s (Distt.Katni)	40	11%	2017-18
4	Karapgaon 132kv s/s (Distt-Narsinghpur)	40	14%	2017-18
5	Indergarh 132kv s/s (Distt.Datia)	40	25%	2017-18
6	Biston 132kv s/s (Distt.) 1x40 MVA	40	24%	2017-18
7	Agrod 132kv s/s (Distt.) 1x40 MVA	40	54%	2017-18
8	Chhayan 132kv s/s (Distt.) 1x40 MVA	40	54%	2016-17
9	Teesgaon 132kv s/s (Distt.) 1x40MVA	40	16%	2016-17
10	Pandhana 132kv s/s (Distt.) 1x63 MVA	63	35%	2016-17
11	Singhana 132kv s/s (Distt.) 1x40 MVA	40	46%	2016-17
12	Talakpura 132kv s/s (Distt.) 1x40 MVA	40	47%	2017-18
13	Waraseoni 132kv s/s (Distt.Balaghat) 1x40 MVA	40	1%	2017-18
14	Devnagar 132kv s/s (Distt. Narsighpur)) 1x40 MVA	40	33%	2017-18
15	Belkheda 132kv s/s (Distt. Jabalpur)) 1x40 MVA	40	1%	2017-18
16	Khimlasa 132kv s/s (Distt.) 1x40 MVA	40	3%	2017-18
17	Karakbel 132kv s/s (Distt. Narsinghpur) 1x40 MVA	40	17%	2017-18
18	Chinaur 132kv s/s (Distt.) 1x40 MVA	40	28%	2016-17
19	Kelaras 132kv s/s with 1x63 MVA (Distt.)	63	14%	2016-17
20	Narsinghgarh 132kv s/s with 1x40 MVA (Distt.)	40	5%	2016-17
21	Salamatpur 132kv s/s with 1x40 MVA (Distt.)	40	47%	2016-17
22	Intkhedi 132kv s/s (Distt.) 1x63 MVA	63	69%	2017-18
23	Silvani 132kv s/s with 1x40 MVA (Distt.)	40	12%	2017-18
24	Udaipura 132kv s/s with 1x40 MVA (Distt.)	40	3%	
25	Kishangarh 132kv s/s with 1 no. 132 kv feeder bay & 1x40 MVA (Distt. Dewash)	40	77%	2016-17

Discoms wise Average Supply Hours

PARTICULARS	East Zone		Central Zone	
	Aug-16	Sep-16	Aug-16	Sep-16
Commissinary HQ	23:45	23:50	23:42	23:42
District HQ	23:54	23:54	23:40	23:46
Tehsil HQ	23:48	23:49	23:28	22:39
Rural -Mixed	23:27	23:28	22:40	22:47
Rural -DLF	23:27	23:28	22:57	23:01
Rural -Irrigation	9:57	9:58	9:26	9:31
PARTICULARS	**West Zone**		**MP**	
	Aug-16	**Sep-16**	**Aug-16**	**Sep-16**
Commissinary HQ	23:53	23:52	23:45	23:47
District HQ	23:51	23:46	23:49	23:50
Tehsil HQ	23:42	23:37	23:40	23:38
Rural -3Phase	23:09	23:20	23:05	23:10
Rural -1Phase	23:01	23:20	23:18	23:17
Total Rural	9:43	9:39	9:42	9:43

Annexure-2.4(ii)

LIST OF 33KV FEEDERS UNDER MPPKVVCL, JABALPUR

(For which group to be allocated)

JABALPUR REGION

Name of EHV Substation	Name of 33KV feeder	Date of commission-ing of feeder bay	Date of commission-ing of feeder
220KV			
220KV Chhindwara	33KV Kundali	27.07.2015	21.11.2015
	33KV Bangaon	27.07.2015	----
132KV			
132KV Borgaon	33KV FS-II	26.02.2013	12.04.2016

LIST OF 33KV FEEDERS UNDER MPPKVVCL, INDORE

(For which group to be allocated)

INDORE REGION

Name of EHV Substation	Name of 33KV feeder	Date of commission-ing of feeder bay	Date of commission-ing of feeder
220KV			
220KV Indore (Jetpura)-II	33KV PGCIL-II feeder		24.08.2014
220KV Nimrani	33KV Maral Overseas		08.06.2015
132KV			
132KV Raukhedi	33KV DLF-I		01.03.2014
	33KV DLF-II		01.03.2014
	33KV Exep.Panther-IV		09.07.2015
132KV Chandrawatiganj	33KV Feeder No.2		31.12.2014
	33KV Feeder No.3		31.12.2014
	33KV Feeder No.4		31.12.2014
132KV Badgaon	33KV Discom Bay	29.11.2014	25.09.2015
132KV Anjad	33KV Discom Bay	08.12.2014	26.11.2015

Annexure-2.4(ii)

UJJAIN REGION			
Name of EHV Substation	**Name of 33KV feeder**	**Date of commission-ing of feeder bay**	**Date of commission-ing of feeder**
220KV			
220KV Barod	33KV M&B-I&II		
132KV			
132KV Susner	33KV Evershine		21.05.2014
132KV Agar	33KV Enercon-I		
	33KV Enercon-II		
	33KV M&B-I		
	33KV M&B-II		
132KV Nalkheda	33KV Kachnariya		
	33KV Lasuldiya Kelwa		
132KV Sonkatch	33KV Industrial (MPAKVN)		

LIST OF 33KV FEEDERS UNDER MPPKVVCL,BHOPAL

(For which group to be allocated)

BHOPAL REGION

Name of EHV Substation	Name of 33KV feeder	Date of charging of feeder
220 KV		
220 KV Betul	33 KV Industrial	13.06.2014
220 KV Vidisha	33 KV ISanchi	30.01.2015
132 KV		
132 KV Bareli	33 KV Barna	19.02.2014
	33 KV Boras	19.02.2014
132 KV Biora	33 KV Nagar Palika	09.03.2014
	33 KV Water Works	09.03.2014
132 KV Shyampur	33 KV Jatkheda-I	07.05.2014
	33 KV Jatkheda-II	07.05.2014
132 KV Runaha	33 KV Runaha	15.04.2015
	33 KV Nazirabad	18.09.2015
	33 KV Ramgarh	19.09.2015
	33 KV Nayasamand	19.12.2015
132 KV MACT Bhopal	33 KV Bairagarh chichli-2	15.11.2014
132 KV Gopalpur	33 KV AE, PHE	27.02.2015
132 KV Amrawad Khurd	33 KV AIIMS Hospital	29.02.2016
	33 KV AIIMS Residence	29.02.2016
	33 KV C-21 Mall	01.06.2016
	33 KV Katara Hills-II	01.06.2016

GWALIOR REGION

Name of EHV Substation	Name of 33KV feeder	Date of charging of feeder
220 KV		
220 KV Sagalgarh	33 KV Mangrol	30.05.2014
132 KV		
132 KV Datia	33 KV Karapura	17.05.2014
132 KV Ron	33 KV Mangarh	21.11.2013
132 KV Morar	33 KV Readymade Garment	22.08.2014

Unitwise / Stationwise Genration in MU

A. Thermal

Ann 4.1

Stn. Name	UNIT No.	Capacity MW	Aug-16	Sep-16
AMARKANTAK	3	120	0.00	0.00
	4	120	0.00	0.00
	PH II	**240**	**0.00**	**0.00**
	5	210	**14.25**	**92.98**
	PH III	**210**	**14.25**	**92.98**
	TOT	**210**	**14.25**	**92.98**
SATPURA	6	200	8.07	6.56
	7	210	13.78	39.89
	PH II	**410**	**21.84**	**46.44**
	8	210	0.00	38.77
	9	210	0.00	20.71
	PH III	**420**	**0.00**	**59.47**
	10	**250**	**0.00**	**7.88**
	11	**250**	**0.00**	**98.08**
	PH IV	**500**	**0.00**	**105.95**
	TOT	**1330**	**21.84**	**211.87**
SANJAY GANDHI	1	210	0.00	16.12
	2	210	29.35	108.83
	PH I	**420**	**29.35**	**124.95**
	3	210	5.89	104.89
	4	210	0.00	72.22
	PH II	**420**	**5.89**	**177.11**
	5	**500**	**310.73**	**328.50**
	PH III	**500**	310.73	328.50
	TOT	**1340**	**345.97**	**630.56**
SSTPS	**1**	**600**	**0.00**	**61.89**
	2	**600**	**0.00**	**27.01**
	PH1	**1200**	**0.00**	**88.90**
MPPGCL THERMAL		**4080**	**382.06**	**1024.31**

Note : 1. Amarkantak Thermal Power Station-II Unit # 4 De-commissioned wef 01-May-2014.

