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ISO: 9001-2008

No.07-05/SG-9B-II/ 2546 Jabalpur, dated 26.10.2012

To

As per distribution list

Sub: Minutes of 30th meeting of Operation and Coordination Committee of MP.

Please find enclosed herewith Minutes of 30th meeting of the Operation and Coordination Committee of MP **scheduled on 29th September 2012 at 11.00 AM** at Conference hall of Company Headquarter of Central Discom, Bhopal. The Minutes are also available on the website of SLDC 'www.sldcmpindia.com'.

(K.K.Prabhakar)
Member Secretary, OCC
S. E. (LD), SLDC
MPPTCL, Jabalpur

Encl : As above.

Distribution List

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MINUTES OF 30TH MEETING OF OPERATION & COORDINATION COMMITTEE HELD ON 29TH SEPTEMBER 2012 AT 11.00 AM AT CONFERENCE ROOM OF COPMANAY HALL, CENTRAL DISCOM, BHOPAL.

30th meeting of Operation & Co-ordination Committee of MP was held on 29.09.2012 at Conference Room, Company Hall, Central DISCOM, Bhopal. The list of participants is enclosed at Ann.-1.0.

The meeting commenced with welcome of the participants in the meeting by shri A. K. Saxena, CGM(PLM) of Central DISCOM. He expressed sincere thanks to give the opportunity to Central DISCOM for hosting the meeting.

Shri P.A.R. Bende, Chief Engineer, SLDC & Chairman OCC, has expressed his gratitude to Central DISCOM for hosting the meeting and welcomed all the participant of OCCM from various entities and stated that the members are gathered here to discuss various important operational issues and the presence of the participants shows their commitment towards maintaining a reliable and stable grid. Shri Bende stated that the discussions in the OCC meeting over last 3 years have yielded quite satisfactory results and the entities have taken forward steps towards reliable system operation. He further stated that after two major grid disturbances in the recent past, the grid operation has become an important issue and now the RLDC does not allow constituents to overdraw and under draw beyond certain limits. He Stated that the WRLDC is opening the lines at the time of over drawal / under drawal by M.P. exceeds 150 MW and hence the DISCOMS should be careful in maintaining the Demand Generation balance as opening of lines make the grid vulnerable.

It is also informed that plan to restrict overdrawal has been prepared and according to the plan if overdrawal is not curtailed by the Discom(s) then the selected 132 KV radial feeders shall be opened by the WRLDC / SLDC. He further stated that under drawal at high frequency is the major issue to be resolved because all the control is at 11 KV level and presently, is not under control of DCC. He stressed the need to take control of 11 KV level by the DCCs for the safe and secure grid operation and also to avoid congestion situations. He requested all the participants to go through the Grid Disturbance Enquiry Committee report available in MoP website. He also informed the committee that islanding schemes for MP are being finalized with support from WRLDC & WRPC.

Thereafter, Chairman, OCC requested Shri K.K.Parbhakar, Member Secretary (OCC) to take up the agenda items for discussion**.**

ITEM NO. 1 : CONFIRMATION OF MINUTES : The Committee confirmed the minutes of 29th meeting of Operation & coordination committee of MP held on 21.07.2012 at State Load Despatch Centre, MPPTCL, Jabalpur and forwarded to the committee members vide No. No.07-05/SG-9B-II/1871 dated 24-08-2012.

ITEM NO. 2 : REVIEW OF SYSTEM OPERATION DURING THE MONTHS July to August 2012.

2.1 Frequency Particulars : The Member Secretary apprised the committee that during August 2012 the system frequency was below 49.5 Hz for 1.57% of time against 24.37% of time during July 2012. The system frequency was within the IEGC range of 49.5-50.2 Hz for 89.72 % of the time against 73.59 % of time during July 2012. The average monthly frequency was 49.95 Hz during August 2012 and in July 2012 it was 49.68Hz. Regarding operation in high frequency range, frequency during the month of August 2012 was above 50.20 Hz for 8.71 % of time against 2.04% of time during July 2012. The system frequency touched 48.8 Hz, 07 times in the month of July 2012 .

The detailed frequency particulars for the month of July to August 2012 are enclosed at **Annexure-2.1**. The brief details of frequency profile is given here under :

Month	Average frequency	minimum integrated frequency over an hour	maximum integrated frequency over an hour	Instantaneous minimum frequency	Instantaneous maximum frequency
July 2012	49.68 Hz	48.96 Hz	50.37 Hz	48.79 Hz	51.21 Hz
August 2012	49.95 Hz	49.48 Hz	50.37 Hz	48.82 Hz	50.65 Hz

2.2 Operational Matters

2.2.1 Operational Discipline : The committee noted the system operated in terms of frequency profile for the months July to August 2012 is as given below:

Month	% of time Frequency Below 49.5 Hz	% of time Frequency above 50. 2 Hz	% of time frequency within the permissible range of 49.5-50.2 Hz	Average monthly frequency	No. of times frequency dipped below 48.8 Hz
July 2012	24.37 %	2.04%	73.59%	49.68 Hz	07
August 2012	1.57 %	8.71%	89.72%	49.95 Hz	0

2.2.2 Messages for drawal curtailment : The committee noted the total number of messages of significant violation of IEGC by the DISCOMs by overdrawing at frequency below 49.7 Hz is as given hereunder:

MONTH	East Discom	Central Discom	West Discom	Total
July 2012	101	105	50	256
August 2012	5	5	2	12

The Chairman, OCC stated that frequency remained within permissible range of 49.5 Hz to 50.2 Hz during July and August 73.59% and 89.72 % time. He further stated that permissible range of 49.5 Hz to 50.2 should normally be above 90%. It has been informed to the Committee that now the permissible range of frequency band has been revised to 49.70 to 50.20 Hz. The New UI regulation is now become effective from 17.09.2012 as the High court of Tamil Nadu has dismissed the petition filed by TANGEDCO against for amendment in UI regulation and IEGC. CE (LD) stated that now the over drawal should be controlled at frequency below 49.80 and there should be no overdrawal below 49.7 Hz. The reason for low frequency during July was due to over drawal by the northern entities. Member Secretary stated in the month of August the frequency profile was quite satisfactory and violation messages given by SLDC were very less. This shows that during August grid discipline was good.

The Member Secretary, OCC presented the 15 minutes average frequency graph for July to August 2012 and also DISCOM wise hourly average schedule versus drawal. He further stated now UI can not be used as commercial purpose. The overall result shows that M.P. was under drawn during the month of July and August 2012.

2.3.1 Voltage Profile : The Committee noted the date wise voltage profile at some of the important 400 KV and 220 KV substations during the months July to August 2012 is enclosed at **Annexure -2.3.1.**

During the months July to August 2012, the deviation of voltage from the accepted limit on either side was recorded at following important 400 KV s/s in MP Grid.

Sr No	Name of 400 KV Substation	JULY 2012				AUGUST 2012			
		Max. Voltage observed		Min. Voltage observed		Max. Voltage observed		Min. Voltage observed	
		Voltage	Date	Voltage	Date	Voltage	Date	Voltage	Date
1	Indore	428	30, 31.07.12	---	---	430	14.08.2012	---	---
2	Itarsi	430	07.07.12	---	---	428	07,22.08.12	---	---
3	Bina	435	06.07.12	---	---	431	07.08.12	---	---
4	Gwalior	432	30.07.12	---	---	433	28, 29.08.12	---	---
5	Nagda	431	04.07.12	---	---	430	05,27.08.12	---	---
6	Satpura	431	07.07.12	---	---	428	02,20,21,22, 26.08.12	---	---
7	Birsingpur	428	13,15.07.12	---	---	429	08.08.12	---	---

2.3.2 Status of Capacitor Banks in sub-transmission system : The Committee noted the updated information of the status of capacitor banks in sub-transmission system as on 31ST August 2012 as submitted by DISCOMs is detailed below :

DISCOM	Capacitor bank installed in good condition (No)		Capacitor bank installed but defective & are repairable (No)			Requirement of repair against each unit (No)	Requirement against non-repairable capacitor banks		Capacitor banks already covered under ADB T-V		Balance capacitor banks to be covered in other schemes	
	600 KVAR	1200 KVAR	600 KVAR	1200 KVAR	2400 KVAR	No of 100 KVAR Units required	600 KVAR	1200 KVAR	600 KVAR	1200 KVAR	600 KVAR	1200 KVAR
WZ	636	449	28	96	--	225	38	46	52	57	101	82
CZ	8	721	3	34	-	24	3	16	0	588	0	373
EZ	361	153	38	06	-	98	--	--	--	--	--	--

DISCOMs have also furnished the updated additional information as detailed below.:

Figures are in MVAR

SN	Particulars	WZ	CZ	EZ
1	MVAR capacity of connected capacitors in good condition	920.4	806.4	400.2
2	MVAR capacity of connected capacitors in partially good condition	109.5	42.6	0
3	MVAR capacity of connected capacitors in good condition including partially good condition.	1029.9	849.0	400.2
4	MVAR capacity of connected capacitors covered under ADV T-V Scheme.	99.6	559.5	Nil
5	Grand total MVAR of capacitors including that are proposed in ADB T-V scheme	1129.5	1408.5	Nil

The Member Secretary, OCC has pointed that there is complete change in status of Capacitor Bank in EAST DISCOM wrt information furnished by EAST DISCOM in last OCC Meeting. In response, Director DCC intimated the committee that the status of capacitor bank submitted in this meeting is on actual information gathered from the field. Chairman OCC requested other DISCOM to submit the status of capacitor bank on actual basis as submitted by EAST DISCOM.

2.3.3 Status of Shunt Capacitor Banks installed at various EHV Transmission Substation : The updated information of the status of Installed capacitor banks(in MVAR) in EHV transmission system as on 31st August 2012 as submitted by MPPTCL is given below :

Voltage Class	Capacitor bank installed in good condition (No/Mvar)	Capacitor bank installed but defective & are repairable (No/Mvar)	Requirement of repair against each unit (No/Mvar)	Requirement against non-repairable capacitor banks	Capacitor banks already covered under ADB T-V	Balance capacitor banks to be covered in other schemes
220 KV	2 No / 62 MVAR	All in Service	---	---	---	
132 KV	36 Nos / 1182.34 MVAR		---	---	---	
33 KV	366 Nos / 3319 MVAR		---	---	---	-
Total	404 nos / 4563.34 MVAR		---	---	---	

The Chairman OCC enquired the MPPTCL officials whether there is any provision of capacitor bank in JAICA Scheme. In response the MPPTCL representative informed that the Capacitor bank under JAICA will be available during the year 2013-14 and hence the same is not included here.

2.4.1 Status of completion of on going Transmission Schemes being executed by MPPTCL : The latest status of completion of various ongoing Transmission Schemes for the current financial year i.e. Year 2012-2013 upto 31.08.2012 and the plan of transmission schemes for 2012-13 as submitted by MPPTCL is enclosed as annexure **2.4.1(i) & 2.4.1(ii).**

2.4.2 U/F and df/dt Relay Operation-

(i) U/F and df/dt Relay Operation: In the month of August the frequency did not touch 48.80 Hz, however it touched 48.80 Hz in the month of July for 07 times. The date wise Operation of Under frequency for the month of July 2012 is given at **Annexure 2.4.2**

(ii) Defective u/f, df/dt relays : MPPTCL has informed that there is no defective u/f and df/dt relays.

The Member Secretary informed the committee that the df/dt scheme is revised and shall be furnished to DISCOM. The revised df/dt relay scheme is attached as **Annexure 2.4.2 (ii).**

2.5 Power Cuts / Load restrictions/Differential Load Shedding by DISCOMS & group allocation to 33 KV feeders :

(i) Details of DISCOM wise Power supply given to various domestic categories during the period July 2012 and August 2012 is enclosed at **Annexure 2.5(i).**

(ii) **Group Allocation to Newly Commissioned existing EHV substations :-** As per information submitted by Power System, the region wise list of 33 KV feeders emanating from various newly commissioned/existing EHV substations for which groups have not been allocated is given in **Annexure 2.5 (ii)**. The DISCOM wise details of pending group allocation to 33 KV feeders is given below :

SN	DISCOM	Region	No of 33 KV feeders for which groups to be allocated
01	EAST	Jabalpur	01
02		Sagar	02
03		Rewa	10
04		**Total**	**13**
05	WEST	Indore	20
06		Ujjain	05
07		**Total**	**25**
08	CENTRAL	Bhopal	04
09		Gwalior	00
10		**Total**	**04**
TOTAL		**Grand Total**	**42**

The Member Secretary requested all the DISCOM to furnish the latest status as per enclosed list at Annexure-2.5(i) to SLDC, so same could be updated in the minutes. All the DISCOMs have not submitted the latest information in this regard till date. Member secretary informed the committee that some feeders are of non-conventional energy sources and these feeders should be kept in Industrial group. ***In the Meeting it is decided that the dedicated non-conventional generator feeders are to be kept under new group 14.***

ITEM NO. 3 : OPERATIONAL PLANNNING

3.1 Anticipated availability for the Month of October 2012 to March 2013.: The Discom wise average hourly anticipated availability, demand and shortage/ surplus were issue by SLDC on 13.09.2012. and is given in **Annexure-3.1**

3.2 Generating Units under planned outage and proposed maintenance programme : The generating units under planned outages for the period Sep 2012 to October 2012 based on Maintenance Programme R-1 of MPPGCL **(Annexure – 3.2)** and actual outage availed is as detailed here under :

SN	Description	Capacity	From	To	Reason
01	Satpura # 5	62.5 MW	11.09.2012	23.09.2012	AOH
02	Satpura # 7	210 MW	23.08.2012	11.10.2012	AOH
03	Satpura # 9	210 MW	20.08.2012	24.09.2012	COH
04	SGTPS#1	210 MW	17.09.2012	02.10.2012	AOH

3.3 Proposed shutdown programme of Transmission line / Transformers : The proposed shutdown of transmission elements for the period 01.10.2012 to 30.11.2012 submitted by MPPTCL is enclosed in **annexure 3.3.** The MPPGCL and NHDC have not submitted the shutdown proposals.

The Chairman OCC informed the committee members that in the recent OCC meeting of WR, it has been decided that WRLDC shall give consent for only those shut downs which are approved in OCCM of WR. Shut-downs which are not approved in OCCM shall not be entertained by the WRLDC except S/D of emergency nature or construction related work. The MPPTCL/MPPGCL/NHDC/ IPPs may please note that the list of proposed shut downs for the next month should be furnished to SLDC by 3rd of every month for onward transmission to WRPC. For this the proposed shut down furnished on 3rd October 2012 is for the period 20-Oct-12 to 30 Nov 2012 and thereafter the same shall be on monthly basis (i.e. 1st to last day of the month).

3.4 Long Outages of transmission elements and protections : The Member Secretary apprised the committee that MPPGCL and MPPTCL has submitted the updated position of long outage of transmission elements and protections which is detailed below :

SN	Line/Transformer/Breaker/ Reactor etc under long outage	Outage date	Reason	Expected date of restoration as intimated for 30th OCC.
1	63MVAR Bus-I Reactor at Satpura TPS	24.05.2005	Damage of all three limbs along with reactor tank	Installation and Commissioning in bay no.17 shall be completed along with switchyard of unit #10 & 11, in dec'12
2	220KV Breaker of 220 KV Tons-Rewa line-II at Tons HPS	30.06.2011	R &Y Phase pole out	Order placed on M/s. electro Vadodara. Readiness is confirmed put in service by Nov'12. In the meeting MPPGCL ensured the same.
3	16 MVA, 15.75/6.6 KV UAT-1B at SGTPS, Birsinghpur	25.02.2008	Bursting of incomer breaker of 6.6 KV bus 1SB	Ready for charging from 08.10.12 & will be taken into service after AOH of the unit.
4	UAT 7-B at Satpura TPS	29.11.2011	Tripped on differential & Bucholtz relay protection due to internal fault in the transformer	Ready for charging from 01.10.12.
5	16MVA UAT of Unit # 4 at Amarkantak TPS	17.11.2011	Heavy oil leakage	Taken into service on 24.10.12
6	Bus bar Differential protection scheme at Amarkantak TPS	Since installation	Not commissioned	M/s. ABB is not responding, further exploring the possibilities of supply by another source. Not yet alternate solution is found.
7	Carrier protection of 400 KV Sarni-Seoni line Channel-1 at Satpura TPS	26.06.2007	Problem in PLCC system at Seoni end, since LILO of 400 KV Sarni- Bhilai at Seoni	Procurement of new PLCC under progress. Consent given to power grid.
8	220 KV Bus bar protection scheme at SGTPS Birsinghpur	Since commissioning of 220 KV switch yard	The scheme not available	Procurement of new numerical bus bar protection scheme is in tendering process. Bidder is not responding.
9	400 KV Bus bar protection scheme at SGTPS Birsinghpur	Since commissioning of 400 KV switch yard	Under commission-ing state	BHEL engineers have been called for commissioning. Whereas BHEL saying the work should be completed by ABB.
10	UAT No. 1 at RABS Bargi HPS	June 2008	Not mentioned	Relay problem. Shall be ready by the end of Sept'12.
11	220kv Bus bar differential protection at TONS HPS	Since commissioning	Not mentioned	New scheme with digital relays is required to be procured & commission. Case is under progress.