2. Amarkantak Thermal Power Station-II Unit # 3 De-commissioned wef 13-Jan-2015.

B. Hydel

Station Name	Capacity MW	Aug-16	Sep-16
GANDHISAGAR	**115.0**	23.45	13.00
R.P.SAGAR	**172.0**	54.99	19.06
J.SAGAR	**99.0**	45.61	14.56
CHAMBAL	**386.0**	**124.05**	**46.62**
M.P.CHAMBAL	**193.0**	**62.03**	**23.31**
PENCH	**160.0**	30.63	85.13
M.P.PENCH	**107.0**	**20.42**	**56.75**
BARGI	**90.0**	60.28	61.34
TONS	**315.0**	146.10	178.63
BIRSINGHPUR	**20.0**	14.31	10.18
B.SGR(DEOLONDH)	**60.0**	20.47	32.00
B.SGR(SILPARA)	**30.0**	0.52	10.01
RAJGHAT	**45.0**	12.18	0.00
M.P.RAJGHAT	**22.5**	**6.09**	**0.00**
B.SGR(JINHA)	**20.0**	1.23	10.98
MADIKHEDA	**60.0**	45.01	14.13
TOTAL HYDEL	**1186.0**	**454.78**	**449.01**
MPPGCL Hydel	**915.0**	**354.18**	**415.39**
MPSEB HYDEL Share	**917.5**	**376.46**	**397.32**

C. NHDC (Ex-Bus)

Station Name	Capacity MW	Aug-16	Sep-16
Indira Sagar Hydel Project	1000	740.600	310.630
Omkareshwar Hydel Project	520	290.228	131.966

ENERGY BALANCE SHEET

Year : 2016 - 17

All figures in Million Unit

S No.	Source	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Total
A.	**M.P. Availability**													
1	Thermal	1534.26	1058.71	641.73	332.22	352.62	928.27	0.00	0.00	0.00	0.00	0.00	0.00	**4847.81**
2	Hydel	71.27	73.63	49.50	146.54	372.19	392.84	0.00	0.00	0.00	0.00	0.00	0.00	**1105.98**
3	Total	1605.53	1132.35	691.22	478.76	724.82	1321.11	0.00	0.00	0.00	0.00	0.00	0.00	**5953.79**
B.	**Exchange with other States / Systems**													
1	Indira Sagar	120.81	146.45	52.97	496.81	731.60	304.97	0.00	0.00	0.00	0.00	0.00	0.00	**1853.61**
2	Omkareshwar	65.89	75.81	31.09	215.83	290.23	131.97	0.00	0.00	0.00	0.00	0.00	0.00	**810.82**
3	MPPMCL Schedule from Central Sector of WR	1753.12	1394.10	1634.96	1127.74	933.38	1494.56	0.00	0.00	0.00	0.00	0.00	0.00	**8337.86**
4	MPPMCL Schedule from Central Sector ER	47.17	31.17	15.19	4.98	11.58	14.23	0.00	0.00	0.00	0.00	0.00	0.00	**124.32**
5	Total MPPMCL Schedule from Central Sector (WR+ER)	1800.29	1425.27	1650.15	1132.72	944.96	1508.79	0.00	0.00	0.00	0.00	0.00	0.00	**8462.18**
6	Deviation Energy of (WR+ER)	-47.47	-70.17	-59.80	-88.60	-92.98	-73.79	0.00	0.00	0.00	0.00	0.00	0.00	**-432.82**
7	Schedule From DVC ER	232.92	202.40	229.04	111.04	8.12	57.86	0.00	0.00	0.00	0.00	0.00	0.00	**841.39**
8	Schedule From Sugen	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**4.80**
9	LANCO Amk	195.30	186.44	187.18	144.74	54.50	140.13	0.00	0.00	0.00	0.00	0.00	0.00	**908.29**
10	SASAN	988.04	886.52	921.35	834.99	589.41	616.28	0.00	0.00	0.00	0.00	0.00	0.00	**4836.58**
11	ESSAR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
12	J P Nigri	278.92	323.20	295.64	250.95	308.17	318.10	0.00	0.00	0.00	0.00	0.00	0.00	**1774.98**
13	MB Power	63.53	131.56	84.34	18.07	14.29	43.26	0.00	0.00	0.00	0.00	0.00	0.00	**355.06**
14	JHABUA Power	0.00	20.41	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**23.71**
15	STOA Schedule other than MPPMCL	0.00	0.00	64.44	75.76	80.19	19.73	0.00	0.00	0.00	0.00	0.00	0.00	**240.12**
16	Himachal Pradesh HYDAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
17	BARH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
18	Schedule from Sardar Sarovar	8.89	19.97	78.71	257.09	527.28	268.86	0.00	0.00	0.00	0.00	0.00	0.00	**1160.80**
19	SCH to Railway from RGPPL_ebid	144.00	148.02	143.44	158.36	161.40	161.67	0.00	0.00	0.00	0.00	0.00	0.00	**916.89**
20	Schedule from SEZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
21	Schedule from Rihand+Matatila	2.37	3.07	3.26	5.02	11.49	19.42	0.00	0.00	0.00	0.00	0.00	0.00	**44.63**
22	Medium Term Power Purchase from CSPDCL through PTC agaisnt PPA CSPDCCL dtd. 18.09.2012	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
23	Medium Term Power Purchase from Balco through PTC agaisnt PPA Balco dtd. 18.09.2012 Including Short term purchase against MTOA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
24	Additional Power Purchase	6.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.53
25	Energy Exchange	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Banking of Energy	-145.84	-11.74	-77.54	-210.04	-297.14	-149.27	0.00	0.00	0.00	0.00	0.00	0.00	**-891.57**
27	Sale of Power	-321.72	-171.39	-105.78	-155.59	-512.51	-399.33	0.00	0.00	0.00	0.00	0.00	0.00	**-1666.31**
28	**Total MP Schedule (Including Railway)**	**3253.22**	**3163.74**	**3477.52**	**2627.92**	**1890.17**	**2605.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	17018.09
29	**Total MP Drawal (Including Railway)**	**3205.75**	**3093.57**	**3417.72**	**2539.32**	**1797.19**	**2531.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	16585.27
30	Wheeled Energy of Tawa HEG	0.00	0.00	0.00	6.87	11.38	8.33	0.00	0.00	0.00	0.00	0.00	0.00	**26.58**
31	Wheeled Energy of Wind Farm	18.13	9.25	25.91	19.94	12.96	6.17	0.00	0.00	0.00	0.00	0.00	0.00	**92.36**
32	Wheeled Energy of Solar Plant	16.07	15.81	13.19	8.67	8.05	12.82	0.00	0.00	0.00	0.00	0.00	0.00	**74.62**
33	Wheeled Energy of Ascent Hydro	1.39	1.16	0.67	0.05	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	**4.38**
34	POWER PURCHASE by MPPMCL from BLA Power + JP BINA (Intra State STOA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
35	Deviation Energy of MPPGCL Thermal	11.36	0.36	-7.88	-10.24	-10.91	2.46	0.00	0.00	0.00	0.00	0.00	0.00	**-14.86**
36	Energy Purchased by MP from Wind Farm	227.92	447.95	437.76	435.03	496.33	279.71	0.00	0.00	0.00	0.00	0.00	0.00	**2324.70**
37	Energy Purchased by MP from Solar Plant	87.17	87.65	75.92	76.23	48.36	77.74	0.00	0.00	0.00	0.00	0.00	0.00	**453.08**
38	Firm / Infirm Energy of HEG Mandideep+Hindalco+HEG Tawa +Trimula Ind. purchase by MP +Wheeled enrgy of CPP / IPP	20.37	8.23	8.07	21.17	23.00	50.10	0.00	0.00	0.00	0.00	0.00	0.00	**130.93**
39	Purchased from ASN Biomass Katni + RDM Care Ind. Biogas Pariyat + Pragya Energy Pvt. Ltd. Biogas Richhai+ Arya Energy Kotma + Orient Green Power Limited, Gadarawara Bio-Mass+Shaliwahna (CHH+Umariya) + JBP MSW	10.35	8.46	9.39	6.14	8.23	8.82	0.00	0.00	0.00	0.00	0.00	0.00	**51.40**
40	Deviation Energy of ISP	1.99	2.22	2.15	6.76	9.00	5.66	0.00	0.00	0.00	0.00	0.00	0.00	**27.77**
41	Schedule Energy of BLA Power against LTOA	7.85	1.92	2.76	1.09	0.16	1.69	0.00	0.00	0.00	0.00	0.00	0.00	**15.45**
42	Schedule Energy of JP BINA Power against LTOA	0.00	3.86	0.00	0.00	0.00	17.27	0.00	0.00	0.00	0.00	0.00	0.00	**21.13**
43	Import from bargi Left Bank Canal Power House + ISP NVDA	0.01	0.01	0.01	0.01	0.01	0.55	0.00	0.00	0.00	0.00	0.00	0.00	**0.58**
44	Chambal Complex Excess / less Overshare by MP	-3.19	3.46	6.91	-6.51	-41.40	-14.62	0.00	0.00	0.00	0.00	0.00	0.00	**-55.33**
45	Rajghat Hydel Power Station Excess / Less Overshare by MP	-0.03	0.01	-0.02	3.50	2.62	-0.02	0.00	0.00	0.00	0.00	0.00	0.00	**6.06**
46	**State Supply (Ex-Power st. Bus)**	**5397.37**	**5038.53**	**4767.84**	**4299.45**	**4111.75**	**4747.43**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	28362.36
47	AVERAGE DAILY (Ex-Bus)	179.91	162.53	158.93	138.69	132.64	158.25	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	154.99
48	MINIMUM DAILY (MP Periphery)	167.37	137.08	134.68	107.18	92.82	135.71	0.00	0.00	0.00	0.00	0.00	0.00	92.82
49	MAXIMUM DAILY (MP Periphery)	177.75	174.97	166.73	144.25	142.69	177.30	0.00	0.00	0.00	0.00	0.00	0.00	177.75
50	**State Supply (Ex-Power st. Bus):- YEAR : 2015-16**	**4281.50**	**4822.95**	**4090.97**	**4214.27**	**4371.53**	**5133.25**	**6395.72**	**6376.15**	**6847.93**	**6256.30**	**5773.75**	**5310.94**	26914.48
51	Year ((16-17)-(15-16))*100/Year (15-16)	**26.06**	**4.47**	**16.55**	**2.02**	**-5.94**	**-7.52**	**-100.00**	**-100.00**	**-100.00**	**-100.00**	**-100.00**	**-100.00**	**5.38**
52	Unshedule L/S : Year-2016-17	0.00	5.37	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**5.64**
53	Frequency Correction	3.92	1.95	2.34	1.38	1.52	1.86	0.00	0.00	0.00	0.00	0.00	0.00	**12.97**
54	**Restricted Requirement : Year-2016-17**	**5401.30**	**5045.84**	**4770.18**	**4301.10**	**4113.27**	**4749.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	28380.98
55	Shedule L/S : Year-2016-17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
56	**Un-Restricted Requirement : Year-2016-17**	**5401.30**	**5045.84**	**4770.18**	**4301.10**	**4113.27**	**4749.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	28380.98

ENERGY BALANCE SHEET : Demand & Sypply Hours

Year : 2016 - 17

S.NO.		Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Yr 16-17
C.	**MORNING PEAK (MAX)**													
1	DEMAND MET	7984	7347	7019	6147	6146	7909	0	0	0	0	0	0	7984
2	LOAD RELIEF	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LOAD SHEDDING	0	0	0	0	0	0	0	0	0	0	0	0	0
D.	**EVENING PEAK (MAX)**													
1	DEMAND MET	8011	7902	7501	6903	6964	7963	0	0	0	0	0	0	8011
2	LOAD RELIEF	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LOAD SHEDDING	0	0	0	0	0	0	0	0	0	0	0	0	0
F.	**REGISTERED MAXIMUM**	8119	8045	7501	6903	6964	7963	0	0	0	0	0	0	8119
G.	**COMPUTED MAXIMUM DEMAND**	8153	8050	7517	6913	6964	7978	0	0	0	0	0	0	8153
H.	**UNRESTRICTED MAXIMUM DEMAND**	8153	8050	7517	6913	6964	7978	0	0	0	0	0	0	8153
I.	**Average Power Supply per day to**													
1.	Div. Head Quarters	23:47	23:37	23:42	23:42	23:45	23:47	0:00	0:00	0:00	0:00	0:00	0:00	23:43
2.	District Head Quarters	23:52	23:44	23:45	23:48	23:49	23:50	0:00	0:00	0:00	0:00	0:00	0:00	23:48
3.	Tahsil Head Quarters	23:44	23:31	23:34	23:36	23:40	23:38	0:00	0:00	0:00	0:00	0:00	0:00	23:37
4.	Rural -Mixed	23:25	22:52	22:54	22:56	23:05	23:10	0:00	0:00	0:00	0:00	0:00	0:00	23:04
5.	Rural -DLF	23:32	23:09	23:06	23:12	23:18	23:17	0:00	0:00	0:00	0:00	0:00	0:00	23:16
6.	Rural -Irrigation	9:51	9:37	9:37	9:39	9:42	9:43	0:00	0:00	0:00	0:00	0:00	0:00	9:42
J	LOAD FACTOR %	92.33	79.51	82.87	78.80	74.42	78.89	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	81.14