The Chairman OCC requested MPPGCL representative to take Bus reactor of Satpura in service as early as possible. Due to outage of above reactor the voltages remains on higher side at Satpura and ISP end. The Member Secretary informed the committee that during last two disturbances in NR, Satpura-ISP line was tripped on both the occasions. The MPPGCL representative intimated that the UAT 1B at Birsinghpur will be taken in to service after AOH of the unit No. 1. In response, Chairman OCC stated that the UAT should be kept in service.

Chairman OCC strictly advised to MPPGCL representative that all the work related to protection of lines and sub-station should be completed as early as possible as WRLDC may conduct protection audit at any time and the report of the same shall be submitted to CEA, New Delhi..

ITEM NO. 4 : OPERATIONAL STATISTICS FOR THE MONTH OF July 2012 and August 2012 : The details of actual generation, Schedule from Central Sector demand etc. are given in the following Annexures:

Annex. 4.1 Unit wise actual Generation of MPPGCL thermal Units and station wise Generation of MPPGCL & NHDC Hydel Units.

Annex. 4.2 Power Supply Position.

Annex. 4.3 Hourly Average of Availability and Demand.

Annex. 4.4 Hourly average schedule Vs Drawal of DISCOMs.

ITEM NO. 5 : SYSTEM DISTURBANCE IN MP DURING JULY & AUGUST 2012 : There was total grid failure on 30thJuly 2012 in NR and on 31.07.2012 in NR, ER and NER. On both occasions the area around Gwalior was affected. The Grid disturbance report submitted by the committee constituted by GOI is available on the website of Ministry of Power GOI. However, there was no major Grid disturbance in MP during the period August 2012. The Grid incident and Grid incidents during July 2012 to August 2012 are given in **Annexure 5.0**.

Chairman OCC has informed the committee that there was two no. of tripping at Omkareshwar HPS on 29.07.12 and 28.08.12 and these tripping should not have occurred. He further stated that tripping of 220 OSP-Khandwa feeder, results in tripping of all feeders emanating from OSP along with all the Machines on bar. He further requested Omareshwar representative to analysis the same. He also requested Omakareshwar representative to give the timeline for change of CT ratio from 500/1 to 800/1 on all the feeders emanating from OSP. In response, Omkareshwar representative intimated the committee that the CT ratio of three feeders shall be changed by the end of November 2012. The program for change in CT ratio for other two feeders shall be intimated to SLDC shortly.

ITEM NO. 6.0 : PROTECTION RELATED PROBLEM

6.1 TRIPPING AT GANDHISAGAR HPS

14.09.2012

Member secretary informed the committee that at around 10.45 Hrs at Gandhisagar HPS, following 132 KV lines tripped simultaneously on indications given below :

1. 132 KV Gandhisagar – Suwasra tripped from both ends.
   Gandhisagar – Back-up E/F relay PAR, PE, PS III
   Suwasra – Back-up O/C E/F

2. 132 KV Gandhisagar – Garoth at Garoth end only.
   Goroth – DPR operated – GEF
   STF WL – 1 – Zone II

3. 132 KV Gandhisagar – Manasa at Manasa end only

Manasa – DPR – R Phase Zone III
F.L. – 50.8 KM

4. 132KV Gandhisagar – RPS II at Gandhisagar
Gandhisagar – PAR, PE, PSW, PS II

As reported by EE (GS), there was some fault on 132 KV Gandhisagar-RPS II line, which could not be cleared timely, hence tripping of 132 KV lines emanating from Gandhisagar occurred. EE (GS) also reported that there were about 15 line trippings of GS-RPS-II line recorded during one month. DPRs/ Protection provided on all 132 KV lines at GS needs to be checked. Further MPPTCL may conduct detailed patrolling of the line

The Member secretary informed the committee that due to tripping of RPS Feeder at Gandhi Sagar, all the feeders emanating from Gandhi Sagar tripped from remote end. The Chairman OCC intimate the committee that similar types of trippings were occurred in past . He requested the MPPGCL representative to analyze the same. The member Secretary requested the MPPGCL representative to check the protection settings at Gandhi Sagar. He further requested MPPGCL representative to take the matter with EHT section of MPPTCL for arranging joint patrolling of Gandhisagar-RPS-I Feeder with EHT/ Rajasthan person to avoid such repetition of tripping.

6.2 TRIPPING AT SATPURA TPS :

Member secretary informed the committee that at 220 KV Main Bus-I at Satpura TPS tripped on Zone-I on R & Y Phase at 10:13 Hrs on 05.09.2012 due to inrush current while charging 500 MVA ICT. After some time 220 KV Bus-II also tripped without any indication on Bus Bar differential protection. All the 220 KV feeders emanating from STPS 220 KV switchyard and running Unit No. 1,2,3,4 & 6 also tripped.

The above trippings have occurred while charging of 400/220 KV ICT from 220 KV side without informing SLDC which is a serious violation of grid code. It has been observed that similar type of trippings occurred at 220 KV STPS several times in the past few years due to one or the other reason including mal-operation of bus bar differential protection. The SE (ET&I) PH-II in his report has also indicated the mal-operation of bus bar differential scheme and intimated that ABB Engineers are being called. It is also proposed by SE (ET&I) PH-II that Numerical Based DPR to be installed on feeders and a new Numerical Based Bus Bar Differential Protection Scheme may be provided at STPS.

The Chairman, OCC informed the committee that similar types of tripping were occurred in Satpura TPS in the past. He requested the MPPGCL representative to analyze the same. Member secretary informed the committee that the 400/220 KV ICT from 220 KV side was charged by Satpura TPS without informing to SLDC, which is a serious violation of grid code.

6.3 Charging of 400 KV feeders through transfer bus at 400 KV Satpura/Non Standard Practice at Satpura Power House:- Member Secretary informed the committee that in the last OCC Meeting, Member Secretary informed the Committee that shifting of 400 KV feeders from main bus to transfer bus at 400 KV Satpura at Satpura is being done by taking shutdown on the feeder, shifting it on the transfer bus, then charging from remote end and finally by closing transfer bus breaker. This is a non-standard practice defeating the very purpose of having transfer bus arrangement as transfer of any feeder from main bus to transfer bus is done on line. MPPGCL was requested to look into the matter and adopt standard practice of operation. However no comments in this regard have been received from MPPGCL.

The Member Secretary, OCC requested the MPPGCL representative to inform the latest status of same to SLDC. MPPGCL representative intimate the committee that the sparking was observed during charging of feeder few years back. The Chairman OCC has requested to attend the isolator if required & the problem at Satpura TPS may be resolved immediately.

ITEM NO. 7.0 : OTHER IMPORTATNT OPERATIONAL ISSUES

7.1 PROCEDURE FOR ISSUING CODE FOR OPERATION OF TRANSMISSION ELEMENTS IN THE STATE GRID :- The state Load Despatch Centre is an apex body to ensure integrated operation of the State Grid. The SLDC functions in accordance with the provisions made in the IE Act 2003, IEGC, MPEGC and other State/Central Regulations. As per provision of IEGC/MPEGC, no part of the State Grid shall be deliberately isolated from the rest of the State Grid except (i) under an emergency and conditions in which such isolation would prevent a total grid collapse and/ or would enable early restoration of power supply; (ii) for safety of human life; (iii) when serious damage to a costly equipment is imminent and such isolation would prevent it; (iv) when such isolation is specifically instructed by SLDC. Further, no important element of the State Grid shall be opened or removed from the service at any time, except when specifically instructed by SLDC or with specific & prior clearance of SLDC. In case of opening / removal of any important element of the grid under emergency situation, the same shall be communicated to SLDC at the earliest possible time after the event. The procedure for issuing code for operation of transmission element in the State Grid is given at **ANNEXURE-7.1**. This procedure shall be effective from 1st November 2012.

Chairman OCC informed the committee that some instances were noticed when shut downs are availed and transmission elements charged/taken out by the entities, without prior consent of SLDC. Now as per procedure in vogue at Regional level, code No. is to be issued for each switching operation 0f transmission element. No switching operation takes place in Regional grid without code No.. Same procedure of issuing code No. for all the switching operation in the State Grid shall be w.e.f. 01-November 2012. He further stated that the details of transmission elements which are to be operated only after receiving code from SLDC are as follows:-

(1) 400 KV, 220 KV and 132 KV lines.
(2) 400 / 220 KV, 220 / 132 KV, 220 / 33 KV and 132/33 KV transformers.
(3) EHV Buses of generating stations & sub-stations.
(4) Bus reactors and line reactors, condensers connected at EHV network.
(5) Online maintenance of EHV lines.
(6) Main breaker, bus coupler, tie-breaker and isolator.
(7) Online testing / checking of protection system.

He further requested that all Intra State entities should go through the procedure and if any problem exists then same may be discussed in next OCCM.

7.2 Providing ABT meter data to SLDC on Weekly Basis : Member Secretary, OCC informed the committee that in accordance with MPERC Balancing and Settlement Code 2009 , State UI/REC Account is to be issue on weekly basis. However due to non-availability of ABT meter data on weekly basis, the accounts are being prepared and issued on monthly basis. Recently Hon'ble MPERC has directed MPPTCL to ensure completion of installation and commissioning of AMR facilities by end of December 2012. It is therefore requested that MPPTCL, MPPGCL, NHDC, BLA and JP Bina may take suitable action to furnish ABT Meter data to SLDC on weekly basis so that UI/REC accounts could be issued on weekly from Jan' 2013 .

Member Secretary requested the MPPTCL to intimate the latest status of AMR of ABT meters. In response MPPTCL informed that the tender was issued and same may be completed by the end of December. BLA representative informed that the AMR of ABT meter is almost completed and purchase of MRI and necessary software for manual downloading of the ABT meter data is also in progress. Member Secretary requested the Jay Pee Bina to implement the AMR for down loading of ABT meter reading. Jay Pee Bina representative has ensured to install the same in near future. MPPGCL representative inform the committee that the AMR facility will be available after implementation of MIS in

MPPGCL. Chairman OCC stated that it will take about one year and MPERC has already given the directives to complete the AMR by end of December 2012. He requested MPPGCL/ MPPTCL/NHDC/ IPPS to install the AMR in their interface points by the end of December 2012 so the UI could be computed on weekly basis as per directives of Hon'ble MPERC.

Further Member secretary informed the committee that T&C, MPPTCL furnish the monthly ABT meter data after 20th of every month on repeated persuasion by SLDC. He requested the MPPTCL representative to look up the matter so that ABT meter data may be available by 15th of every month to SLDC. Chairman OCC further informed the committee that MP Transmission losses are now calculated on the basis of 15 minutes ABT meter data. Member OCC intimates that these losses are applicable for scheduling of Intra state entities. Therefore the ABT meter data should be available with SLDC by 15th of every month.

He further stated that efforts should be made to provide fortnightly ABT meter data to SLDC in time so that SLDC could compute the UI bills on fortnightly basis.

ITEM NO. 8 : <u>BLACK-START MOCK DRILL OF HYDEL POWER STATIONS :</u>

8.1 Black Start mock drill at Bargi HPS: Member Secretary, OCC informed the committee that in last OCC, the MPPGCL representative informed that the order for replacement of 48 V DC battery has been placed and the same shall be replaced within next 6 months. The Member Secretary requested MPPGCL to carryout periodic checking of battery at all Power Stations by taking batteries on load. This will ensure timely action for replacement of decaying battery sets or battery elements. MPPGCL also confirmed that the defective ampere meter in Bus Coupler panel shall be replaced. MPPGCL is requested to intimate the updated status of the same.

The Chairman OCC requested the MPPGCL representative to check all the battery at hydel power station by taking load.

8.2 Schedule of Black Start mock drill at HPS: Member Secretary informed the committee that the need for timely performing the black start mock drills of HPS have become necessary after twin blackouts in the major parts of the country, to ensure availability when blackout takes place. The proposed black start mock drill of Hydel Power Stations shall be done as per schedule given below :

Name of Power Station	Proposed Date
Pench	1st Week of Oct 12
Tons	4th Week of Oct 12
Birsingpur	1st Week of Nov 12
Gandhisagar	4th week of Nov 12
Rajghat	1st Week of Dec 12
Madikheda	4th Week of Dec 12
Bargi	2nd Week of Jan 2013

Chairman OCC informed the committee that RLDC has issued a guide lines as per instruction of MoP, GOI to complete the black start mock drill exercise of all the hydel power station should be completed by the end of December 2012. Accordingly SLDC has prepared a proposed date as mentioned above.

ITEM NO 9: SOME IMPORTANT MATTERS REQUIRED IMMEDIATE ATTENTION :

9.1 Quarterly Review of Crisis Management Plan : Member Secretary OCC informed the committee that in the 439th OCC meeting of WR, WRPC has informed that Chief Engineer (DMLF), CEA vide letter dated 27.04.2012 have intimated that need for regular monitoring of the contingency plan to ensure the readiness of various utilities in handling the crisis situation was emphasized by MOP and conducting mock drills by various utilities was discussed. CEA have advised to conduct at least one mock drill during a quarter by creating emergent situations to which the plant/installations are vulnerable and furnish the report to CEA.

Member Secretary I/c, WRPC, informed that in 20th WRPC meeting, it was decided that a small group comprising of WRPC, WRLDC, other Power utilities in WR & CEA will be formed to formulate the various activities under CMP and also the experiences of utilities who have under taken such mock drill exercise in their plant/installation will be share to arrive at modalities to be adopted.

All the constituents are requested to submit the CMP report for the First quarter (April 2012 to June 2012) for the year 2012-13 directly to SLDC, WRLDC and WRPC.

9.2 Status of Physical & Cyber Security in Power Sector regarding : Member Secretary OCC informed the committee that WRPC in its 439th OCC informed that status of physical & cyber security in Power Sector for the First quarter (April 2012 to June 2012) have not been received from any of the constituents. The MPPTCL, MPPGCL and NHDC may like to furnish the status (April 2012 to June 2012) for the year 2012-13 directly to the Chief Engineer (GM), CEA New Delhi under intimation to SLDC Jabalpur and WRPC Mumbai .

9.3 Absorption of reactive power by generators:- Member Secretary OCC informed the committee that in 439th OCC of WR, based on the discussions held during last OCC meetings, stated that it is imperative that generators will absorb maximum MVAR when asked by SCM/Shift incharge, WRLDC/SLDC. It is requested that generators will come with data of reactive power absorption; voltage at the bus before and after the message is given by WRLDC/SLDC, in every OCCM of WR. In order to monitor the response, WRPC also requested the generators to send the capability curves of generators. .

The chairman OCC intimated the committee that generator should absorb the reactive power as and when asked by WRLDC / SLDC and furnish the detailed information to SLDC/WRLDC for the same. He further stated that generator should support the system by observing MVAR according to capability curve. Member secretary stated that the generator may be operated in leading condition if required by WRLDC/SLDC or as per system requirement.