FREQUENCY ANALYSIS YEAR 2016-17

S.N	PARTICULARS	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Yr 16-17
A. INTGRATED FREQUENCY														
1	MAXIMUM	50.11	50.20	50.11	50.16	50.14	50.09	0.00	0.00	0.00	0.00	0.00	0.00	50.20
2	MINIMUM	49.80	49.78	49.82	49.82	49.67	49.85	0.00	0.00	0.00	0.00	0.00	0.00	49.67
B. INSTANTANEOUS FREQUENCY														
1	MAXIMUM	50.32	50.44	50.37	50.35	50.35	50.24	0.00	0.00	0.00	0.00	0.00	0.00	50.44
2	MINIMUM	49.64	49.56	49.65	49.69	49.65	49.67	0.00	0.00	0.00	0.00	0.00	0.00	49.56
C. AVG FREQUENCY		49.98	50.00	50.00	50.01	50.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
D. % TIME WHEN FREQUENCY WAS														
1	ABOVE 51.5 Hz	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	50.05 TO 51.5 Hz	16.98	23.12	18.28	23.65	20.32	19.00	0.00	0.00	0.00	0.00	0.00	0.00	20.26
3	49.9 TO 50.05 Hz	69.94	69.78	74.09	72.35	73.73	75.15	0.00	0.00	0.00	0.00	0.00	0.00	72.50
4	49.7 TO 49.9 Hz	12.92	6.96	7.50	3.90	5.83	5.75	0.00	0.00	0.00	0.00	0.00	0.00	7.12
5	49.5 TO 49.7 Hz	0.16	0.14	0.13	0.10	0.12	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.12
6	49.2 TO 49.5 Hz	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	48.8 TO 49.2 Hz	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	48.5 TO 48.8 Hz	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	BELOW 48.5 Hz	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand

Month :- August 2016

FIGURES IN MW

Hrs.	FREQ.	Own Generation								Schedule from																	Tot Avl.	Act. Drl	Deviation	Intra State STOA	DEMAND MET	Load Shedding			REST. DEMAND	UNREST. DEMAND
		THER. Incl Aux	THER. Excl Aux	HYD.	ISP	OSP	Total IPPs Injection	Total CPPs Injection	Total	CSS	DVC ER	Sugen	Lanco	Sasan	Essar	JP Nigri	MB Power	Jhabua Power	SSP	SCH to Railway	SEZ	Banking	Sale	Pur	Total MTOA at MP	STOA	Rihand+ Matatila-Rajghat	Total					SCH	UN SCH	TOTAL		
1:00	49.99	506	460	455	993	393	26	529	2857	1192	4	0	73	767	0	395	21	0	885	218	0	-223	-858	0	0	63	10	2547	5404	2494	-53	0	5351	0	0	0	5354	5354
2:00	50.01	507	462	449	987	393	26	528	2844	1092	0	0	64	728	0	386	16	0	873	218	0	-223	-757	0	0	75	10	2483	5327	2404	-79	0	5248	0	0	0	5249	5249
3:00	50.01	505	460	430	988	394	26	517	2816	1031	3	0	64	732	0	386	9	0	869	218	0	-223	-684	0	0	81	10	2496	5312	2378	-118	0	5193	0	0	0	5195	5195
4:00	50.01	506	460	434	990	394	26	511	2815	1049	4	0	64	709	0	392	6	0	861	218	0	-223	-785	0	0	86	10	2392	5207	2324	-68	0	5139	0	0	0	5141	5141
5:00	49.98	506	461	433	990	394	26	503	2805	1023	4	0	61	692	0	387	11	0	848	218	0	-223	-683	0	0	98	10	2446	5251	2336	-110	0	5141	0	0	0	5144	5144
6:00	50.01	502	457	452	989	394	26	510	2828	1091	0	0	64	743	0	392	10	0	655	218	0	-224	-630	0	0	98	10	2427	5256	2427	-1	0	5255	0	0	0	5257	5257
7:00	50.00	508	462	480	986	394	26	532	2880	1258	0	0	64	810	0	392	2	0	536	218	0	-598	-410	0	0	156	10	2440	5320	2455	15	0	5335	0	0	0	5337	5337
8:00	50.04	506	460	463	977	395	26	595	2918	1311	0	0	64	807	0	392	10	0	557	218	0	-598	-431	0	0	146	10	2486	5403	2417	-68	0	5335	0	0	0	5336	5336
9:00	50.01	512	466	466	983	395	26	667	3003	1365	0	0	68	830	0	393	16	0	387	218	0	-598	-448	0	0	127	10	2368	5371	2329	-39	0	5331	0	0	0	5333	5333
10:00	50.00	497	452	473	984	393	26	717	3046	1333	12	0	72	831	0	393	15	0	340	218	0	-598	-501	0	0	103	10	2228	5275	2175	-53	0	5222	0	0	0	5224	5224
11:00	50.01	503	458	470	985	393	26	758	3091	1327	17	0	80	809	0	393	23	0	343	218	0	-597	-550	0	0	84	10	2156	5247	2007	-150	0	5098	0	0	0	5099	5099
12:00	50.01	496	451	468	987	393	26	782	3107	1321	15	0	71	768	0	393	25	0	358	218	0	-597	-727	0	0	51	10	1906	5014	1757	-149	0	4865	0	0	0	4867	4867
13:00	50.02	493	448	451	988	393	26	787	3093	1218	15	0	71	746	0	393	18	0	538	218	0	-619	-844	0	0	84	10	1849	4942	1752	-97	0	4845	0	0	0	4846	4846
14:00	50.00	502	457	436	989	393	26	770	3071	1146	13	0	64	716	0	389	18	0	537	218	0	-620	-797	0	0	97	10	1794	4865	1690	-103	0	4762	0	0	0	4763	4763
15:00	49.99	511	465	441	993	394	26	745	3064	1150	7	0	64	710	0	385	11	0	618	218	0	-616	-933	0	0	86	10	1710	4774	1662	-48	0	4726	0	0	0	4729	4729
16:00	50.01	501	456	450	985	395	26	671	2983	1070	4	0	64	710	0	378	6	0	720	218	0	-615	-901	0	0	110	10	1775	4758	1777	2	0	4760	0	0	0	4761	4761
17:00	49.99	506	460	438	988	394	26	599	2906	945	0	0	64	695	0	384	0	0	865	218	0	-617	-749	0	0	134	10	1950	4856	1970	19	0	4876	0	0	0	4878	4878
18:00	50.01	513	467	448	991	394	26	503	2829	871	0	0	61	657	0	403	0	0	1102	218	0	-616	-608	0	0	159	10	2258	5086	2200	-57	0	5029	0	0	0	5031	5031
19:00	49.97	534	486	490	998	393	27	461	2856	1326	23	0	85	786	0	427	25	0	756	214	0	-30	-1026	0	0	104	10	2701	5557	2836	135	0	5692	0	0	0	5698	5698
20:00	49.98	545	496	512	986	392	27	460	2873	1618	65	0	91	805	0	432	64	0	691	214	0	-90	-634	0	0	48	10	3315	6189	3216	-99	0	6089	0	0	0	6095	6095
21:00	50.00	541	492	480	988	393	27	451	2829	1585	49	0	85	798	0	423	56	0	697	214	0	-87	-623	0	0	47	10	3254	6084	3132	-123	0	5961	0	0	0	5965	5965
22:00	50.04	538	489	479	986	395	27	464	2840	1456	30	0	85	791	0	424	40	0	716	214	0	-79	-634	0	0	63	10	3117	5957	2958	-159	0	5798	0	0	0	5799	5799
23:00	50.02	528	481	472	985	393	26	489	2846	1344	4	0	75	785	0	424	23	0	806	214	0	-61	-603	0	0	36	10	3058	5904	2850	-208	0	5696	0	0	0	5697	5697
24:00	50.02	522	475	478	980	393	26	506	2858	1328	9	0	78	795	0	413	12	0	893	216	0	-600	-441	0	0	54	10	2767	5625	2617	-150	0	5476	0	0	0	5477	5477
Avg.	50.01	512	466	460	987	394	26	586	2919	1227	12	0	71	759	0	399	18	0	685	217	0	-399	-677	0	0	91	10	2413	5333	2340	-73	0	5259	0	0	0	5261	5261
00 TO 06 HRS.	50.00	505	460	442	990	394	26	516	2828	1080	3	0	65	728	0	390	12	0	832	218	0	-223	-733	0	0	83	10	2465	5293	2394	-71	0	5221	0	0	0	5223	5223
06 TO 12 HRS.	50.01	504	458	470	984	394	26	675	3008	1319	7	0	70	809	0	393	15	0	420	218	0	-597	-511	0	0	111	10	2264	5272	2190	-74	0	5198	0	0	0	5199	5199
12 TO 18 HRS.	50.00	504	459	444	989	394	26	679	2991	1067	7	0	65	706	0	389	9	0	730	218	0	-617	-805	0	0	112	10	1889	4880	1842	-47	0	4833	0	0	0	4835	4835
06TO 18 HRS.	50.01	504	459	457	986	394	26	677	2999	1193	7	0	67	758	0	391	12	0	575	218	0	-607	-658	0	0	111	10	2077	5076	2016	-61	0	5015	0	0	0	5017	5017
18 TO 24 HRS.	50.01	535	487	485	987	393	27	472	2851	1443	30	0	83	793	0	424	37	0	760	215	0	-158	-660	0	0	59	10	3035	5886	2935	-101	0	5785	0	0	0	5788	5788

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand

Month :- September 2016

FIGURES IN MW

Hrs.	FREQ.	Own Generation								Schedule from																	Tot Avl.	Act. Drl	Deviation	Intra State STOA	DEMAND MET	Load Shedding			REST. DEMAND	UNREST. DEMAND
		THER. Incl Aux	THER. Excl Aux	HYD.	ISP	OSP	Total IPPs Injection	Total CPPs Injection	Total	CSS	DVC ER	Sugen	Lanco	Sasan	Essar	JP Nigri	MB Power	Jhabua Power	SSP	SCH to Railway	SEZ	Banking	Sale	Pur	Total MTOA at MP	STOA	Rihand+ Matatila-Rajghat	Total					SCH	UN SCH	TOTAL		
1:00	50.00	1404	1278	560	451	197	91	392	2969	2135	63	0	185	847	0	430	54	0	438	212	0	-226	-603	0	0	2	26	3562	6531	3555	-7	0	6524	0	0	0	6526	6526
2:00	50.01	1381	1256	540	420	181	91	407	2895	2069	67	0	185	850	0	423	51	0	458	212	0	-224	-524	0	0	6	26	3599	6494	3489	-110	0	6384	0	0	0	6384	6384
3:00	50.00	1375	1251	515	393	176	90	410	2835	1986	56	0	185	851	0	423	50	0	447	211	0	-223	-490	0	0	9	26	3531	6367	3504	-27	0	6340	0	0	0	6342	6342
4:00	50.02	1386	1261	523	400	168	93	411	2856	1962	68	0	181	844	0	423	50	0	440	212	0	-225	-481	0	0	3	26	3504	6360	3442	-62	0	6298	0	0	0	6299	6299
5:00	49.97	1392	1267	510	415	169	93	383	2838	1970	66	0	185	845	0	423	52	0	419	212	0	-229	-465	0	0	6	26	3510	6348	3451	-59	0	6289	0	0	0	6295	6295
6:00	49.99	1397	1271	548	419	182	96	363	2879	2003	68	0	190	844	0	423	49	0	346	210	0	-236	-397	0	0	3	26	3527	6406	3502	-25	0	6381	0	0	0	6385	6385
7:00	50.00	1398	1273	569	437	188	96	366	2928	1971	67	0	194	838	0	422	34	0	256	212	0	-250	-269	0	0	49	26	3550	6477	3568	18	0	6495	0	0	0	6497	6497
8:00	50.03	1388	1263	533	435	190	95	426	2942	2003	68	0	194	842	0	421	34	0	261	212	0	-216	-243	0	0	30	26	3632	6574	3536	-96	0	6478	0	0	0	6479	6479
9:00	50.02	1390	1265	535	429	182	96	539	3045	2013	73	0	190	835	0	422	43	0	263	213	0	-214	-315	0	0	3	26	3552	6597	3407	-145	0	6452	0	0	0	6453	6453
10:00	50.01	1401	1275	514	425	183	96	619	3111	2035	81	0	190	835	0	423	50	0	262	214	0	-209	-566	0	0	-21	26	3321	6432	3221	-100	0	6332	0	0	0	6334	6334
11:00	50.02	1400	1274	499	427	179	95	649	3123	2012	82	0	186	822	0	427	50	0	268	213	0	-206	-636	0	0	-38	26	3207	6330	3127	-80	0	6250	0	0	0	6251	6251
12:00	50.01	1395	1269	502	410	179	94	658	3112	1977	77	0	186	809	0	428	52	0	277	210	0	-194	-714	0	0	-51	26	3083	6195	2842	-241	0	5954	0	0	0	5955	5955
13:00	50.00	1370	1247	478	393	170	92	660	3039	1884	73	0	183	803	0	427	55	0	344	208	0	-194	-791	0	0	-48	26	2970	6009	2981	11	0	6020	0	0	0	6022	6022
14:00	50.00	1366	1243	479	396	170	93	648	3029	1861	75	0	183	803	0	427	48	0	320	209	0	-193	-750	0	0	-35	26	2974	6002	2925	-49	0	5954	0	0	0	5957	5957
15:00	49.98	1365	1242	489	399	175	93	638	3035	1867	75	0	184	790	0	427	44	0	340	212	0	-187	-825	0	0	-29	26	2923	5958	2911	-12	0	5946	0	0	0	5951	5951
16:00	49.99	1374	1250	475	392	166	92	567	2943	1869	77	0	184	790	0	427	47	0	368	211	0	-197	-816	0	0	-9	26	2977	5920	2900	-77	0	5843	0	0	0	5847	5847
17:00	49.98	1370	1247	505	395	172	94	452	2864	1859	78	0	185	780	0	413	58	0	430	210	0	-189	-858	0	0	11	26	3004	5868	3034	31	0	5899	0	0	0	5903	5903
18:00	49.98	1421	1293	566	414	187	95	309	2863	1956	82	0	185	789	0	423	59	0	488	214	0	-195	-904	0	0	32	26	3155	6018	3114	-41	0	5977	0	0	0	5983	5983
19:00	49.95	1519	1383	637	521	234	101	290	3166	2203	123	0	194	815	0	432	88	0	377	214	0	-239	-557	0	0	40	26	3715	6881	3753	38	0	6919	0	0	0	6929	6929
20:00	50.03	1554	1414	606	503	241	107	314	3184	2314	139	0	194	823	0	434	113	0	377	215	0	-242	-392	0	0	12	26	4012	7197	3891	-121	0	7076	0	0	0	7076	7076
21:00	50.01	1515	1379	590	472	209	107	323	3080	2244	94	0	194	824	0	431	94	0	371	215	0	-220	-372	0	0	12	26	3913	6993	3817	-97	0	6897	0	0	0	6898	6898
22:00	50.05	1482	1349	560	443	199	105	342	2997	2209	90	0	194	822	0	433	77	0	378	213	0	-214	-383	0	0	28	26	3873	6870	3783	-89	0	6781	0	0	0	6781	6781
23:00	50.02	1459	1327	584	429	189	101	361	2991	2188	85	0	197	824	0	440	66	0	389	214	0	-200	-333	0	0	-3	26	3894	6885	3866	-29	0	6857	0	0	0	6857	6857
24:00	50.03	1460	1328	552	405	192	97	374	2948	2142	86	0	194	827	0	441	67	0	415	211	0	-206	-340	0	0	-2	26	3860	6808	3737	-124	0	6685	0	0	0	6685	6685
Avg.	50.01	1415	1288	536	426	187	96	454	2986	2031	80	0	188	823	0	427	58	0	364	212	0	-214	-543	0	0	0	26	3452	6438	3390	-62	0	6376	0	0	0	6379	6379
00 TO 06 HRS.	50.00	1389	1264	533	416	179	92	394	2879	2021	64	0	185	847	0	424	51	0	425	212	0	-227	-493	0	0	5	26	3539	6418	3490	-48	0	6369	0	0	0	6372	6372
06 TO 12 HRS.	50.01	1395	1270	525	427	184	95	543	3044	2002	75	0	190	830	0	424	44	0	264	212	0	-215	-457	0	0	-5	26	3391	6434	3283	-108	0	6327	0	0	0	6328	6328
12 TO 18 HRS.	49.99	1378	1254	498	398	173	93	546	2962	1883	77	0	184	793	0	424	52	0	382	211	0	-193	-824	0	0	-13	26	3000	5963	2978	-23	0	5940	0	0	0	5944	5944
06TO 18 HRS.	50.00	1386	1262	512	413	178	94	544	3003	1942	76	0	187	812	0	424	48	0	323	211	0	-204	-641	0	0	-9	26	3196	6199	3130	-65	0	6133	0	0	0	6136	6136
18 TO 24 HRS.	50.02	1498	1363	588	462	211	103	334	3061	2217	103	0	194	822	0	435	84	0	384	214	0	-220	-396	0	0	14	26	3878	6939	3808	-70	0	6869	0	0	0	6871	6871