9.4 Demand Disconnection Schemes in line with clause 5.4.2(c) &(d) of Indian Electricity Grid Code 2010 : Member Secretary OCC informed the committee that as per clause 5.4.2 (c) of IEGC which came in effect from 3rd May 2010 *" Each User / STU/SLDC shall formulate contingency procedures and make arrangements that will enable demand disconnection to take place, as instructed by the RLDC / SLDC, under normal and/or contingency conditions. These contingency procedures and arrangements shall regularly be / updated by User/ STU and monitored by RLDC /SLDC. RLDC/SLDC may direct any User/STU to modify the above procedures/ arrangement, if required, in the interest of grid security and the concerned User/STU shall abide by these directions".*

In view of the above and as directed by WRLDC/WRPC, SLDC has prepared list of radial feeders which would be hand tripped on advise of RLDC/SLDC, when the grid is subjected to danger on account of over drawal. The list of radial feeders is enclosed herewith as **Annexure-9.4.**

Chairman, OCC stated that the WRLDC has requested to submit the list of radial feeder which may be hand tripped by WRLDC/ SLDC incase of violation of the IEGC by the constituents/Entities. Accordingly SLDC has prepared the same and forwarded to WRLDC**.**

9.5 Declaration of Peak and other than peak conditions Demand / Generation for CERC (Sharing of Inter-State Transmission Charges and losses) regulation 2010 : Member Secretary OCC informed the committee that as per CERC (Sharing of Inter-State Transmission Charges and losses) regulation 2010, NLDC is required to identify peak and off peak conditions for each season of the next application period in advance. In this regard, the peak and other than peak condition for next application period will be required on specific dates at 2000 hrs and 0300 hrs respectively for all seasons as mentioned below :-

Season –I April to June

Date of 15th may 2013 (next working day if 15th may is holiday)

Season –II Jul to September

Date of 31st August 2013 (next working day if 31st Aug is holiday)

Season –III October to November

Date of 30th October 2013 (next working day if 30th October is holiday)

Season –IV December to February

Date of 15th Jan 2014 (next working day if 15th Jan is holiday)

Season –V March

Date of 15th March 2014 (next working day if 15th Mar is holiday)

In view of the above Discoms are requested to furnish their restricted demand (preferably district wise) and the Generators are requested to furnish the injection schedule (unit wise) for the blocks of the month to SLDC before 27th September 2012 as detailed above in the Format III-B enclosed at **Annexure 9.5.**

ITEM NO 10: <u>OTHER IMPORTATNT OPERATIONAL ISSUES :</u>

10.1 : Standard Operating Procedure for DCCs : Member Secretary, OCC informed the committee that the Standard Operating Procedures for Distribution Control Centres has been prepared by SLDC. As directed by Energy Department, GoMP in the meeting held at Bhopal on 16.03.2012, the SOP should be implemented w.e.f 01.05.2012 by the DCCs. Further as directed, the following key action points may also be ensured by DISCOMs within the timeline fixed by Energy Department, GoMP. The DISCOMs are requested to furnish the Activity wise updated status in meting.

Action Point	Timeline	Updated Status
Feeder grouping, prioritization and mapping	30.04.2012	DISCOMs have not furnished the updated status
Formation of NDCC and DEAG	30.04.2012	
Set-up communication channel (DCC – NDCC)	30.04.2012	
Set-up communication channel (NDCC- SS)	30.06.2012	
Setting of systematic outage planning protocol	30.04.2012	
Complete implementation of DAS on 33 kV feeders	30.04.2012	
Develop incentive mechanism for DCC, NDCC, SS staff	31.12.2012	
Infrastructure to obtain weekly data from interface meters	30.04.2012	
Implementation to obtain weekly data from interface meters	30.06.2012	
Implementation and compliance of SOP	01.05.2012	
Implementation schedule to be uploaded on SLDC site	***Done***	***Completed***
Implementation of IT tools for DCC	31.12.2012	DISCOMs have not furnished the updated status
Technical proposal for development of IT tools	31.03.2012	

The Member Secretary again requested all the DISCOMs to furnish the activity wise updated status of SOP as per time line defined above. All the three DISCOMs have not submitted the same to SLDC till date.

10.2 RGMO status of generating units in WR :-

Member Secretary OCC informed the committee that though the RGMO contributed to a large extent in saving the Western Grid during Grid disturbance on 31.07.2012, a large number of units are still remain out of RGMO. In MP all 8 units of ISP and only one unit out of 39 units (10 Thermal and 29 Hydro) of MPPGCL have implemented RGMO. MPPGCL and JP Bina may give the status of implementation of RGMO in thermal units of capacity 200 MW and above and Hydro units of capacity 10 MW and above.

ITEM NO 11 : SCADA/EMS RELATED ISSUES :

11.1 PROGRESS OF INSTALLATION OF NEW RTUS ALONG WITH PLCC DATA LINKS AT EHV S/S

The progress of installation and commissioning of RTU's was reviewed and it was assured by T&C /T&P MPPTCL to

(1) Arrange communication channels for 220KV Sidhi S/s, 220KV Betul, 132KV Harda S/s, 132KV Khategaon on top priority, as RTU has already been commissioned at these Sub Stations but data is not available at SLDC.
(2) To arrange balance process connections at 220KV Rajgarh (B) & 220KV Julwaniya S/s,220Kv Seoni, 220Kv Birisngpur on priority.
(3) To investigate the matter and arrange for reliable functioning of 220KV Seoni RTU.
(4) To take up the matter with the firm for early replacement of MFM at 220KV Chnidwara & 220KV Rajgar(B) S/s.
(5) To plan & arrange communication channels well in advance for RTU's being delivered in IInd phase, so as to avid delay in commissioning of RTU's.

11.2 MAINTENANCE OF RTU's & AVAILABILITY OF SPARES:-

MPPGCL:- In the last OCC meeting, it was decided that the RTU spares procured by MPPGCL may be stored at centralized location at Jabalpur (may be GCC/Hydel testing Division) so that time consumed in restoration of telemetry fault may be minimized. However, action in the matter has not been taken. Accordingly, the mater was again discussed & SLDC requested MPPGCL to take suitable action in the matter, on priority basis for which MPPGCL agreed.

MPPTCL:- It was informed by SLDC that the matter of arrangement of Spare CPU's along with D20ME rack for GE/Honeywell RTU's was discussed in last three OCCM meetings and it was assured by T&C department of MPPTCL to initiate the action in the matter. It was informed by T&C representative that action is being initiated for procurement of spares as well as for repairing of faulty spares.

11.3 ARRANGEMENT OF TELEMETRY FOR SATPURA EXTENTION & SINGAJI TPS

SLDC requested MPPGCL to provide details of RTU/IEC gateway, data list etc & requested to arrange commissioning and testing of telemetry arrangement well before synchronization of generators at these power stations, for which MPPGCL agreed.

11.4 THE ARRANGEMENT OF DATA CHANNELS FOR REMOTE VDU INSTALLED AT GCC, DCC & CMD MPPTCL CHAMBER.

The matter was discussed in detail in 29th OCM meeting & it was suggested by MPPGCL that a single agency may take-up the work of arranging communication channels for all the remote work stations available in Shakti Bhawan, on cost sharing basis & requested T&C department of, MPPTCL to explore the possibility of arranging the same by communication division. The SLDC requested to inform progress in the matter.

As no action is being initiated in the matter, it was specifically informed by SLDC that for functioning of remote work stations from new SCADA system high speed reliable communication link is a prerequisite & hence SLDC again requested all concern departments to arrange the reliable high speed data channel, either jointly through communication section of MPPTCL, or separately,.

11.5 DISCREPANCY IN TELEMETRERED VALUES RECEIVED FROM DIFFERENT EHV S/S & POWER STATIONS & UPGRADATION OF EXISTING RTUS

SLDC requested MPPGCL and MPPTCL to take up the work of telemetry discrepancy & upgradation of RTU's immediately so that the work gets completed as per the schedule submitted to CERC. MPPTCL & MPPGCL assured to complete the work within the time frame submitted to CERC.

The matter of upgradation of RTU at 220KV Pithampur S/s was specifically discussed & it was informed by MPPTCL that they are arranging separate additional RTU for 220KV Pithampur. Further, matter of telemetry discripiency at Birsingpur TPS and non availability of SOE of TONS HPS, was also specifically discussed and MPPGCL assured to look into the issues on priority basis.

11.6 LONG OUTAGE OF RTU's

MPPTCL assured to take up necessary action on priority basis for avoiding long outage of other RTU's i.e 220KV Damoh, 132KV Morwa, 220KV Tikamgarh, 132KV Boregaon,132KV Satna etc.

11.7 PROVIDING ALTERNATE DATA CHANNELS & EXPRESS VOICE CHANNELS FOR RTU STATIONS:-

The matter was discussed in detail specifically for arranging alternate data channels for power stations. MPPGCL & MPPTCL assured to take necessary action and if required, a separate meeting shall also be arranged between MPPGCL,& T&C MPPTCL to sort out the matters regarding alternate data and voice channels for important power stations.

11.8 NON AVAILBILITY OF TELEMETRY OF M/s BLA POWER

M/s BLA power informed that the PLCC panels required for establishment of communication channel have already been delivered. Further, the work for interfacing of their relay panel having real time data with PLCC channel is in progress. M/s BLA power confirm that the telemetry of their power Stations shall be arranged before end of November 2012. SLDC specifically requested to confirm the arrangement of MODEM required at control centre end for which M/s BLA power agreed.

ITEM No 12 : DATE AND VENUE OF NEXT OCC MEETING : It is proposed to hold 31st OCC meeting of Operation and Coordination Committee of MP on 18th December 2012. The final date and venue shall be communicated separately.

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FREQUENCY PARTICULARS

S. No.	Particulars	Jul-12		Aug-12	
1	**INTEGRATED OVER AN-HOUR**				
1.1	Maximum Frequency	50.37 Hz	Between 05.00 hrs & 06.00 Hrs on 06.07.12	50.37 Hz	Between 0300 Hrs & 0400 Hrs on 27.08.12
1.2	Minimum Frequency	48.96 Hz	Between 22.00 hrs & 23.00 Hrs on 26.07.12	49.48 Hz	Between 10.00 hrs & 11.00 Hrs on 20.08.12
1.3	Average Frequency	49.68 Hz		49.95 Hz	
2	**INSTANTANEOUS FREQUENCY**				
2.1	Maximum Frequency	51.21 Hz	AT 13.02 HRS ON 31.07.12	50.65 Hz	AT 08.02 HRS ON 02.08.12
2.2	Minimum Frequency	48.79 Hz	AT 22.16 HRS ON 16.07.12	48.82 Hz	AT 10.44 HRS ON 20.08.12

3 Percentage of time when frequency was :-

	%age of time when frequency was	Jul-12	Aug-12
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	5.43	0.1
3.4	Between 49.20 Hz and 49.5 Hz	18.94	1.47
3.5	Between 49.50 Hz and 49.7 Hz	28.44	8.45
3.6	Between 49.70 Hz and 50.2 Hz	45.15	81.27
3.7	Between 50.20 Hz and 50.3 Hz	1.03	6
3.8	Between 50.30 Hz and 51.0 Hz	1.01	2.71
3.9	Between 51.0 Hz AND 51.5 Hz	0.00	0
3.1	Above 51.5 Hz	0.00	0
4.1	No. of times frquency touched 48.80 Hz	7	0
4.2	No. of times frquency touched 48.60 Hz	0	0
4.3	No. of times frquency touched 51.0 Hz	0	0

Voltage Profile During the Month of JUL- 2012

Date	Indore		Itarsi		Bina		Gwalior		Nagda		Birsingpur		Satpura	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	423	410	423	412	422	407	418	385	426	414	419	412	425	418
2	424	400	426	407	428	399	427	397	428	400	420	412	424	417
3	424	404	424	409	425	407	421	386	427	408	420	410	426	417
4	427	403	427	407	424	398	425	381	431	407	419	407	427	416
5	424	410	426	410	426	404	428	387	428	413	421	408	426	415
6	427	410	429	414	435	429	432	389	430	414	424	409	428	416
7	427	407	430	410	428	402	430	390	428	407	426	414	431	416
8	424	410	427	411	422	409	423	395	426	410	426	415	427	417
9	424	408	427	411	424	402	423	385	426	410	422	414	427	412
10	426	407	426	412	425	407	421	391	430	405	426	414	426	419
11	427	409	427	411	428	413	422	396	428	413	424	411	426	416
12	427	411	426	413	423	408	422	396	426	412	423	413	427	411
13	427	412	428	414	426	414	427	399	428	413	428	413	427	419
14	426	409	425	411	423	404	427	389	427	407	416	409	427	416
15	424	411	426	413	427	405	425	388	424	410	428	410	427	411
16	426	411	426	413	424	410	421	398	424	410	415	410	428	418
17	425	411	427	412	425	409	422	397	426	413	417	412	427	416
18	424	406	424	407	425	403	425	389	425	407	418	410	426	419
19	424	406	424	407	427	403	421	385	425	407	419	412	426	413
20	426	410	429	414	430	412	424	392	427	412	420	415	427	419
21	426	410	428	409	428	402	429	385	426	410	423	413	428	417
22	427	412	426	414	423	401	425	387	427	413	424	414	428	414
23	427	411	426	410	425	405	422	389	429	411	423	415	426	413
24	427	411	426	410	420	404	416	388	429	411	424	415	424	409
25	424	410	424	411	426	403	426	388	424	410	419	413	425	416
26	427	412	427	414	425	410	424	396	427	413	422	416	426	411
27	426	414	426	414	424	410	421	384	427	414	420	414	423	415
28	426	414	426	414	420	397	416	379	427	414	419	413	424	415
29	427	413	427	413	429	394	429	370	427	414	420	414	424	415
30	428	403	427	403	424	397	432	381	429	404	419	413	426	413
31	428	401	425	399	421	372	425	375	420	404			423	413
Max / Min	**428**	**400**	**430**	**399**	**435**	**372**	**432**	**370**	**431**	**400**	**428**	**407**	**431**	**409**

Voltage Profile During the Month of AUG - 2012

Date	Indore		Itarsi		Bina		Gwalior		Nagda		Birsingpur		Satpura	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	427	409	426	408	424	406	423	387	428	411	418	410	426	414
2	429	411	427	409	423	406	425	396	430	411	419	410	428	416
3	428	403	426	404	423	409	419	398	428	405	424	413	426	411
4	426	408	426	409	423	409	419	398	427	407	426	415	427	414
5	428	394	427	398	428	407	422	405	430	392	427	416	426	407
6	423	411	423	413	428	415	429	406	426	412	426	417	424	415
7	427	410	428	412	431	416	430	407	429	413	426	421	425	417
8	425	412	426	409	429	415	429	408	428	413	429	419	425	413
9	424	410	426	408	427	413	428	408	425	410			424	411
10	424	409	424	406	426	409	429	407	426	409			423	410
11	423	411	423	409	425	411	429	406	425	411			426	414
12	426	413	426	407	425	405	427	405	426	413			425	411
13	425	412	423	407	424	406	427	403	426	412			423	413
14	430	411	427	411	429	410	428	404	430	412			424	413
15	426	410	424	407	424	403	428	401	427	409			425	414
16	424	408	423	403	424	404	429	404	424	410			427	412
17	425	406	423	399	421	395	426	396	426	407			426	417
18	423	413	424	413	426	410	428	405	425	415			426	420
19	424	410	424	406	428	403	429	400	427	412			425	412
20	423	409	423	407	423	406	425	397	424	410	BUS-Dead		428	413
21	426	411	426	409	429	404	428	404	427	413			428	416
22	426	411	428	407	429	405	431	401	428	413			428	414
23	425	412	426	406	430	403	431	400	427	408			425	413
24	427	410	427	407	425	404	430	403	427	411			427	413
25	426	407	424	403	427	401	430	400	428	410			423	410
26	425	409	424	404	425	407	429	403	427	411			428	412
27	428	410	426	409	426	407	430	407	430	411			427	414
28	426	406	427	403	430	407	433	407	427	408			424	410
29	423	407	423	408	427	409	433	410	424	408			426	400
30	423	404	424	406	429	412	432	410	424	406			424	410
31	423	406	426	405	426	400	428	403	424	407			427	414
Max	**430**	**394**	**428**	**398**	**431**	**395**	**433**	**387**	**430**	**392**	**429**	**410**	**428**	**400**

ANNEXURE - 2.4.2(i)

M.P POWER TRANSMISSION COMPANY LIMITED

TRANSMISSION WORKS COMPLETED DURING 2012-13 (UP TO 31.08.2012)