Discomwise Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month :- August 2016

FIGURES IN MW

Hrs.	FREQ.	EZONE							CZONE							WZONE							Railway	
		SCH	Demand Met	O/U DRL	SCH LS	Unsch LS	Restricted Demand	Unrestricted Demand	SCH	Demand Met	O/U DRL	SCH LS	Unsch LS	Restricted Demand	Unrestricted Demand	SCH	Demand Met	O/U DRL	SCH LS	Unsch LS	Restricted Demand	Unrestricted Demand	Total Sch	Total Drawal
1:00	49.99	1914	1829	-85	0	0	1830	1830	1802	1748	-54	0	0	1749	1749	1803	1571	-232	0	0	1572	1572	218	203
2:00	50.01	1838	1803	-35	0	0	1803	1803	1719	1700	-19	0	0	1700	1700	1786	1545	-241	0	0	1545	1545	218	200
3:00	50.01	1827	1784	-43	0	0	1784	1784	1695	1675	-20	0	0	1675	1675	1787	1538	-249	0	0	1538	1538	218	197
4:00	50.01	1789	1757	-31	0	0	1758	1758	1653	1645	-9	0	0	1645	1645	1751	1535	-216	0	0	1536	1536	218	202
5:00	49.98	1775	1744	-32	0	0	1745	1745	1641	1640	-1	0	0	1641	1641	1765	1559	-206	0	0	1560	1560	218	199
6:00	50.01	1771	1702	-69	0	0	1702	1702	1646	1667	20	0	0	1667	1667	1827	1689	-138	0	0	1690	1690	218	197
7:00	50.00	1690	1646	-44	0	0	1647	1647	1647	1649	2	0	0	1650	1650	1933	1839	-94	0	0	1839	1839	218	201
8:00	50.04	1687	1612	-74	0	0	1613	1613	1671	1671	0	0	0	1671	1671	1945	1844	-101	0	0	1844	1844	218	207
9:00	50.01	1681	1585	-96	0	0	1585	1585	1698	1683	-15	0	0	1683	1683	1946	1852	-94	0	0	1853	1853	218	212
10:00	50.00	1653	1563	-90	0	0	1563	1563	1674	1662	-13	0	0	1662	1662	1910	1785	-125	0	0	1786	1786	218	212
11:00	50.01	1663	1553	-110	0	0	1554	1554	1681	1627	-53	0	0	1628	1628	1893	1717	-175	0	0	1718	1718	218	200
12:00	50.01	1630	1503	-127	0	0	1503	1503	1625	1559	-65	0	0	1560	1560	1799	1619	-180	0	0	1619	1619	218	184
13:00	50.02	1592	1507	-86	0	0	1507	1507	1587	1541	-46	0	0	1542	1542	1766	1615	-151	0	0	1616	1616	218	182
14:00	50.00	1538	1482	-56	0	0	1483	1483	1550	1540	-10	0	0	1541	1541	1739	1563	-176	0	0	1563	1563	218	177
15:00	49.99	1514	1463	-51	0	0	1464	1464	1511	1509	-2	0	0	1509	1509	1774	1579	-195	0	0	1580	1580	218	175
16:00	50.01	1497	1464	-33	0	0	1464	1464	1495	1500	5	0	0	1500	1500	1776	1603	-173	0	0	1603	1603	218	193
17:00	49.99	1511	1460	-52	0	0	1460	1460	1518	1538	20	0	0	1539	1539	1835	1679	-156	0	0	1679	1679	218	199
18:00	50.01	1546	1512	-34	0	0	1512	1512	1565	1563	-2	0	0	1564	1564	1885	1742	-142	0	0	1743	1743	218	212
19:00	49.97	1736	1847	111	0	0	1849	1849	1577	1741	164	0	0	1743	1743	1886	1891	5	0	0	1893	1893	214	213
20:00	49.98	2058	2046	-13	0	0	2048	2048	1811	1907	96	0	0	1909	1909	1992	1923	-69	0	0	1925	1925	214	213
21:00	50.00	2125	2036	-89	0	0	2037	2037	1838	1886	48	0	0	1887	1887	1950	1831	-119	0	0	1832	1832	214	209
22:00	50.04	2133	1975	-157	0	0	1976	1976	1838	1846	8	0	0	1847	1847	1925	1768	-158	0	0	1768	1768	214	209
23:00	50.02	2117	1929	-188	0	0	1929	1929	1875	1847	-28	0	0	1847	1847	1925	1711	-213	0	0	1712	1712	214	209
24:00	50.02	1980	1868	-112	0	0	1868	1868	1774	1783	9	0	0	1783	1783	1820	1619	-201	0	0	1619	1619	216	206
Avg.	**50.01**	**1761**	**1695**	**-66**	**0**	**0**	**1695**	**1695**	**1670**	**1672**	**2**	**0**	**0**	**1673**	**1673**	**1851**	**1692**	**-158**	**0**	**0**	**1693**	**1693**	**217**	**200**
00 TO 06 HRS.	50.00	1819	1770	-49	0	0	1770	1770	1693	1679	-14	0	0	1680	1680	1787	1573	-214	0	0	1573	1573	218	200
06 TO 12 HRS.	50.01	1667	1577	-90	0	0	1578	1578	1666	1642	-24	0	0	1642	1642	1904	1776	-128	0	0	1777	1777	218	203
12 TO 18 HRS.	50.00	1533	1481	-52	0	0	1482	1482	1538	1532	-6	0	0	1532	1532	1796	1630	-165	0	0	1631	1631	218	190
06TO 18 HRS.	50.01	1600	1529	-71	0	0	1530	1530	1602	1587	-15	0	0	1587	1587	1850	1703	-147	0	0	1704	1704	218	196
18 TO 24 HRS.	50.01	2025	1950	-75	0	0	1951	1951	1785	1835	50	0	0	1836	1836	1916	1790	-126	0	0	1791	1791	215	210

Discomwise Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month :- September 2016