S. No.	NAME OF THE TRANSMISSION LINE / (FINANCED BY)	TYPE OF CIRCUITS	ROUTE LENGTH	CIRCUIT KMS.	DATE OF COMPL-ETION	DATE OF COMMI-SSIONING	ESTIMATED COST (Rs. In lacs)	TSP	SCSP	TSP / SCSP	GEN
I.	**EHV TRANSMISSION LINES**										
A.	**400 KV TRANSMISSION LINES**			**NIL**							
	Sub-Total (A)										
B.	**220 KV TRANSMISSION LINES**										
1	Diversion of 220KV Rajgarh - Pithampur DCDS line up to common point near 220KV Sub-station, Pithampur (ADB-II/S)	DCDS	1.60	3.20	June'12	11.06.2012	158	3.2			
	Sub-Total (B)		**1.60**	**3.20**			**158.00**	**3.2**	**0**	**0**	**0**
C.	**132 KV TRANSMISSION LINES**										
1	Barman - Gadarwara second ckt. (PFC)	2nd Ckt		30.54	MAY'2012	28.05.2012	242			30.54	
2	Power supply to M/s. IMC, Baklai from 220KV Barwaha Sub-station (D/W)	DCSS	34.17	34.17	June'12	02.06.2012	1371				34.17
3	Power supply to M/s. Arya Energy. Kotma from 132KV Kotma Sub-station (D/W)	DCSS	1.29	1.29	June'12	30.06.2012	81				1.29
4	Power supply to Mungawali Railway Traction S/s from 220kv Bina S/s. (D/W)	DCSS	31.32	31.32	July'12	26.07.2012	903				31.32
5	LILO of 132 kv Rewa - Sidhi line for Rewa - II (Sagra) 132KV S/s (2x13.38) (GoMP)	DCDS	13.38	26.76	August'12	30.08.2012	734			26.76	
	Sub-Total (C)		**80.16**	**124.08**			**3331.00**	**0.00**	**0.00**	**57.30**	**66.78**
	Total (EHV LINES) (A + B + C)		**81.76**	**127.28**			**3489**	**3.2**	**0**	**57.3**	**66.78**
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**	**ESTIMATED COST (Rs. In lacs)**	**TSP**	**SCSP**	**TSP / SCSP**	**GEN**
A.	**400 KV SUBSTATIONS**			**NIL**							
	Sub Total (B) (220KV S/s)			**0**			**0**	**0**	**0**	**0**	**0**
B.	**220 KV SUBSTATIONS**										
a.	**NEW SUBSTATIONS**										
b.	**ADDITIONAL TRANSFORMERS**										
1	Mehgaon (Addl Trans) (Distt. Bhind) (ADB)	220/132	1x160	160	APRIL'12	05.04.2012	1064		160		
2	Tikamgarh (Addl Trans) (Distt. Tikamgarh) (ADB)	220/132	1x160	160	MAY'12	24.05.2012	1268		160		
3	Sabalgarh (Addl Trans) (Distt. Morena) (ADB)	220/132	1x160	160	August'12	24.08.2012	1217		160		
	Sub Total (B) (220KV S/s)			**480**			**3549**	**0**	**480**	**0**	**0**

C.	**132 KV SUBSTATIONS**										
a.	**NEW SUBSTATIONS**										
	Sub Total (C.a) (NEW S/s)			**0**			**0**	**0**	**0**	**0**	**0**
b.	**ADDITIONAL TRANSFORMERS**										
1	Ghosla (Additional) District Ujjain. (ADB)	132/33	1x40	40	June'2012	14.06.2012	606	0	40	0	0
2	132 KV Indore (Chambal) (Addl) (Distt. Indore) (GoMP)	132/33	1x40	40	August'12	03.08.2012	487	0	40	0	0
	Sub Total (C.b) (ADDITIONAL TRANSFORMER)			**80**			**1093**	**0**	**80**	**0**	**0**
c.	**AUGMENTATION OF CAPACITY**										
1	Ratadia (Mullapura) (Aug from 40 to 63 MVA) (Distt. Ujjain) (Simhastha)	132/33		23	MAY'12	25.05.2012	720		23		
2	Dabra (Aug from 20 to 40 MVA) (Distt. Gwalior) (ADB - II)	132/33		20	August'12	10.08.2012	526		20		
	Sub Total (C.c) (AUGMENTATION OF CAPACITY)			**43**			**1246**	**0**	**43**	**0**	**0**
	Sub-Total (C) (132 kv Sub-stations)			**123**			**2339**	**0**	**123**	**0**	**0**
	Total (EHV SUB - STATIONS) (A+B+C)			**603**			**5888**	**0**	**603**	**0**	**0**
										03.9.2012	
III	**CAPACITOR BANKS**										
S. No.	**NAME OF THE SUBSTATION**	**District**	**RATED CAPACITY MVAR**	**EFFECTIVE CAPACITY MVAR**	**DATE OF COMPL-ETION**	**DATE OF COMMI-SSIONING**					
A.	**33 KV SHUNT CAPACITORS (MVAR)**										
	Total (33 KV SHUNT CAPACITORS)		**0**	**0**							
	Total Cost of Trans. Works Completed in 2011-12						**9377.00**				

EHV TRANSMISSION LINES UNDER PROGRESS DURING 2012-13 (AS ON 31.08.2012)						ANNEXURE -2.4.~~1~~(ii)		
					(Rs.in Lakhs)			
S. No.	NAME OF THE TRANSMISSION LINE	TYPE OF CIRCUITS	ROUTE LENGTH	CKT.KMS.	COMPLETION PROGRAMME	FUNDING AGENCY	ESTIMATED COST	PROGRESS IN %
A.	**400 KV TRANSMISSION LINES**							
1	400KV DCDS Indore (PGCIL) - Pithampur line (2x65)	DCDS	65	130	Dec-12	PFC	9551.00	42%
2	400KV DCDS Malwa TPS - Pithampur line (2x150)	DCDS	150	300	Mar-13	PFC	20464.00	61%
3	400KV DCDS Malwa TPS - Chhegaon line (2x65)	DCDS	65	130	Dec-12	PFC	9325.00	73%
4	400KV DCDS Chhegaon - Julwania line (2x115)	DCDS	115	230	Jun-13	PFC	16088.00	28%
	Sub Total (A)		**395**	**790**			**55428**	
B.	**220 KV TRANSMISSION LINES**							
1	Second Circuiting of 220 kv Satpura - Pandhurna line	2nd ckt		83	Sep-12	ADB - II	1705.00	76%
2	220KV DCDS Interconnector between 400 & 220KV Sub-stations at Pithampur (Two Lines)(4x5.9 + 2x20.8)	DCDS	26.7	65.2	Sep-12	PFC	2439.00	98%
3	LILO of 220KV Nagda - Neemuch line for Daloda 220kV S/S. (2x4.41)	DCDS	4.41	8.82	Sep-12	PFC	555.00	81%
4	Ashta (400) - Indore - II (Jaitpura) (2x100)	DCDS	100	200	2013-14	PFC	5603.00	4%
5	Ratlam - Daloda	DCSS	72	72	2013-14	PFC	3704.00	9%
6	LILO of Itarsi - Narsinghpur 220 DCDS line at Chichali S/S. (DCDS) (2x2.06)	DCSS	2.06	4.12	Mar-13	PFC	178.00	10%
7	LILO of both ckts Of 220KV Amarkantak - Korba DCDS line at Amarkantak 220kv S/s (4x3.87)	DCDS	7.74	15.28	Mar-13	PFC (S)	704.00	44%
8	LILO of both ckts Of 220KV Nimrani - Julwania DCDS line at Julwania 400 kv S/s (2x2.53)	DCDS	2.53	5.06	2013-14	PFC	191.00	20%
9	220KV line from Gwalior (400kv) (PGCIL) to Gwalior (220kv) (II) (2x0.76)	DCDS	0.76	1.52	2013-14	JICA	275.00	12%
	Sub Total (B)		**216.2**	**455**			**15354**	
C.	**132 KV TRANSMISSION LINES**							
1	132kv Sidhi - Deosar DCDS line (2x50)	DCSS	50	100	Dec-12	ADB - II (S)	2198.00	59%
2	Birsinghpur - Shahdol DCSS	DCSS	48	48	2013-14	PFC	994.00	4%
3	2nd Ckt of Satna - Pawai section for Nagod 132kv S/s (19.50)	2nd ckt		19.5	Dec-12	PFC		90%
4	Shivpuri - Mohna DCSS	DCSS	65	65	2013-14		1963.00	41%
5	Handiya220 - Sultanpur (Rolgaon) 132KV DCSS line	DCSS	31.3	31.3	Mar-13	PFC	1203.00	42%
6	Sagar - Banda	DCSS	40	40	Dec-12	PFC	1368.00	10%
7	Chhegaon - Moondi	DCSS	44.27	44.27	Dec-12	PFC	1675.00	37%
8	LILO of both ckts of 132 kv Amarkantak - Morwa / Waidhan line for Amarkantak 220KV S/s (2x2.36)	DCDS	2.36	4.72	Mar-13	PFC (S)	402.00	51%
9	Mandsaur - Neemuch DCDS line (2x65 Kms)	DCDS	65	130	Mar-13	PFC	2410.00	8%
10	Chhatarpur - Nowgaon DCSS line (35Kms)	DCSS	35	35	Mar-13	PFC	1120.00	12%
11	LILO of 132 kv Indore (SZ) - Indore (CAT) line for Rau 132KV S/s (4x5.06 + 2x0.7)	DCSS	5.76	21.64	Jun-13	PFC	1038.00	35%
12	LILO of 132 kv Barman - Gadarwara line for Chichli 220 KV S/s (2x14)	DCDS	14	28	Mar-13	PFC	893.00	11%
	Sub Total (C)		**400.69**	**567.43**			**15264**	
	Grand Total (A+B+C)		**1011.89**	**1812.43**			**86046.00**	

EHV SUB STATIONS UNDER PROGRESS DURING 2012-13 (AS ON 31.08.2012)								
S.No.	**NAME OF THE SUBSTATION**	**VOLTAGE RATIO (KV)**	**No.OF X-mer & Cap. (MVA)**	**EFFECTIVE CAPACITY MVA**	**COMPLETION PROGRAMME**	**FUNDING AGENCY**	**ESTIMATED COST (Rs.in Lakhs)**	**PROGRESS IN %**
A.	**400 KV SUBSTATIONS**							
1	Ashta (New S/s) (Distt. Sehore)	400/220	2x315	630	Jan-13	PFC - II	8844.00	40%
2	Pithampur (New S/s) (Distt. Dhar)	400/220	2x315	630	Dec-12	PFC - II	8989.00	79%
3	Julwania (New S/s) (Distt. Badwani)	400/220	2x315	630	Jun-13	PFC - II	8620.00	5%
4	Chhegaon (New S/s) (Distt. Khandwa)	400/220	1x315	315	Dec-12	PFC - II	5101.00	90%
	Sub Total (A) (400 kv)			**2205**			**31554**	
B.	**220 KV SUBSTATIONS**							
1	Amarkantak (New S/s) (Distt. Anooppur)	220/132	1x160	160	Dec-12	PFC	3060.00	92%
2	Chichli (New S/s) (Distt. Narsinghpur)	220/132	1x160	160	Mar-13	PFC	2885.00	5%
3	Jabalpur (ADDL) (Distt. Jabalpur)	220/132	1x160	160	Jun-13		794.00	18%
	Sub Total (B) (220kv)			**480**			**6739**	
C.	**132 KV SUBSTATIONS**							
(a)	**NEW SUBSTATIONS**							
1	Mohna (Distt. Shivpuri)	132/33	1x40	40	2013-14	GoMP	403.00	57%
2	Moondi (Distt. Khandwa)	132/33	1x40	40	Dec-12	PFC - II	957.00	92%
3	Deosar (Distt. Sidhi)	132/33	1x40	40	Dec-12	PFC - II	987.00	20%
4	Nowgong (Distt. Chhatarpur)	132/33	1x40	40	Mar-13	PFC - II	957.00	46%
5	Banda (Distt. Sagar)	132/33	1x40	40	Dec-12	PFC - II	957.00	55%
6	Sultanpur (Distt. Harda)	132/33	1x40	40	Mar-13	PFC - II	957.00	12%
7	Bankhedi (Distt. Hoshangabad)	132/33	1x40	40	Dec-12	PFC - II	973.00	91%
8	Indore (RAU) (Distt. Indore)	132/33	1x63	63	Mar-13	PFC - II	1061.00	5%
9	Rewa - II (Sagra) (Distt. Rewa)	132/33	1x40	40	Dec-12	GoMP	794.00	92%
10	Gopalpur (Distt. Sehore)	132/33	1x40	40	Dec-12	GoMP	760.00	5%
	Sub Total (a)			**423**			**8806**	
C.	**132 KV SUBSTATIONS**							
(b)	**Additional/ Augmentation of Transformers**							
1	220 KV Damoh (Addl) (Distt. Damoh)	132/33		40	Jun-12	ADB - II (S)	370.00	85%
2	Bhonra (Addl.) (Distt. Guna)	132/33		20	Mar-13	GoMP	146.00	70%
3	Ratlam (Aug from 20 to 40 MVA) (Distt. Ratlam)	132/33		20	2012-13	ADB - II (S)	511.00	90%
	Sub Total (b)			**80**			**1027**	
	Grand Total (a+b+c) (132 kv)			**503**			**9833**	
	Grand Total (A+B+C)			**3188**			**48126**	
Total Cost of EHV Lines and Substations under progress (A+B+C)							**134172.00**	**06.09.2012**

(*) : Cost included in respective estimate for New Sub-station.

Datewise Under Frequnecy (48.8 Hz & 48.6 Hz) & Df / Dt Operation in Madhya Pradesh

Date	Month : July - 2012				Month : August - 2012			
	U/F 48.8 Hz		U/F 48.6 Hz		U/F 48.8 Hz		U/F 48.6 Hz	
	No.of Occasion	MAX LOAD RELIEF IN MW	No.of Occasion	MAX LOAD RELIEF IN MW	No.of Occasion	MAX LOAD RELIEF IN MW	No.of Occasion	MAX LOAD RELIEF IN MW
1	0	0.0	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0	0	0.0
3	**3**	**30.9**	0	0.0	0	0.0	0	0.0
4	0	0.0	0	0.0	0	0.0	0	0.0
5	0	0.0	0	0.0	0	0.0	0	0.0
6	0	0.0	0	0.0	0	0.0	0	0.0
7	0	0.0	0	0.0	0	0.0	0	0.0
8	0	0.0	0	0.0	0	0.0	0	0.0
9	0	0.0	0	0.0	0	0.0	0	0.0
10	0	0.0	0	0.0	0	0.0	0	0.0
11	0	0.0	0	0.0	0	0.0	0	0.0
12	0	0.0	0	0.0	0	0.0	0	0.0
13	0	0.0	0	0.0	0	0.0	0	0.0
14	0	0.0	0	0.0	0	0.0	0	0.0
15	0	0.0	0	0.0	0	0.0	0	0.0
16	**1**	**34.9**	0	0.0	0	0.0	0	0.0
17	**2**	**78.9**	0	0.0	0	0.0	0	0.0
18	**1**	**80.5**	0	0.0	0	0.0	0	0.0
19	0	0.0	0	0.0	0	0.0	0	0.0
20	**3**	**40.5**	0	0.0	0	0.0	0	0.0
21	0	0.0	0	0.0	0	0.0	0	0.0
22	**1**	**66.6**	0	0.0	0	0.0	0	0.0
23	0	0.0	0	0.0	0	0.0	0	0.0
24	**1**	**86.0**	0	0.0	0	0.0	0	0.0
25	0	0.0	0	0.0	0	0.0	0	0.0
26	0	0.0	0	0.0	0	0.0	0	0.0
27	0	0.0	0	0.0	0	0.0	0	0.0
28	0	0.0	0	0.0	0	0.0	0	0.0
29	0	0.0	0	0.0	0	0.0	0	0.0
30	0	0.0	0	0.0	0	0.0	0	0.0
31	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	**12**	**86.00**	**0**	**0.00**	**0**	**0.00**	0	**0.00**

NOTE :- U/F 48.2 Hz and DF/DT Operation - **NIL**

Annexure-2.4.2(ii)

DF/DT RELAY PLAN

SR.NO.	NAME OF S/S	df/dt 0.4Hz/s Base freq.49.9 Hz. Lines to be tripped	Load in MW	df/dt 0.2Hz/s Base freq.49.9 Hz. Lines to be tripped	Load in MW	df/dt 0.1Hz/s Base freq.49.9 Hz. Lines to be tripped	Load in MW	TOTAL LOAD M.W.
(I)	**EASTERN MP.**							
1	220 KV S/s JABALPUR			132 kv MANERI	**15**			
	132 KV S/S SEONI			132 KV NAINPUR-MANDLA	**20**			
	220 KV S/s KATNI			132 KV SLEEMNABAD	**25**			
	132 KV S/s GOURJHAMER			132/33KV X'MER	**25**			
2	220 KV S/s			132/33kV X'MERS	**53**			
	NARSINGHPUR							
3	220 KV S/s SATNA			132 KV PANNA	**30**			
				132 KV MANGAWAN-PAWAI	**20**			
4	220 KV S/s REWA	132 KV MANGAWAN-KATRA **20**						
		132 KV RAMPUR BAGHELAN AT X-MER **35**						
5	220KV S/s SIDHI					132KV MAUGANJ	**21**	
5	220KV S/s BINA					132KV GANJBASODA	**15**	
TOTAL EASTERN M.P.			**55**		**188**		**36**	**279**
(II)	**CENTRAL MP.**							
1	220 KV S/s PIPARIYA					132KV BARELI	**55**	
2	220 KV S/s MEHGAON	160MVA XMER	**110**					
		132 KV MALANPUR	**-**					
3	132 KV VIDISHA	132 KV GAIRATGANJ	**20**					
		132 KV RAISEN	**15**					
4	132 KV CHHANERA					132/33 KV XMER	**15**	
5	220 KV HANDIYA			132 KV NASRULLAGANJ	**40**			
6	132 KV BETUL					132 KV GUDGAON	**15**	
7	132 KV KHILCHIPUR			132 KV ZEERAPUR	**15**			
8	132 KV AGAR			132 KV SUSNER	**10**			
9	220KV MALANPUR	132 KV AMBAH	**30**					
10	220KV S/s GUNA			132/33 KV XMER-I,II & III	**75**	132/33KV XMER AT 132KV RAGHOGARH	**40**	
TOTAL CENTRAL MP.			**175**		**140**		**125**	**440**
(III)	**WESTERN M.P.**							
1	220 KV S/Z INDORE	132 KV DHAR (TAPPED G.BILLOD)	**40**					
2	220 KV RAJGARH	132 KV DHAR	**-**					
		132 I/C-I&II	**105**					
		132KV PETLAWAD	**-**					
3	220 KV RATLAM					132KV SAILANA	**10**	
4	400 KV NAGDA					220KV NEEMUCH I&II	**145**	
	132KV NEEMUCH					132KV MANASA & MALH'GARH		
6	220KV SHUJALPUR					132/33 KV XMER-I & II	**25**	
7	220 KV PITHAMPUR			132 KV JAMLI	**35**			
8	220 KV DEWAS			132 KV CHAPDA	**30**			
9	220KV JULWANIA	132 KV XMER-I & II	**30**					
		132 KV SENDHWA (& PANSEMAL)	**40**					
10	220 KV UJJAIN					132 KV TARANA-I&II	**15**	
11	220 KV RAJGARH(DHAR)					132 KV BAGDI+BETMA	**40**	
	220 KV BADNAGAR					132 KV GOUTAMPURA	**20**	
						132 KV KANWAN	**30**	
12	220 KV NAGDA					132 KV MAHIDPUR	**15**	
						132KV A LOT	**35**	
TOTAL WESTERN MP.			**215**		**65**		**335**	**615**
TOTAL M.P.			**445**		**393**		**496**	**1334**
LOAD RELIEF DESIRED BY WRLDC w.e.f. 01.07.2008			**361**		**355**		**392**	**1108**

Discoms wise Average Supply Hours

PARTICULARS	East Zone		Central Zone	
	Jul-12	Aug-12	Jul-12	Aug-12
Commissinary HQ	23:48	24:00	24:00	24:00
District HQ	23:30	23:58	23:23	24:00
Tehsil HQ	18:01	23:08	20:20	23:55
Rural -3Phase	14:12	22:44	15:35	23:20
Rural -1Phase	0:00	0:00	0:00	0:00
Total Rural	14:12	22:44	15:35	23:20
PARTICULARS	**West Zone**		**MP**	
	Jul-12	**Aug-12**	**Jul-12**	**Aug-12**
Commissinary HQ	24:00	24:00	23:55	24:00
District HQ	23:57	24:00	23:36	23:59
Tehsil HQ	20:32	23:53	19:28	23:36
Rural -3Phase	14:37	23:05	14:45	23:01
Rural -1Phase	0:00	0:00	0:00	0:00
Total Rural	14:37	23:05	14:45	23:01

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 charging of feeder
132KV		
220kV Pipariya	33kV Panagar	02.03.2011
SAGAR REGION		
132KV		
132kV Khajuraho	33kV Airport	25.06.2011
132kV Bijawar	33kV Bada Malhara	04.01.2012
REWA REGION		
132KV		
132kV Beohari	33kV Madwas	03.01.2012
132kV Rajmilan	33kV Khutar	05.03.2012
	33kV Rajmilan	05.03.2012
132KV Nagod	33KV Nagod	13.02.2012
	33KV Raikwara	13.02.2012
	33KV Jasso	09.02.2012
	33KV Singhpur	10.02.2012
220KV		
220kV Satna	33KV Raigaon	19.05.2011
220kV Kotar (Rewa)	33kV Semariya	22.10.2011
220kV Maihar	33kV Reliance	15.04.2011

LIST OF 33KV FEEDERS UNDER MPMKVVCL, JABALPUR

(For which group to be allocated)

BHOPAL REGION		
Name of EHV Substation	**Name of 33KV feeder**	**Date of charging of feeder**
132KV		
132KV Gudgaon	33KV Gudgaon	31.06.2012
132KV Kurawar	33KV Oswal Denim	24.02.2012
220KV		
220KV Betul	33KV Junawani	04.05.2012
220KV Bairagarh	33KV Iiser	19.05.2012

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 Charging of feeder
132 KV		
132KV Betma	33KV Chiklonda	12.06.2010
	33KV Gohan	15.02.2012
132KV Manawar	33KV NVDA	23.05.2011
	33KV Anjanda	03.05.2011
132KV Jamli	33KV MES (Karbala)	12.10.2010
132KV Barwani	33KV Rehgun	03.04.2012
132KV Kanwan	33KV Rajod	14.06.2011
132KV Sanwer	33KV Panth Piplai-II	08.12.2010
	33KV Panth Piplai-III	16.10.2011
132KV Kukshi (Susari)	33KV Water Works	22.12.2009
132KV Petlawad	33KV Raipuriya	22.07.2010
	33KV Sarangi	22.12.2010
	33KV Kothara	08.02.2012
	33KV Bolasa	08.02.2012
220KV		
220KV Jetpura (Indore)	33KV BPCL	30.08.2012
	33KV Industtrial	30.11.2011
	33KV PGCIL	29.07.2011
220KV Pithampur	33KV MPAKVN (Nalrip Water Works)	30.07.2011
	33KV Sagore	03.01.2011
220KV Indore EAST (Bicholi)	33KV Kannod (Industrial)	17.08.2007

UJJAIN REGION

Name of EHV Substation	Name of 33KV feeder	Date of Charging of feeder
132KV		
132KV Susner	33KV Suzlon-i	28.03.2011
	33KV Suzlon-II	09.02.2011
132KV Agar	33KV Suzlon-i	19.06.2011
	33KV Suzlon-II	18.02.2012
132KV Berchha	33KV Shet Khedi	23.08.2012

Anticipated Hourly Average Availability MP : 2012-2013

WITH BILATERAL

Figures in MW

Particulars	Oct-12					Nov-12					Dec-12				
	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU
Thermal	1985	1985	1995	2025	1486	2020	2020	2030	2060	1464	2022	2022	2032	2062	1514
Hydel	760	350	350	770	415	600	480	460	800	421	250	300	340	650	286
CSS	2240	2240	2240	2270	1672	2290	2290	2290	2323	1655	2340	2340	2340	2390	1750
ISP	310	40	20	810	219	380	290	400	870	349	0	350	370	760	275
SSP	30	30	30	350	82	30	90	80	390	106	50	50	50	310	86
Omkareshwar	100	50	10	340	93	140	120	150	340	135	10	90	140	300	100
IPP (BLA+JP Bina+Lanco+Sasan)	164	164	164	164	122	240	240	240	240	173	240	240	240	240	179
DVC	300	300	300	300	223	300	300	300	300	216	300	300	300	300	223
Rihand +Matatila	15	15	15	15	11	15	15	15	15	11	15	15	15	15	11
Sugen	40	40	40	40	30	55	55	55	55	40	40	40	40	40	30
Banking+sale	0	0	0	0	0	470	160	120	230	176	1100	450	400	540	463
MTPP	380	380	380	380	283	380	380	380	380	274	380	380	380	380	283
Total	**6324**	**5594**	**5544**	**7464**	**4636**	**6920**	**6440**	**6520**	**8004**	**5019**	**6747**	**6577**	**6647**	**7987**	**5200**
Unres. Demand	**6880**	**6890**	**6860**	**7960**	**5318**	**7850**	**8040**	**7890**	**8710**	**5848**	**7460**	**8010**	**7990**	**8470**	**5939**
Resl. Demand	**6190**	**5560**	**5480**	**7500**	**4600**	**6930**	**6400**	**6450**	**8130**	**5024**	**6530**	**6550**	**6640**	**7980**	**5152**
Shortgae(+) / Surplus(-) (wrt Unres)	**556**	**1296**	**1316**	**496**	**681**	**930**	**1600**	**1370**	**706**	**829**	**713**	**1433**	**1343**	**483**	**739**
Shortgae(+) / Surplus(-) (wrt res)	**-134**	**-34**	**-64**	**36**	**-37**	**10**	**-40**	**-70**	**126**	**5**	**-217**	**-27**	**-7**	**-7**	**-48**

Particulars	Jan-13					Feb-13					Mar-13				
	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU
Thermal	2246	2246	2257	2291	1681	2246	2246	2257	2291	1519	2246	2246	2257	2291	1681
Hydel	140	130	130	670	199	220	70	310	690	217	100	150	180	570	186
CSS	2440	2440	2440	2473	1822	2410	2410	2410	2435	1624	2450	2450	2450	2500	1832
ISP	0	500	380	480	253	20	510	370	570	247	0	110	180	370	123
SSP	50	230	210	390	164	40	280	320	490	190	30	30	30	300	73
Omkareshwar	10	200	180	160	102	10	230	170	330	124	10	130	80	180	74
IPP (BLA+JP Bina+Lanco+Sasan)	240	240	240	240	179	438	438	438	438	294	438	438	438	438	326
DVC	300	300	300	300	223	300	300	300	300	202	300	300	300	300	223
Rihand +Matatila	15	15	15	15	11	15	15	15	15	10	15	15	15	15	11
Sugen	40	40	40	40	30	40	40	40	40	27	40	40	40	40	30
Banking+sale	1100	440	400	540	461	660	210	190	320	232	660	210	190	320	257
MTPP	380	380	380	380	283	380	380	380	380	255	380	380	380	380	283
Total	**6961**	**7161**	**6972**	**7979**	**5408**	**6778**	**7128**	**7200**	**8298**	**4940**	**6668**	**6498**	**6540**	**7703**	**5098**
Unres. Demand	**6780**	**7690**	**7650**	**8390**	**5675**	**7200**	**7600**	**7750**	**8660**	**5243**	**6600**	**6660**	**6630**	**7670**	**5126**
Resl. Demand	**6100**	**7040**	**6990**	**7890**	**5212**	**6620**	**7070**	**7200**	**8260**	**4897**	**6080**	**6180**	**6160**	**7320**	**4788**
Shortgae(+) / Surplus(-) (wrt Unres)	**-181**	**529**	**678**	**411**	**267**	**422**	**472**	**550**	**362**	**303**	**-68**	**162**	**90**	**-33**	**28**
Shortgae(+) / Surplus(-) (wrt res)	**-861**	**-121**	**18**	**-89**	**-196**	**-158**	**-58**	**0**	**-38**	**-43**	**-588**	**-318**	**-380**	**-383**	**-311**

1 **100 MW Power from Unit -III of Sipat -I has been started from Aug.'12**
2 **100 MW Power from Vindhayachal-IV has been taken w.e.f. Dec.'12**
3 **150 MW Power from JP Bina has been taken in Oct.'12 and 225 MW from Nov.'12 onwards**
4 **400 MW MTPP Power has been taken w.e.f. Oct.'12**
5 **250 MW Power has been taken from STPP Extn w.e.f. Jan.'13.**
6 **247 MW Power has been taken from SASAN w.e.f. Feb.'13.**
7 **300 MW Power has been taken from LANCO w.e.f. Nov.'12.**

TENTATIVE MAINTENANCE PROGRAMME OF MPPGCL THERMAL UNITS FOR THE YEAR 2012-2013 R-01

22-Sep-2012

STATION	UNIT No.	AOH START	AOH COMP	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	No of Days	REMARKS	
AM -II	3	Deferred														0	A.O.H.	
AM -II	4	Deferred														0		
AMK EXT	5	11-Jul-12	06-Aug													27	A.O.H.	
STP-I	1	23-Apr-12	25-May													33	C.O.H.	
STP-I	2	26-May-12	15-Jun													21	A.O.H.	
STP-I	3	Deferred														0	A.O.H.	
STP-I	4	Deferred														0		
STP-I	5	20-Sep-12	10-Oct													21	A.O.H.	
STP-II	6	Deferred														0		
STP-II	7	23-Aug-12	11-Oct													50	C.O.H.	Econ.LTSH RH APH Repl
STP-III	8	Deferred														0		
STP-III	9	24-Aug-12	27-Sep													35	C.O.H.	Econ.LTSH RH APH Repl
SGTPS - I	1	15-Sep-12	09-Oct													25	A.O.H.	
SGTPS - I	2	Deferred														0		
SGTPS - II	3	Deferred														0		
SGTPS - II	4	7-Jul-12	30-Jul													24	A.O.H.	
SGTPS - III	5	3-Aug-12	10-Sep													39	A.O.H.	IP & LP Module

Capacity under Planned Maintenance	0	21	63	63	63	0	140	420	473	640	753	672	392	0	0	0	0	0	0	0	0	0	0	0			
PLANNED MAINTENANCE %	0	1	2	2	2	0	5	14	16	22	26	23	13	0	0	0	0	0	0	0	0	0	0	0			

THERMAL AVAILABLITYAFTER CONSIDERING FORCED & PARTIAL OUTAGES IN MW INCLUDING AUX. CONSUMPTION	2271	2127	2094	1636	1146	1613	2100	2282	2284	2284	2284	2284
Generation In MU	1635	1582	1508	1217	853	1161	1563	1643	1699	1699	1589	1699
PUF In %	77	73	71	56	39	55	72	78	78	78	78	78

Proposed shut down of transmission elements during 01-10-12 to 30-11-12

S.No	Name of Sub station	Details of Transmission Element	Date of Maintenance	Time	Remark
Nagda					
1	Nagda 400	315MVA BHEL-III	03-Oct-12	08:00hrs-17:00hrs	For Post monsoon maintenance
2	Nagda 400	315MVA BHEL-III	04-Oct-12	08:00hrs-17:00hrs	For Post monsoon maintenance
3	Nagda 400	400KV Tie Main CB Bay-I (ICT-I)	12-Oct-12	08:00hrs-17:00hrs	For Post monsoon maintenance
4	Nagda 400	400KV Main CB Bay-I (ICT-I)	17-Oct-12	08:00hrs-17:00hrs	For Post monsoon maintenance
5	Nagda 400	400KV Tie Main CB Bay-II (ICT-II)	20-Oct-12	08:00hrs-17:00hrs	For Post monsoon maintenance
6	Nagda 400	400KV Tie Main CB Bay-III (ICT-III)	25-Oct-12	08:00hrs-17:00hrs	For Post monsoon maintenance
7	Nagda 400	400KV Main CB Bay-III (ICT-III)	31-Oct-12	08:00hrs-17:00hrs	For Post monsoon maintenance
8	Nagda 400	50MVAR Bus Reactor-I	08-Nov-12	08:00hrs-17:00hrs	For Post monsoon maintenance
9	Nagda 400	400KV Main CB Bay-III	17-Nov-12	08:00hrs-17:00hrs	For Post monsoon maintenance
10	Nagda 400	50MVAR Bus Reactor-I	21-Nov-12	08:00hrs-17:00hrs	For Post monsoon maintenance
11	Nagda 400	400KV Indore Tie Bay	30-Nov-12	08:00hrs-17:00hrs	For Post monsoon maintenance
Indore					
1	Indore 400	400KV Nagda	03-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
2	Indore 400	220KV South Zone-I	04-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
3	Indore 400	220KV South Zone-II	05-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
4	Indore 400	220KV Indore East	08-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance

S.No	Name of Sub station	Details of Transmission Element	Date of Maintenance	Time	Remark
5	Indore 400	220KV Jetpura-I	09-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
6	Indore 400	220KV Jetpura-II	10-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
7	Indore 400	220KV Barwaha-I	12-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
8	Indore 400	220KV Barwaha-II	16-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
9	Indore 400	220KV Badnagar	17-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
10	Indore 400	220KV Pithampur	18-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
11	Indore 400	220KV Dewas	19-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
Jabalpur					
1	Katni 400	315MVA BHEL	04-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
2	Katni 400	315MVA BHEL	05-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
3	Katni 400	400KV Birsingpur	06-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
4	Chhindwara 220	220KV PGCIL-I	11-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
5	Chhindwara 220	220KV PGCIL-II	17-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
6	Seoni 220	220KV PGCIL-I	18-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
7	Seoni 220	220KV PGCIL-II	19-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
8	Pandhurna 220	220KV Kalmeshwar	20-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance
9	Katni 220	220KV PGCIL-I	31-Oct-12	09:00hrs-17:00hrs	For Post monsoon maintenance