FIGURES IN MW

Hrs.	FREQ.	EZONE							CZONE							WZONE							Railway	
		SCH	Demand Met	O/U DRL	SCH LS	Unsch LS	Restricted Demand	Unrestricted Demand	SCH	Demand Met	O/U DRL	SCH LS	Unsch LS	Restricted Demand	Unrestricted Demand	SCH	Demand Met	O/U DRL	SCH LS	Unsch LS	Restricted Demand	Unrestricted Demand	Total Sch	Total Drawal
1:00	50.00	2206	2142	-64	0	0	2143	2143	2318	2310	-7	0	0	2311	2311	2037	1867	-170	0	0	1868	1868	212	204
2:00	50.01	2159	2112	-47	0	0	2112	2112	2230	2256	26	0	0	2256	2256	1986	1814	-172	0	0	1814	1814	212	202
3:00	50.00	2111	2094	-16	0	0	2095	2095	2173	2228	56	0	0	2229	2229	1956	1818	-137	0	0	1819	1819	211	198
4:00	50.02	2096	2081	-15	0	0	2082	2082	2144	2201	57	0	0	2201	2201	1972	1810	-161	0	0	1811	1811	212	205
5:00	49.97	2085	2078	-7	0	0	2080	2080	2135	2174	39	0	0	2176	2176	1992	1835	-158	0	0	1836	1836	212	202
6:00	49.99	2075	2046	-28	0	0	2048	2048	2125	2161	36	0	0	2162	2162	2116	1974	-142	0	0	1975	1975	210	199
7:00	50.00	1984	1992	8	0	0	1993	1993	2067	2115	47	0	0	2115	2115	2222	2184	-38	0	0	2185	2185	212	204
8:00	50.03	1970	1941	-28	0	0	1942	1942	2074	2108	34	0	0	2108	2108	2274	2220	-54	0	0	2220	2220	212	208
9:00	50.02	1975	1905	-70	0	0	1905	1905	2106	2143	37	0	0	2143	2143	2309	2195	-115	0	0	2195	2195	213	210
10:00	50.01	1916	1890	-26	0	0	1890	1890	2072	2108	36	0	0	2109	2109	2233	2117	-115	0	0	2118	2118	214	217
11:00	50.02	1906	1878	-29	0	0	1878	1878	2052	2102	50	0	0	2102	2102	2167	2066	-102	0	0	2066	2066	213	205
12:00	50.01	1881	1811	-70	0	0	1812	1812	2024	2014	-10	0	0	2015	2015	2084	1940	-144	0	0	1940	1940	210	188
13:00	50.00	1823	1830	7	0	0	1830	1830	1956	2017	61	0	0	2017	2017	2052	1998	-54	0	0	1998	1998	208	176
14:00	50.00	1807	1772	-35	0	0	1773	1773	1949	2010	61	0	0	2011	2011	2072	1997	-75	0	0	1998	1998	209	175
15:00	49.98	1800	1753	-47	0	0	1755	1755	1943	1995	52	0	0	1997	1997	2107	2011	-96	0	0	2012	2012	212	187
16:00	49.99	1773	1702	-71	0	0	1703	1703	1932	1951	19	0	0	1953	1953	2117	1997	-120	0	0	1999	1999	211	193
17:00	49.98	1753	1700	-53	0	0	1702	1702	1906	1942	36	0	0	1944	1944	2139	2057	-81	0	0	2059	2059	210	199
18:00	49.98	1803	1770	-33	0	0	1771	1771	1916	1960	44	0	0	1962	1962	2127	2035	-91	0	0	2037	2037	214	212
19:00	49.95	2075	2249	175	0	0	2253	2253	2005	2237	232	0	0	2240	2240	2227	2222	-5	0	0	2225	2225	214	210
20:00	50.03	2347	2306	-41	0	0	2306	2306	2319	2384	66	0	0	2385	2385	2287	2168	-119	0	0	2168	2168	215	217
21:00	50.01	2338	2285	-53	0	0	2286	2286	2316	2352	36	0	0	2353	2353	2179	2048	-131	0	0	2048	2048	215	212
22:00	50.05	2319	2242	-77	0	0	2242	2242	2314	2334	20	0	0	2334	2334	2145	1989	-156	0	0	1989	1989	213	215
23:00	50.02	2291	2231	-60	0	0	2232	2232	2344	2426	82	0	0	2426	2426	2112	1988	-124	0	0	1988	1988	214	211
24:00	50.03	2268	2190	-78	0	0	2190	2190	2352	2371	19	0	0	2371	2371	2086	1919	-167	0	0	1920	1920	211	204
Avg.	**50.01**	**2032**	**2000**	**-32**	**0**	**0**	**2001**	**2001**	**2116**	**2163**	**47**	**0**	**0**	**2163**	**2163**	**2125**	**2011**	**-114**	**0**	**0**	**2012**	**2012**	**212**	**202**
00 TO 06 HRS.	50.00	2122	2092	-29	0	0	2093	2093	2187	2222	35	0	0	2223	2223	2010	1853	-157	0	0	1854	1854	212	202
06 TO 12 HRS.	50.01	1939	1903	-36	0	0	1903	1903	2066	2098	32	0	0	2099	2099	2215	2120	-95	0	0	2121	2121	212	205
12 TO 18 HRS.	49.99	1793	1754	-39	0	0	1756	1756	1934	1979	45	0	0	1980	1980	2102	2016	-86	0	0	2017	2017	211	190
06TO 18 HRS.	50.00	1866	1829	-37	0	0	1829	1829	2000	2039	39	0	0	2040	2040	2159	2068	-91	0	0	2069	2069	211	198
18 TO 24 HRS.	50.02	2273	2251	-22	0	0	2251	2251	2275	2351	76	0	0	2352	2352	2173	2056	-117	0	0	2056	2056	214	212

ANNEXURE-5.0

System Disturbance / System Incidence

1. **System Disturbance on 03.08.2016 at 220 KV S/s Satna:** On dated 03.08.2016 at around 17:20 Hrs. M.P system was normal and frequency of National Grid was 49.98 Hz. At around 17:22 Hrs. 132 KV Satna Interconnector – I tripped from 132 KV S/s Satna end. Due to non-tripping of 132 KV Satna Interconnector – I from 220 KV S/s Satna, the fault was fed from 160 MVA X'mer – I & II at 220 KV S/s Satna, resulting in tripping of both 160 MVA X'mer at 220 KV S/s Satna. Consequently 132 KV Supply failed at 220 KV S/s Satna, 132 KV S/s Satna, 132 KV S/s Panna, 132 KV S/s Pawai, 132 KV S/s Nagod & 132 KV S/s Majhgawan 32 KV Satna Cement & 132 KV Prism Cement industrial feeders. The complete system was normalized by 18:00 Hrs.

   At around 18:02 Hrs. while test charging 132 KV Satna Interconnector – I from 220 KV S/s Satna end, the feeder did not hold and again tripped from 132 KV S/s Satna end only and fault was fed through 160 MVA X'mer – I & II at 220 KV S/s Satna. Consequently 220/132 KV, 160 MVA X'mer – I & II tripped at 220 KV S/s Satna resulting in interruption at 220 KV S/s Satna, 132 KV S/s Satna, 132 KV S/s Panna, 132 KV S/s Pawai, 132 KV S/s Nagod & 132 KV S/s Majhgawan and 132 KV Satna Cement & 132 KV Prism Cement industrial feeders. Thereafter 132 KV Satna Interconnector – I was declared faulty and on patrolling top string disc at Loc No. 17 was found failed and also the DPR of 132 KV Satna Interconnector – I at 220 KV S/s Satna was defective and was not operating which resulted in above tripping. Due to the above tripping there was load loss of about 43.51 MW. There was no generation loss and System was normalized in due course of time.