S.No	Name of Sub station	Details of Transmission Element	Date of Maintenance	Time	Remark
Sagar					
1	Bina 400	315MVA 400/220/33KV Xmer-I	08-Oct-12	09:00hrs-17:00hrs	Load will be managed through 315MVA transformer II,III & by keeping 200kv Bina IC-I,II off
2	Bina 400	315MVA 400/220/33KV Xmer-I	09-Oct-12	09:00hrs-17:00hrs	Load will be managed through 315MVA transformer II,III & by keeping 200kv Bina IC-I,II off
3	Bina 400	315MVA 400/220/33KV Xmer-I	10-Oct-12	09:00hrs-17:00hrs	Load will be managed through 315MVA transformer II,III & by keeping 200kv Bina IC-I,II off
4	Bina 400	25MVAr Reactor -I	10-Oct-12	09:00hrs-17:00hrs	50MVAr Reactor-I,II Bhopal,50MVAr Bus Reactor,25MVAr Reactor II will be in service
5	Bina 400	315MVA 400/220/33KV Xmer-II	11-Oct-12	09:00hrs-17:00hrs	Load will be managed through 315MVA transformer I,III & by keeping 220kv Bina IC-I,II off
6	Bina 400	315MVA 400/220/33KV Xmer-II	12-Oct-12	09:00hrs-17:00hrs	Load will be managed through 315MVA transformer I,III & by keeping 220kv Bina IC-I,II off
7	Bina 400	315MVA 400/220/33KV Xmer-II	13-Oct-12	09:00hrs-17:00hrs	Load will be managed through 315MVA transformer I,III & by keeping 220kv Bina IC-I,II off
8	Bina 400	25MVAr Reactor -II	13-Oct-12	09:00hrs-17:00hrs	50MVAr Reactor-I Bhopal,50MVAr Bus Reactor,25MVAr Reactor I will be in service
9	Bina 400	315MVA 400/220/33KV Xmer-III	15-Oct-12	09:00hrs-17:00hrs	Load will be managed through 315MVA transformer I,II & by keeping 220kv Bina IC-I,II off
10	Bina 400	315MVA 400/220/33KV Xmer-III	16-Oct-12	09:00hrs-17:00hrs	Load will be managed through 315MVA transformer I,II & by keeping 220kv Bina IC-I,II off
11	Bina 400	315MVA 400/220/33KV Xmer-III	17-Oct-12	09:00hrs-17:00hrs	Load will be managed through 315MVA transformer I,II & by keeping 220kv Bina IC-I,II off
12	Bina 400	50MVAr 400KV Bus Reactor	29-Oct-12	09:00hrs-17:00hrs	50MVAr Reactor-I,II Bhopal,25MVAr Reactor I,II will be in service
13	Bina 400	50MVArREACTOR 400KV Bhopal -I	30-Oct-12	09:00hrs-17:00hrs	50MVAr Reactor-II Bhopal,50MVAr Bus Reactor,25MVAr Reactor I,II will be in service
14	Bina 400	50MVArREACTOR 400KV Bhopal -II	31-Oct-12	09:00hrs-17:00hrs	50MVAr Reactor-I Bhopal,50MVAr Bus Reactor,25MVAr Reactor I,II will be in service
15	Bina 400	400KV Bina-Bhopal-I	02-Nov-12	09:00hrs-17:00hrs	Load will be managed through 400kv Bina Bhopal-II
16	Bina 400	400KV Bina-Bhopal-I	03-Nov-12	09:00hrs-17:00hrs	Load will be managed through 400kv Bina Bhopal-II
17	Bina 400	400KV Bina-Bhopal-II	05-Nov-12	09:00hrs-17:00hrs	Load will be managed through 400kv Bina Bhopal-I

S.No	Name of Sub station	Details of Transmission Element	Date of Maintenance	Time	Remark
18	Bina 400	400KV Bina-Bhopal-II	06-Nov-12	09:00hrs-17:00hrs	Load will be managed through 400kv Bina Bhopal-I
19	Bina 400	400KV MAIN BUS -I	07-Nov-12	09:00hrs-17:00hrs	Load will be managed by 400kv Main Bus -II
20	Bina 400	400KV MAIN BUS -II	29-Nov-12	09:00hrs-17:00hrs	Load will be managed by 400kv Main Bus -I
Bhopal					
1	Bhopal 400	315MVA Transformer-III	03-Oct-12	09:00hrs to 17:00hrs	For maintenance work
2	Bhopal 400	220KV ICT-III	04-Oct-12	09:00hrs to 17:00hrs	For maintenance work
3	Bhopal 400	315MVA Transformer-III & Tie Bay	05-Oct-12	09:00hrs to 17:00hrs	For maintenance work
4	Bhopal 400	220KV Vidisha	06-Oct-12	09:00hrs to 17:00hrs	For maintenance work
5	Bhopal 400	220KV Bina	08-Oct-12	09:00hrs to 17:00hrs	For maintenance work
6	Bhopal 400	220KV Shujalpur-II	09-Oct-12	09:00hrs to 17:00hrs	For maintenance work
7	Bhopal 400	400KV Itarsi-I	10-Oct-12	09:00hrs to 17:00hrs	For maintenance work
8	Bhopal 400	400KV Itarsi-I	11-Oct-12	09:00hrs to 17:00hrs	For maintenance work
9	Bhopal 400	400KV Itarsi-II	12-Oct-12	09:00hrs to 17:00hrs	For maintenance work
10	Bhopal 400	400KV Itarsi-II	15-Oct-12	09:00hrs to 17:00hrs	For maintenance work
11	Bhopal 400	220KV Bairagarh-I	16-Oct-12	09:00hrs to 17:00hrs	For maintenance work
12	Bhopal 400	220KV Bairagarh-II	17-Oct-12	09:00hrs to 17:00hrs	For maintenance work
13	Bhopal 400	220KV Transfer Bus	18-Oct-12	09:00hrs to 17:00hrs	For maintenance work
14	Bhopal 400	220KV Bus Tie	19-Oct-12	09:00hrs to 17:00hrs	For maintenance work
15	Bhopal 400	220KV Bus-I	20-Oct-12	09:00hrs to 17:00hrs	For maintenance work
16	Bhopal 400	220KV Bus-II	22-Oct-12	09:00hrs to 17:00hrs	For maintenance work

S.No	Name of Sub station	Details of Transmission Element	Date of Maintenance	Time	Remark
17	Bhopal 400	220KV Bhopal Inter connecter-I	23-Oct-12	09:00hrs to 17:00hrs	For maintenance work
18	Bhopal 400	220KV Bhopal Inter connecter-II	27-Oct-12	09:00hrs to 17:00hrs	For maintenance work
19	Bhopal 400	220KV Ashta-I	29-Oct-12	09:00hrs to 17:00hrs	For maintenance work
20	Bhopal 400	220KV Ashta-II	30-Oct-12	09:00hrs to 17:00hrs	For maintenance work
21	Bhopal 400	400KV Bina-I	02-Nov-12	09:00hrs to 17:00hrs	For maintenance work
22	Bhopal 400	400KV Bina-I	03-Nov-12	09:00hrs to 17:00hrs	For maintenance work
23	Bhopal 400	400KV Bina-II	05-Nov-12	09:00hrs to 17:00hrs	For maintenance work
24	Bhopal 400	400KV Bina-II	06-Nov-12	09:00hrs to 17:00hrs	For maintenance work

Unitwise / Stationwise Genration in MU

A. Thermal

Stn. Name	UNIT No.	Capacity MW	Jul-12	Aug-12
AMARKANTAK	3	120	54.22	48.67
	4	120	50.83	51.85
	PH II	**240**	**105.05**	**100.52**
	PH III	**210**	**44.00**	**109.69**
	TOT	**450**	**149.05**	**210.21**
SATPURA	1	62.5	25.81	18.01
	2	62.5	28.99	30.85
	3	62.5	20.41	22.10
	4	62.5	20.95	19.30
	5	62.5	21.08	4.69
	PH I	**312.5**	**117.23**	**94.95**
	6	200	75.88	52.96
	7	210	63.13	38.72
	PH II	**410**	**139.005**	**91.68**
	8	210	77.135	39.82
	9	210	69.645	49.62
	PH III	**420**	**146.78**	**89.44**
	TOT	**1142.5**	**403.02**	**276.06**
SANJAY GANDHI	1	210	98.147	105.34
	2	210	91.53	61.05
	PH I	**420**	**189.67**	**166.40**
	3	210	98.11	72.19
	4	210	24.58	106.67
	PH II	**420**	**122.69**	**178.86**
	PH III	**500**	352.48	21.30
	TOT	**1340**	**664.84**	**366.56**
MPPGCL THERMAL		**2932.5**	**1216.91**	**852.83**

AMARKANTAK POWER HOUSE-I RETIRED FROM SERVICE WEF 01.04.2009

B. Hydel

Station Name	Capacity MW	Jul-12	Aug-12
GANDHISAGAR	**115.0**	0.04	0.06
R.P.SAGAR	**172.0**	1.29	0.02
J.SAGAR	**99.0**	1.46	16.51
CHAMBAL	**386.0**	**2.78**	**16.59**
M.P.CHAMBAL	**193.0**	**1.39**	**8.30**
PENCH	**160.0**	5.09	7.17
M.P.PENCH	**107.0**	**3.39**	**4.78**
BARGI	**90.0**	20.04	49.81
TONS	**315.0**	163.44	151.65
BIRSINGHPUR	**20.0**	6.67	5.19
B.SGR(DEOLONDH)	**60.0**	30.67	40.31
B.SGR(SILPARA)	**30.0**	9.28	4.68
RAJGHAT	**45.0**	0.00	8.22
M.P.RAJGHAT	**22.5**	**0.00**	**4.11**
B.SGR(JINHA)	**20.0**	9.96	5.96
MADIKHEDA	**60.0**	2.88	22.60
TOTAL HYDEL	**1186.0**	**250.81**	**312.2**
MPPGCL Hydel	**915.0**	**248.06**	**295.7**
MPSEB HYDEL Share	**917.5**	**247.72**	**297.4**

C. NHDC (Ex-Bus)

Station Name	Capacity MW	Jul-12	Aug-12
Indira Sagar Hydel Project	1000	100.874	477.114
Omkareshwar Hydel Project	520	72.903	193.789

MP SUPPLY EXCLUDING AUXILIARY CONS.
in Million Units

S.No.	Particulars	Jul-12	Aug-12
1	MPSEB Thermal Availability	1052.29	721.03
2	MPSEB Hydel Availability	245.02	294.19
3	Indira Sagar	101.11	478.81
4	Omkareshwar	72.90	193.79
5	Schedule / Drawal From Central Sector	1549.56	1381.66
6	Schedule of DVC	219.03	182.00
7	Schedule of Sujen	35.78	30.45
8	Sardar Sarovar	60.66	451.13
9	Additional Power Purchase	0.00	0.00
10	Sale of Power	-38.44	-392.06
11	Banking of Power	-335.65	-390.98
12	Energy Exchange	0.00	0.00
13	Unschedule Interchange	-102.89	-73.51
14	IPP SCH (BLA+JP Bina)	5.55	11.27
14	Other Imp / Exp	140.00	135.76
15	Total MPSEB Supply excl. Aux. Cons.	3004.91	3023.54
16	Average Supply per Day	96.93	97.53
17	Maximum Daily M.P. Supply	100.15	103.63
18	Minimum Daily M.P. Supply	82.97	81.16
19	Registered Demand : MW	5368	5729
24	Unrestricted Demand : MW	6097	5784

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- July 2012

FIGURES IN MW

Hrs.	FREQ.	Own Generation								Schedule from											Tot Avl.	Act. Drl	UI	Intra State STOA	DEMAND MET	Load Shedding			REST. DEMAND	UNREST. DEMAND
		THER. Incl Aux	THER. Excl Aux	HYD.	ISP	OSP	BLA Power	Injection from STOA	Total	CSS	DVC ER	Suge n	SSP	SEZ	Bankin g	Sale	Pur	Exch ange	STO A	Rihand+ Matat	Total						SCH	UNSCH	TOTAL		
1:00	49.70	1660	1510	355	298	149	8	0	2320	2024	293	46	16	10	-532	-30	7	0	0	7	1843	4155	1801	-42	-2	4119	285	95	380	4251	4536
2:00	49.75	1661	1511	347	236	132	8	1	2236	2019	293	46	16	10	-532	-28	19	0	-1	7	1849	4077	1797	-52	-2	4031	286	96	381	4157	4443
3:00	49.77	1658	1509	340	188	94	8	-3	2135	2024	292	46	16	10	-532	-20	36	0	3	7	1883	4010	1828	-54	-2	3961	283	82	365	4071	4354
4:00	49.85	1660	1510	321	130	72	8	-3	2038	2020	289	46	16	10	-532	-20	44	0	3	7	1884	3914	1740	-144	-2	3777	383	83	466	3877	4260
5:00	49.72	1648	1500	300	102	78	8	-1	1986	2000	292	46	16	10	-532	-25	28	0	1	7	1845	3823	1690	-154	-2	3675	353	52	405	3758	4111
6:00	49.87	1644	1496	292	43	80	8	-1	1917	1980	292	46	16	10	-532	-53	16	0	1	7	1784	3693	1617	-166	-2	3532	345	45	390	3591	3936
7:00	49.83	1647	1499	270	16	73	8	-3	1863	1993	292	46	16	10	-479	-72	5	0	3	7	1821	3676	1578	-243	-2	3439	195	16	211	3474	3669
8:00	49.96	1649	1501	271	10	75	8	-6	1858	1988	291	46	16	10	-479	-35	3	0	6	7	1854	3705	1509	-346	-2	3365	165	29	195	3399	3565
9:00	49.75	1637	1490	266	14	77	8	-5	1849	1993	286	46	16	10	-479	-65	3	0	5	7	1822	3664	1551	-272	-2	3399	148	21	169	3446	3594
10:00	49.79	1609	1464	259	45	80	8	-3	1853	1984	290	46	44	10	-508	-120	5	0	3	7	1762	3607	1508	-254	-2	3358	168	42	210	3422	3590
11:00	49.72	1604	1459	271	54	80	8	6	1878	1997	286	46	50	10	-508	-95	6	0	-6	7	1793	3664	1652	-141	-2	3528	282	33	315	3591	3873
12:00	49.78	1596	1453	293	53	63	7	10	1879	1988	288	46	54	10	-508	-103	4	0	-10	7	1777	3649	1641	-135	-2	3519	331	55	386	3597	3928
13:00	49.82	1593	1450	298	54	56	7	13	1878	1990	287	46	57	10	-462	-95	0	0	-13	7	1826	3697	1709	-117	-2	3585	409	51	460	3657	4066
14:00	49.70	1601	1457	302	49	56	6	14	1885	1985	278	46	57	10	-446	-66	3	0	-14	7	1860	3738	1754	-107	-2	3637	374	57	431	3727	4100
15:00	49.64	1606	1462	299	49	55	7	14	1885	1984	278	46	41	10	-446	-56	3	0	-14	7	1854	3733	1742	-112	-2	3625	314	95	410	3760	4075
16:00	49.75	1594	1450	308	50	52	7	14	1881	1998	278	46	27	10	-446	-46	3	0	-14	7	1863	3736	1681	-182	-2	3560	204	137	342	3724	3929
17:00	49.85	1605	1460	290	33	50	8	15	1856	1997	277	46	27	10	-446	-79	0	0	-15	7	1823	3672	1628	-195	-2	3482	321	63	383	3561	3882
18:00	49.92	1616	1470	297	62	53	8	8	1899	2001	272	46	27	10	-446	-80	4	0	-8	7	1832	3723	1728	-104	-2	3625	311	43	353	3677	3988
19:00	49.80	1636	1489	355	168	102	8	8	2130	1982	274	46	262	10	-337	-79	5	0	-8	7	2163	4285	2088	-74	-2	4217	287	17	303	4259	4545
20:00	49.63	1661	1511	444	358	177	8	15	2514	2019	284	47	345	10	-336	-30	6	0	-15	7	2338	4844	2246	-91	-2	4758	355	87	442	4898	5252
21:00	49.64	1670	1519	476	394	209	8	17	2624	2023	283	47	360	10	-336	-20	0	0	-17	7	2357	4973	2171	-185	-2	4793	374	111	485	4957	5330
22:00	49.66	1681	1530	457	369	207	8	18	2588	2020	278	47	336	10	-336	-23	0	0	-18	7	2321	4902	2160	-161	-2	4747	333	136	469	4932	5264
23:00	49.63	1643	1495	412	342	196	8	18	2471	2040	279	47	100	10	-336	-20	0	0	-18	7	2109	4572	2024	-85	-2	4493	408	123	531	4666	5074
24:00	49.80	1645	1497	376	331	183	8	17	2411	2025	277	47	14	10	-507	0	0	0	-17	7	1856	4260	1834	-22	-2	4244	413	194	607	4463	4875
Avg.	49.76	1634	1487	329	144	102	7	7	2076	2003	284	46	81	10	-460	-52	8	0	-7	7	1915	3990	1778	-143	-2	3853	305	73	379	3955	4260
00 TO 06 HRS.	49.78	1655	1506	326	166	101	8	-1	2105	2011	292	46	16	10	-532	-29	25	0	1	7	1848	3945	1746	-102	-2	3849	322	75	398	3951	4273
06 TO 12 HRS.	49.81	1624	1478	272	32	74	8	0	1863	1990	289	46	33	10	-493	-82	4	0	0	7	1805	3661	1573	-232	-2	3435	215	33	247	3488	3703
12 TO 18 HRS.	49.78	1602	1458	299	49	54	7	13	1881	1993	278	46	39	10	-449	-70	2	0	-13	7	1843	3717	1707	-136	-2	3586	322	74	396	3684	4007
06TO 18 HRS.	49.79	1613	1468	285	41	64	7	6	1872	1992	283	46	36	10	-471	-76	3	0	-6	7	1824	3689	1640	-184	-2	3510	268	53	322	3586	3855
18 TO 24 HRS.	49.69	1656	1507	420	327	179	8	16	2456	2018	279	47	236	10	-365	-28	2	0	-16	7	2190	4639	2087	-103	-2	4542	361	111	473	4696	5057

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- August 2012

FIGURES IN MW

Hrs.	FREQ.	Own Generation								Schedule from											Tot Avl.	Act. Drl	UI	Intra State STOA	DEMAND MET	Load Shedding			REST. DEMAND	UNREST. DEMAND
		THER. Incl Aux	THER. Excl Aux	HYD.	ISP	OSP	BLA Power	Injection from STOA	Total	CSS	DVC ER	Suge n	SSP	SEZ	Bankin g	Sale	Pur	Exch ange	STO A	Rihand+ Matat	Total						SCH	UNSCH	TOTAL		
1:00	50.08	1161	1057	407	725	291	10	-14	2476	1711	207	44	611	10	-491	-415	0	0	14	14	1704	4170	1730	26	1	4207	25	0	25	4197	4222
2:00	50.06	1153	1049	382	712	281	10	-18	2415	1704	214	44	607	10	-475	-395	0	0	18	14	1741	4145	1711	-30	1	4127	8	0	8	4120	4128
3:00	50.05	1143	1040	369	676	281	10	-19	2356	1704	214	44	598	10	-477	-383	0	0	19	14	1743	4089	1706	-37	1	4063	2	0	2	4057	4059
4:00	50.07	1136	1033	360	620	271	10	-20	2276	1699	210	44	592	10	-480	-363	0	0	20	14	1746	4011	1728	-17	1	4005	2	0	2	3996	3998
5:00	49.96	1134	1032	347	580	257	10	-24	2202	1698	216	44	588	10	-493	-363	0	0	24	14	1738	3930	1657	-81	1	3860	11	1	12	3865	3876
6:00	50.04	1140	1038	351	565	247	10	-25	2186	1701	216	44	585	10	-515	-406	0	0	25	14	1675	3851	1502	-173	1	3689	11	6	17	3690	3701
7:00	50.08	1140	1038	347	528	224	10	-27	2120	1693	209	44	575	9	-591	-459	0	0	27	14	1522	3632	1287	-235	1	3408	8	0	8	3399	3407
8:00	50.14	1132	1030	344	527	215	9	-28	2097	1702	209	44	573	9	-601	-489	0	0	28	14	1488	3576	1302	-186	1	3400	0	0	0	3386	3386
9:00	49.99	1123	1022	363	532	223	9	-21	2129	1709	214	44	581	9	-604	-568	0	0	21	14	1421	3540	1313	-107	1	3444	5	5	10	3450	3455
10:00	49.97	1122	1021	374	567	239	9	-15	2196	1716	214	44	586	9	-624	-678	0	0	15	14	1296	3482	1176	-120	1	3373	12	7	20	3383	3395
11:00	49.94	1122	1021	390	620	255	10	-3	2294	1716	213	44	598	9	-599	-778	0	0	3	14	1221	3505	1222	1	1	3517	27	11	37	3533	3560
12:00	50.03	1119	1018	388	641	266	10	0	2324	1709	209	44	592	9	-606	-790	0	0	0	14	1180	3494	1144	-37	1	3468	32	11	43	3476	3508
13:00	50.16	1095	997	369	625	264	10	-2	2262	1697	205	44	588	9	-525	-749	0	0	2	14	1285	3537	1195	-90	1	3458	37	4	41	3446	3483
14:00	50.04	1112	1012	374	608	258	10	-4	2259	1700	210	44	575	9	-532	-755	0	0	4	14	1269	3518	1194	-75	1	3454	34	8	42	3458	3492
15:00	50.02	1117	1016	363	608	262	10	-3	2256	1701	199	44	581	9	-521	-762	0	0	3	14	1269	3515	1207	-62	1	3464	24	8	31	3469	3493
16:00	50.11	1113	1013	372	604	261	11	-2	2258	1702	207	44	577	9	-521	-758	0	0	2	14	1275	3523	1207	-68	1	3466	13	12	25	3467	3480
17:00	50.08	1126	1025	362	576	251	11	-5	2219	1707	205	44	589	9	-508	-730	0	0	5	14	1336	3545	1188	-149	1	3408	19	0	19	3399	3419
18:00	50.09	1136	1034	355	558	240	11	-8	2191	1834	206	44	585	10	-527	-670	0	0	8	14	1504	3684	1442	-63	1	3633	9	2	11	3625	3634
19:00	49.85	1161	1057	434	654	268	11	7	2429	1968	206	44	619	10	-458	-538	0	0	-7	14	1858	4277	1980	122	1	4410	18	3	21	4434	4452
20:00	49.91	1183	1076	512	771	298	11	21	2689	2068	343	46	639	10	-495	-316	0	0	-21	14	2288	4966	2254	-34	1	4944	55	23	79	4981	5037
21:00	49.92	1194	1086	518	818	308	11	21	2763	2075	344	46	657	10	-495	-275	0	0	-21	14	2354	5106	2277	-77	1	5041	58	15	73	5067	5125
22:00	49.94	1194	1086	493	788	302	11	23	2704	2076	341	46	651	10	-495	-294	0	0	-23	14	2325	5019	2190	-136	1	4895	45	28	73	4931	4976
23:00	49.98	1181	1075	448	760	297	11	17	2607	2092	341	46	644	10	-495	-342	0	0	-17	14	2292	4888	2044	-248	1	4651	39	17	56	4670	4710
24:00	50.05	1169	1063	411	747	292	11	8	2532	1874	338	46	641	9	-483	-413	0	0	-8	14	2016	4538	1910	-107	1	4443	25	13	38	4450	4475
Avg.	50.02	1142	1039	393	642	265	10	-6	2343	1790	237	45	601	10	-525	-529	0	0	6	14	1634	3981	1565	-83	1	3909	22	7	29	3915	3936
00 TO 06 HRS.	50.04	1144	1041	370	646	271	10	-20	2319	1703	213	44	597	10	-489	-387	0	0	20	14	1724	4033	1672	-52	1	3992	10	1	11	3988	3997
06 TO 12 HRS.	50.02	1126	1025	368	569	237	10	-15	2193	1707	212	44	584	9	-604	-627	0	0	15	14	1355	3538	1240	-114	1	3435	14	6	20	3438	3452
12 TO 18 HRS.	50.08	1117	1016	366	597	256	10	-4	2241	1723	205	44	583	9	-522	-737	0	0	4	14	1323	3554	1239	-84	1	3481	23	6	28	3477	3500
06TO 18 HRS.	50.05	1122	1021	367	583	247	10	-10	2217	1715	208	44	583	9	-563	-682	0	0	10	14	1339	3546	1240	-99	1	3458	18	6	24	3458	3476
18 TO 24 HRS.	49.94	1180	1074	469	756	294	11	16	2621	2025	319	45	642	10	-487	-363	0	0	-16	14	2189	4799	2109	-80	1	4731	40	17	57	4756	4796

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month :- July 2012

FIGURES IN MW

Hrs.	FREQ.	EZONE							CZONE							WZONE						
		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
1:00	49.70	1348	1471	123	58	64	1548	1606	1337	1371	34	119	26	1410	1528	1517	1276	-240	109	5	1293	1401
2:00	49.75	1327	1454	127	58	57	1522	1580	1318	1332	14	119	35	1377	1496	1471	1244	-227	109	4	1258	1367
3:00	49.77	1314	1452	138	56	42	1504	1560	1306	1306	0	119	33	1349	1467	1439	1203	-236	108	7	1219	1327
4:00	49.85	1294	1404	109	55	46	1456	1511	1286	1264	-22	112	36	1306	1418	1399	1106	-293	216	2	1113	1328
5:00	49.72	1273	1358	85	34	25	1394	1428	1263	1233	-30	112	26	1269	1381	1365	1078	-287	207	2	1088	1295
6:00	49.87	1230	1266	35	34	18	1289	1323	1219	1164	-55	112	26	1195	1307	1297	1096	-201	200	0	1100	1300
7:00	49.83	1232	1191	-41	26	7	1204	1230	1220	1150	-70	44	9	1165	1209	1289	1091	-198	125	1	1098	1223
8:00	49.96	1238	1154	-84	15	3	1159	1174	1227	1114	-114	38	21	1136	1175	1296	1091	-205	112	5	1098	1210
9:00	49.75	1227	1132	-95	26	0	1141	1167	1215	1061	-153	33	12	1082	1115	1285	1205	-80	89	9	1223	1312
10:00	49.79	1206	1143	-63	36	4	1154	1191	1188	1067	-121	34	25	1099	1133	1265	1148	-117	98	13	1169	1267
11:00	49.72	1217	1166	-50	64	6	1183	1247	1199	1140	-59	72	13	1162	1234	1283	1222	-61	146	14	1246	1392
12:00	49.78	1214	1166	-48	82	7	1180	1263	1196	1174	-21	95	19	1201	1296	1283	1179	-104	154	29	1216	1370
13:00	49.82	1231	1208	-23	89	13	1227	1316	1212	1231	19	88	31	1270	1357	1303	1146	-157	233	7	1160	1393
14:00	49.70	1232	1229	-2	59	21	1262	1321	1215	1242	26	95	26	1279	1375	1302	1165	-136	220	9	1185	1405
15:00	49.64	1226	1259	34	29	23	1296	1326	1212	1215	3	65	60	1288	1354	1297	1151	-146	220	12	1175	1395
16:00	49.75	1231	1216	-15	39	39	1264	1303	1180	1169	-12	58	60	1237	1296	1302	1175	-127	107	38	1223	1330
17:00	49.85	1212	1178	-35	22	29	1212	1234	1199	1107	-92	87	25	1137	1224	1276	1198	-78	212	8	1212	1423
18:00	49.92	1232	1224	-8	19	16	1243	1262	1216	1173	-43	79	18	1194	1272	1301	1228	-73	213	9	1240	1453
19:00	49.80	1391	1418	27	32	8	1434	1466	1363	1376	13	75	8	1392	1467	1530	1423	-107	180	1	1433	1612
20:00	49.63	1536	1664	128	74	38	1720	1794	1508	1580	72	75	42	1640	1715	1775	1514	-262	206	7	1538	1743
21:00	49.64	1572	1712	140	103	41	1772	1875	1548	1579	31	67	58	1654	1722	1848	1502	-346	204	11	1530	1733
22:00	49.66	1554	1713	159	52	70	1800	1853	1533	1545	12	94	55	1616	1711	1820	1488	-331	186	11	1515	1701
23:00	49.63	1456	1595	139	111	48	1661	1772	1444	1491	47	94	64	1572	1666	1678	1407	-271	203	11	1434	1637
24:00	49.80	1361	1487	126	117	81	1576	1693	1349	1409	60	93	97	1514	1607	1544	1348	-196	203	17	1373	1575
Avg.	**49.76**	**1306**	**1344**	**38**	**54**	**29**	**1383**	**1437**	**1290**	**1271**	**-19**	**82**	**34**	**1314**	**1397**	**1424**	**1237**	**-187**	**169**	**10**	**1256**	**1425**
00 TO 06 HRS.	49.78	1298	1401	103	49	42	1452	1501	1288	1278	-10	115	30	1317	1433	1415	1167	-247	158	3	1178	1336
06 TO 12 HRS.	49.81	1222	1159	-63	41	5	1170	1212	1207	1118	-90	53	16	1141	1194	1284	1156	-128	121	12	1175	1296
12 TO 18 HRS.	49.78	1227	1219	-8	43	24	1251	1294	1206	1189	-16	79	37	1234	1313	1297	1177	-119	201	14	1199	1400
06TO 18 HRS.	49.79	1225	1189	-36	42	14	1211	1253	1207	1154	-53	66	27	1188	1253	1290	1167	-124	161	13	1187	1348
18 TO 24 HRS.	49.69	1478	1598	120	82	47	1661	1742	1458	1497	39	83	54	1565	1648	1699	1447	-252	197	10	1470	1667

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month :- August 2012

FIGURES IN MW

Hrs.	FREQ.	EZONE							CZONE							WZONE						
		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
1:00	50.08	1314	1498	184	9	0	1495	1503	1245	1331	86	6	0	1328	1334	1678	1378	-300	10	0	1375	1385
2:00	50.06	1312	1472	160	8	0	1469	1477	1242	1298	56	0	0	1295	1295	1667	1357	-310	0	0	1355	1355
3:00	50.05	1297	1463	166	2	0	1461	1463	1225	1270	45	0	0	1268	1268	1637	1330	-307	0	0	1328	1328
4:00	50.07	1283	1419	136	2	0	1416	1418	1209	1262	53	0	0	1259	1259	1609	1324	-285	0	0	1321	1321
5:00	49.96	1261	1316	55	1	1	1318	1320	1186	1245	59	2	0	1247	1249	1564	1299	-265	7	0	1300	1308
6:00	50.04	1236	1169	-67	1	5	1173	1174	1161	1212	51	2	1	1211	1213	1529	1308	-221	7	0	1306	1313
7:00	50.08	1180	1061	-119	1	0	1058	1059	1105	1122	17	2	0	1119	1121	1448	1225	-223	5	0	1222	1227
8:00	50.14	1153	1044	-109	0	0	1040	1040	1077	1099	22	0	0	1095	1095	1411	1256	-155	0	0	1251	1251
9:00	49.99	1143	1063	-79	1	0	1064	1065	1063	1059	-3	0	4	1064	1064	1398	1321	-77	4	1	1322	1326
10:00	49.97	1127	1080	-48	2	0	1080	1083	1042	1033	-9	0	7	1041	1041	1387	1260	-127	10	0	1261	1271
11:00	49.94	1119	1153	34	6	0	1154	1161	1033	1078	44	5	8	1088	1092	1398	1287	-112	16	2	1291	1307
12:00	50.03	1127	1173	46	10	1	1173	1183	1041	1077	37	6	6	1083	1089	1417	1218	-199	16	4	1221	1236
13:00	50.16	1136	1202	66	10	1	1198	1208	1055	1097	42	2	2	1094	1096	1429	1159	-269	24	1	1155	1179
14:00	50.04	1130	1207	77	8	3	1209	1217	1046	1093	47	2	4	1096	1098	1412	1154	-258	24	0	1153	1178
15:00	50.02	1125	1205	80	5	3	1208	1213	1042	1072	29	2	4	1075	1077	1407	1187	-220	16	0	1187	1203
16:00	50.11	1124	1177	53	3	3	1176	1179	1042	1066	23	2	4	1066	1068	1410	1224	-186	8	5	1225	1233
17:00	50.08	1132	1108	-24	2	0	1105	1107	1050	1034	-17	4	0	1031	1035	1406	1266	-140	13	0	1263	1276
18:00	50.09	1190	1136	-54	1	2	1135	1136	1099	1153	54	0	0	1149	1149	1457	1344	-113	8	0	1341	1349
19:00	49.85	1359	1420	60	4	3	1430	1433	1264	1408	145	0	0	1415	1415	1689	1582	-106	14	0	1590	1604
20:00	49.91	1552	1706	153	19	8	1719	1738	1455	1564	109	0	13	1582	1582	1959	1674	-285	36	2	1681	1717
21:00	49.92	1592	1783	190	22	8	1795	1817	1496	1574	78	0	6	1584	1584	2025	1684	-341	36	1	1689	1725
22:00	49.94	1572	1731	159	20	12	1746	1766	1474	1519	45	0	14	1536	1536	1990	1645	-345	25	2	1650	1675
23:00	49.98	1542	1629	87	14	6	1636	1650	1438	1463	25	0	11	1474	1474	1935	1560	-376	25	0	1560	1586
24:00	50.05	1425	1553	128	6	5	1556	1562	1335	1399	64	0	8	1404	1404	1801	1491	-310	19	0	1489	1508
Avg.	**50.02**	**1268**	**1324**	**56**	**7**	**3**	**1326**	**1332**	**1184**	**1230**	**46**	**2**	**4**	**1233**	**1235**	**1586**	**1356**	**-230**	**14**	**1**	**1356**	**1369**
00 TO 06 HRS.	50.04	1284	1389	106	4	1	1389	1392	1211	1270	58	2	0	1268	1270	1614	1333	-281	4	0	1331	1335
06 TO 12 HRS.	50.02	1141	1096	-46	3	0	1095	1098	1060	1078	18	2	4	1081	1084	1410	1261	-149	8	1	1261	1270
12 TO 18 HRS.	50.08	1140	1173	33	5	2	1172	1176	1056	1086	30	2	2	1085	1087	1420	1222	-198	16	1	1220	1236
06TO 18 HRS.	50.05	1140	1134	-6	4	1	1133	1137	1058	1082	24	2	3	1083	1085	1415	1242	-173	12	1	1241	1253
18 TO 24 HRS.	49.94	1507	1637	130	14	7	1647	1661	1410	1488	77	0	9	1499	1499	1900	1606	-294	26	1	1610	1636

ANNEXURE-5

System Disturbance / System Incidence
July 2012 to August 2012

1. System Disturbance on 29.07.12 at Omkareshwar HPS : On dated 29.07.12 at OSP at 03.59 Hrs and 03.02 hrs, 220 KV OSP-Burwaha and OSP-Julwaniya tripped on O/V at OSP end. At 04.13 Hrs, remaining three lines also tripped on O/V from OSP end as given below:-

1. 220 KV OSP-Nimrani
2. 220 KV OSP-Chhegaon
3. 220 KV OSP-Khandwa

On account of above mentioned tripping, all running machines tripped and there was a generation loss of 335 MW. All machines were synchronized as per requirement and system was normalized in due course of time. It is understood that O/V protection on MPPTCL lines is not provided. This should be discussed in OCCM and get finalized to keep the protection in service or not.