2. **System Disturbance on 04.08.2016 at 220 KV S/s Rewa & 220 KV S/s Sidhi:** On dated 04.08.2016 at around 12:10 Hrs. M.P system was normal and frequency of National Grid was 50.04 Hz. Prior to fault, to avail S/d on 220 KV Satna – Satna (PGCIL) Interconnector – I for attending hot point and maintenance, 132 KV Satna – Rampur Bhagalen Ckt was opened – at 11:04 Hrs., 220 Rewa – Tons Ckt – II was opened – at 11:20 Hrs. and 220 KV Rewa – Tons Ckt – I was opened – at 11:30 Hrs. After making the above arrangements complete load of 220 KV S/s Rewa & 220 KV S/s Sidhi was fed through 220 KV Rewa – SGTPS Ckt & 220 KV Sidhi – Amarkantak Ckt. Thereafter 220 KV Satna – Satna (PGCIL) Interconnector – I was opened at 11:44 Hrs. 9425806842 pyasi

   At 12:04 Hrs. on 04.08.2016, 220 KV Birsinghpur (SGTPS) – Rewa Ckt tripped on transient fault from both end. Simultaneously 132 KV Amarpatan – Maihar Ckt tripped due to overloading. Consequently complete load of 220 KV S/s Rewa & 220 KV Sidhi shifted on 220 KV Amarkantak – Sidhi Ckt, resulting in over loading and tripping of 220 KV Amarkantak – Sidhi Ckt at 12:16 Hrs. and interruptin occurred at 220 KV S/s Rewa, 220 KV S/s Sidhi, 132 KV S/s Rewa, 132 KV S/s Sidhi, 132 KV S/s Deosar, 132 KV S/s Mauganj, 132 KV S/s Katra, 132 KV S/s Mangawan, 132 KV S/s Rewa II (Sagra/Paharia), 132 KV S/s Rampur Naikin, 132 KV Beohari, 132 KV S/s Amarpatan, Jhinna HPS, Silpara HPS, Devlond HPS, 220 KV Hindalco (Industary). Due to the above tripping there was load loss of about 240MW. There was no generation loss and System was normalized in due course of time.

3. **System Disturbance on 05.08.2016 at 400 KV S/s Indore:** On dated 05.08.2016 at around 19:20 Hrs. M.P system was normal and frequency of National Grid was 50.10 Hz. At around 19:24 Hrs. bird fault occurred on 400 KV 'B'- Phase, 400 KV ICT of 400/220 KV, 315 MVA ICT – IV resulting in tripping of 400/220 KV, 315 MVA ICT – IV, 400 KV Indore – ISP Ckt – II, 400 KV Indore – Indore (PGCIL) Ckt – I and 220 KV Indore – South Zone Ckt – I. Due to the above tripping there was no interruption in any area and hence no load loss. There was no generation loss and System was normalized in due course of time.

4. **System Disturbance on 29.08.2016 at 220 KV S/s Mehgaon:** On dated 29.08.2016 at around 01:20 Hrs. M.P system was normal and frequency of National Grid was 50.01 Hz. Prior to fault 220 KV Malanpur – Mehgaon Ckt tripped at 21:19 Hrs. on 28.08.2016 and was declared faulty due to top string disc failure at Loc. No. 102. At around 01:27 Hrs., on 29.08.2016, Bus Bar Protection at Auriya (U.P) operated resulting in tripping of 220 KV Mehgaon – Auraiya Ckt and 220 KV Malanpur – Auraiya Ckt. Simultaneously 132 KV Malanpur – Mehgaon Clt tripped due to overloading and interruption occurred at 220 KV S/s Mehgaon, 132 KV S/s Bhind, 132 KV S/s Porsa, 132 KV S/s Ron, 132 KV S/s Lahar, 132 KV S/s Seondha. Due to the above tripping there was load loss of about 83.2 MW occurred. There was no generation loss and System was normalized in due course of time.

5. **System Disturbance on 14.09.2016 at 220 KV S/s Maihar:** On dated 14.09.2016 at around 17:20 Hrs. M.P system was normal and frequency of National Grid was 50.04 Hz. Prior to fault 220 KV Satna (PG)– Maihar Ckt, 132 KV Satna – Maihar Ckt & 132 KV Amarpatan – Jhinna Ckt was kept open for load management. At around 17:27 Hrs. 132 KV, R-Phase CT of 132/33 KV, 40 MVA X'mer burst at 220 KV S/s Maihar resulting in 132 KV Bus Fault at 220 KV S/s Maihar and tripping of 132 KV Maihar – Kymore Ckt & 132 KV Maihar – Amarpatan Ckt from far end. Simultaneously 220 KV Katni – Maihar Ckt tripped from 400 KV S/s Katni. Consequently interruption occurred at 220 KV S/s Maihar, 132 KV S/s Amarpatan, 132 KV KJS (industrial feeder), 132 KV Reliance Cement (industrial feeder) & 132 KV Maihar Cement (industrial feeder). Due to the above tripping there was load loss of about 25MW. There was no generation loss and System was normalized in due course of time.
6. **System Disturbance on 14.09.2016 at 220 KV S/s Mehgaon:** On dated 14.09.2016 at around 16:15 Hrs. M.P system was normal and frequency of National Grid was 49.99 Hz. At 16:20 Hrs. 220/132 KV, 160 MVa X'mer – II tripped on B-phase, O/C indication. Simultaneously heavy sparking was observed on 132 KV B-phase isolator of 220/132 KV, 160 MVA X'mer – I, hence X'mer – I was handtripped. Consequently 132 KV Malanpur – Mehgaon Ckt tripped due to overloading and interruption occurred at 220 KV S/s Mehgaon, 132 KV S/s Ron, Porsa, Bhind & Lahar. Later at around 16:56 Hrs. while charging 220/132 KV, 160 MVA X'mer – II, 220 KV 'B'-phase CT of X'mer – II failed resulting in 220 KV Bus fault and operation of 220 KV Bus Bar protection at 220 KV S/s Mehgaon. Consequently 220 KV Malanpur – Mehgaon Ckt & 220 KV Mehgaon – Auriya Ckt tripped. Due to the above tripping there was load loss of about 142.2MW. There was no generation loss and System was normalized in due course of time.
7. **System Disturbance on 20.09.2016 at 220 KV S/s Jabalpur:** On dated 20.09.2016 at around 15:50 Hrs. M.P system was normal and frequency of National Grid was 50.00 Hz. At around 15:57 Hrs. transient fault occurred on 220 KV Jabalpur – Birsinghpur Ckt – II and Ckt

tripped from 220 KV S/s Birsinghpur end only and main breaker at 220 KV S/s Jabalpur end did not trip resulting in operation of LBB protection and Bus Bar Protection of 220 KV Main Bus – II operated at 220 KV S/s Jabalpur. Consequently 220 KV Jabalpur – Amarkantak Ckt – II, 220 KV Jabalpur – Narsinghpur Ckt – II, 220 KV Jabalpur – Sukha Ckt – II, 220 KV Bus Tie tripped.

At around 16:33 Hrs. while charging the 220 KV Bus Tie, one of its breaker pole did not close and resulting in 220 KV Bus Fault. Consequently Bus Bar Protection of 220 KV Main Bus – II operated at 220 KV S/s Jabalpur, resulting in tripping of all 220 KV Feeders connected to 220 KV Main Bus – I & II. Due to the above tripping there was no interruption in any area and hence no load loss. There was no generation loss and System was normalized in due course of time.