2. **System Disturbance on 30.07.12 at Northern Region and Gwalior Area :-** On dated 30.07.12 at around 02.34 Hrs, 220 KV Gwalior (PG) – Malanpur-I tripped on over load. Prior to tripping load on this Ckt. was 280 MW. It is expected that Auraiya hasw drawn more power from Malanpur & Mehgaon which caused tripping of 220 KV Gwalior (PG) – Malanpur-I line. Prior to tripping, 400 KV Bina-Gwalior II, Gwalior-Agra II was under S/D. 220 KV Gwalior (PG)-Mehgaon I and 220 KV Gwalior (PG)-Malanpur II were also under S/D.

220 KV Malanpur-Auraiya, Malanpur-Mehgaon and 220 KV Mahgaon-Auraiya supply failed from remote. WRLDC intimated that part & partial NR grid collapsed. Shystem frequency raised from 50.48 to 50.92 Hz.

3. System Disturbance on 31.07.12 at Northern , Eastern Region and Gwalior Area of MP : Prior to grid disturbance on 31.07.2012, total load on 220 KV Bina-Gwalior Ckt. I & II was 330 MW. 220 KV Badod-Modak & Badod-Kota lines loadat 11.00 Hrs was 113 & 103 MW respectively, which started rising at 12.57 Hrs. The line loading of Badod-Kota and Badod-Modak was around 290 MW each. At 12.58 Hrs 220 KV Badod-Kota and Badod-Modak lines tripped on overload. Line loading on 220 KV Bina-Gwalior suddenly increased to 447 MW. The power flow on 220 KV Gwalior (MP) – Gwalior (PG) lines was 188 MW at 12.58 Hrs which got reversed to 180 MW at 13.00 Hrs. This resulted in tripping of 220 KV Bina-Gwalior Ckt. I & II, 220 KV Seopur-Sabalgarh Ckt.I, 132 KV Pichhore-Chanderi and Pichhore-Shivpuri on overload. At around 13.00 Hrs grid disturbance took place. WRLDC intimated that part & partial of Northern, North-Eastern & Eastern grid collapsed.

On account of this disturbance, Gwalior, Sabalgarh, Seopur, Vijaypur, Motijheel, Tighra, Datiya, Dabra, Karera, Pichhore, Banmore, Morena area of MP were affected and interruption occurred for 15 minutes. Total load loss was about 450 MW in MP (Gwalior area).

4. System System Disturbance on 28.08.12 at Omkareshwar HPS : On dated 28.08.12 at around 13.10 Hrs, all running machines at OSP tripped simultaneously. There was a generation loss of 364 MW due to this tripping. Further it was reported that 220 KV OSP-Khandwa line tripped from both end on Y-Phase fault Zone-I indication.

As per the report received from OSP, it appears from the SER/DR print, fault on line was cleared timely, however 7 running machines tripped. Thereafter machines were synchronized as per system requirement in due course of time.

Annexure-7.1

PROCEDURE FOR ISSUING CODE FOR OPERATION OF TRANSMISSION ELEMENTS IN THE STATE GRID

The state Load Despatch Centre is an apex body to ensure integrated operation of the State Grid. The SLDC functions in accordance with the provisions made in the IE Act 2003, IEGC, MPEGC and other State/Central Regulations.

As per provision of IEGC/MPEGC, no part of the State Grid shall be deliberately isolated from the rest of the State Grid except (i) under an emergency and conditions in which such isolation would prevent a total grid collapse and/ or would enable early restoration of power supply; (ii) for safety of human life; (iii) when serious damage to a costly equipment is imminent and such isolation would prevent it; (iv) when such isolation is specifically instructed by SLDC. Further, no important element of the State Grid shall be opened or removed from the service at any time, except when specifically instructed by SLDC or with specific & prior clearance of SLDC. In case of opening / removal of any important element of the grid under emergency situation, the same shall be communicated to SLDC at the earliest possible time after the event.

Any tripping, whether manual or automatic, any of the grid elements of State Grid shall be precisely intimated by the concerned generating station / sub-station as soon as possible, say within **10 minutes** of event. The reason (to the extent determined) and the likely time of restoration shall also be intimated.

In order to achieve objectives described in the IEGC/ MPEGC and detailed above, all the operation of transmission elements (opening / closing) shall be performed by the site officials only after receiving specific code from SLDC. The details of transmission elements which are to be operated only after receiving code from SLDC are as follows:-

(1) 400 KV, 220 KV and 132 KV lines.
(2) 400 / 220 KV, 220 / 132 KV, 220 / 33 KV and 132/33 KV transformers.
(3) EHV Buses of generating stations & sub-stations.
(4) Bus reactors and line reactors, condensers connected at EHV network.
(5) Online maintenance of EHV lines.
(6) Main breaker, bus coupler, tie-breaker and isolator.
(7) Online testing / checking of protection system.

(8) Any equipment connected with EHV grid.

The procedure for issuing code for operation of transmission element in the State Grid shall be follows:-

(1) Code issued by WRLDC for the operation of Inter State transmission lines shall prevail and SLDC convey the same code to the generating station / sub-station for compliance. SLDC shall not issue separate code for such operation.

(2) In case of tripping of transmission element, the same shall be restored only after receiving code from SLDC for the same. The code shall be issued in real time.

(3) For the shut downs of transmission elements, SLDC shall issue code for opening of line / transformer in the real time of operation. On completion of the work, separate code will be issued by SLDC for taking transmission element into service after completion of work.

(4) For the operation of 132 KV transmission elements located in the geographical area of M.P. Paschim Kshetra Vidyut Vitaran Co. Ltd. and M.P. Madhya Kshetra Vidyut Vitaran Co. Ltd., the code shall be conveyed through the respective Sub SLDC for which the Sub LDC shall obtain the code from SLDC. The code for all transmission elements of 132 KV and above and for all transformers located in geographical area of MP Poorv Kshetra Vidyut Vitaran Co. Ltd, shall be issued directly by SLDC.

(5) For transmission lines the code shall be issued to both end sub-stations and in case of tapped lines, all the concerned sub-stations shall receive the code. The operation shall be carried out by the EHV sub-stations after exchanging the code.

(6) No transmission element shall be removed or taken into service without receiving code from SLDC otherwise same will be treated as violation of IEGC & MPEGC.

(7) In case of multiple trippings, details of tripping of all the transmission elements shall be conveyed to SLDC immediately. SLDC will analyze the trippings and decide which line /transformer is to be charged first and issue code accordingly. Subsequently code shall be issued for charging of other transmission elements one by one as per requirement of the State Grid.

(8) Online maintenance and testing / checking of protection system / relay testing shall be performed only after receiving code from SLDC.

(9) For seeking code in real time, generating station / sub-station can contact SLDC / Sub SLDC on PLCC or P&T Phones.

(10) Operation of State Grid elements on receiving code from SLDC, is vital for safe, secure & reliable operation of the State Grid and hence compliance of the same may be observed by all concerned.

LIST OF RADIAL FEEDERS FOR AUTOMATIC DERMAND CONTROL

Avg load data

Sr.No.	Name of Testing Division	Name of Sub-station	Name of Radial feeder	DISCOM	Apr-Jul	Aug-Oct	Nov-Mar
Sagar					MW		
1	Sagar	220KV S/s Sagar	132KV Gourjhamer		15	15	36
Satna							
2	Shahdol	220 KV BIRSINGHPUR	132 KV UMARIYA		16	15	20
3	Satna	220 KV SATNA	132 KV MAJHGAWAN	**EAST**	9	8	14
4	Satna	220 KV SATNA	132 KV PAWAI		11	11	12
5	Satna	220 KV SATNA	132 KV PANNA		34	33	33
6	Rewa	220 KV REWA	132 KV MANGAWAN +Katra		39	41	61
7	Rewa	220 KV SIDHI	132 KV MAUGANJ		18	14	19
400KV Bhopal							
8	Vidisha	132 KV S/S VIDISHA	132 KV GAIRATGANJ		15	18	29
9	Vidisha	133 KV S/S VIDISHA	132 KV Shamshabad		6	7	10
Gwalior							
10	Gwalior-II	220 KV Malanpur	132 KV Ambah		20	20	25
11	Gwalior-II	220 KV Mehgaon	132 KV Porsa	**CENTRAL**	12	10	15
12	Gwalior-II	220 KV Mehgaon	132 KV Seonda		19	12	22
13	Gwalior-II	220 KV Mehgaon	132 KV Lahar+ Ron		24	15	25
Bhopal							
14	Bhopal-I	220 KV S/S BAIRAGARH	132 KV SHYAMPUR		8	10	16
15	Itarsi	132 KV S/S BETUL	132 KV GUDGAON		9	12	17
16	Bhopal-I	220 KV S/S ASHTHA	132 KV ICHHAWAR		4	5	8
17	Bhopal-I	220 KV S/S ASHTHA	132 KV POLAI KALA		7	7	13
18	Bhopal-I	220 KV S/S ASHTHA	132 KV BERCHHA		5	7	14
Indore							
19	Barwaha	220 KV S/s Julwaniya	132 KV Sendhwa+Pansemal		46	42	65
20	Indore-I	220 KV S/s Nimrani	132 KV Kasrawad		10	12	14
21	Rajgarh (Dhar)	220KV S/S Rajgarh	132KV Petlawad		4	9	13
400KV Indore							
22	Indore-II	220 KV S/s Pithampur	132 KV Bagdi		13	6	20
23	Indore-II	220 KV S/s Pithampur	132 KV Betma		11	11	14
24	Indore-II	220 KV S/s Pithampur	132 KV Jamli	**WEST**	28	23	40
400KV Khandwa							
25	Khandwa	220 KV S/s Nepa	132 KV Badgaon		21	18	24
Ujjain							
26	Ujjain	220KV S/S Barnagar	132KV Kanwan		20	17	17
27	Ujjain	220KV S/S Barnagar	132KV Gautampura		13	12	19
400KV Nagda							
28	400KV Nagda	220 KV S/S Nagda	132KV Nagda - Alot		24	16	41
29	Neemuch	220KV S/S Neemuch	132KV Ratangarh		20	13	27

FORMAT - III (B)
For PoC Charge Determination
Forecase Injection / Withdrawal Data at all nodes upto 132 KV

Year : 2013-14

Season : (April to June) Data of 15th May 2013 (Next Working Day if 15th May is Holiday)

Date :-

SL. No.	Name of Node	Voltage Level	Peak Withdrawal		Peak Injection		Off Peak Withdrawal		Off Peak Injection	
			MW	MVAr	MW	MVAr	MW	MVAr	MW	MVAr

Season : (July to Sep) Data of 31st Aug 2013 (Next Working Day if 31st Aug is Holiday)

Date :-

SL. No.	Name of Node	Voltage Level	Peak		Peak Injection		Off Peak		Off Peak	
			MW	MVAr	MW	MVAr	MW	MVAr	MW	MVAr

Season : (Oct to Nov) Data of 30th Oct 2013 (Next Working Day if 30th Oct is Holiday)

Date :-

SL. No.	Name of Node	Voltage Level	Peak		Peak Injection		Off Peak		Off Peak	
			MW	MVAr	MW	MVAr	MW	MVAr	MW	MVAr

Season : (Dec to Feb) Data of 15th Jan 2014 (Next Working Day if 15th Jan is Holiday)

Date :-

SL. No.	Name of Node	Voltage Level	Peak		Peak Injection		Off Peak		Off Peak	
			MW	MVAr	MW	MVAr	MW	MVAr	MW	MVAr

Season : (March) Data of 15th Mar 2014 (Next Working Day if 15th Mar is Holiday)

Date :-

SL. No.	Name of Node	Voltage Level	Peak		Peak Injection		Off Peak		Off Peak	
			MW	MVAr	MW	MVAr	MW	MVAr	MW	MVAr

Annexure-11.5

TELEMETRY DISCRIPIENCY LIST FOR INDORE T&C CIRCLE

Sr.No	DESCRIPTION	Status	telemetry value at SLDC	actual value at site
Burwaha 220 KV S/S				
1	220 KV BUS COUPLER	CB	FAULTY	OPEN
2	220 KV ITARSI FEEDER	CB	FAULTY	CLOSE
3	220 /132 KV TRANSFORMER 1	CB	FAULTY	CLOSE
4	BURWAHA 132KV-CHEGAON	CB	FAULTY	CLOSE
5	BURWAHA 220 KV NIMRANI	CB	FAULTY	CLOSE
6	132BUS COUPLER	CB	FAULTY	CLOSE
7	220/132KV 160 MVA XMER-	OLTC	17	3
8	220/132KV 3X40 MVA XMER	OLTC	17	3
9	63 MVA XMER	OLTC	17	4
10	132 KV CHOTI KHARGONE	MW	0	52
11	132 KV CHOTI KHARGONE	CB	OPEN	CLOSE
Nepanagar 220 KV S/S				
1	160 MVA XMER	OLTC	17	15
2	3X40 MVA XMER	OLTC	1	9
3	12.5 MVA XMER	OLTC	17	5
5	132/33 XMER (20 MVA) NEW	CB,MW,MVAR,SOE	**Telemetry Not available**	
5	132 KV NAPA-BADGAON			
6	220/132 KV , 3*40 MVA TXMER	CB	FAULTY	CLOSE
SOE'S OF ALL THE FEEDERS ARE NOT COMING				
PITHAMPUR 220 KV S/S				
1	220KV BUS XFER	CB	FAULTY	OPEN
2	220KV PITHAMPUR - RAJGARH I	CB	NC	CLOSE
3	220KV PITHAMPUR- RAJGARH II	CB	NC	CLOSE
4	220KV BUS COUPLER	CB	FAULTY	CLOSE
5	132/33 KV TRANSFORMER 3	OLTC	N/C	11
6	PITAMPUR 132 KV-HML	CB	FAULTY	OPEN
7	132 KV TRB	CB	FAULTY	OPEN
8	132 KV BUS COUPLE	CB	FAULTY	CLOSE
9	132 KV IC-2	CB	OPEN	CLOSE
10	132KV HML	MW,MVAR	**NOT AVAILABLE,UPGRADATION OF RTU REQUIRED**	
11	132KV PARASRAMPURIYA	MW,MVAR		
12	132KV JAMLI	MW,MVAR,CB		
13	132/33 KV TRANSFORMER 2	MW,MVAR,CB,OLTC		
14	132/33 KV TRANSFORMER 3	MW,MVAR,CB,OLTC		
15	132/33 KV TRANSFORMER 3	CB	OPEN	CLOSE
16	132/33 KV TRANSFORMER 2	OLTC	N/C	8
17	220/132 XMER2	OLTC	N/C	11
SOE'S OF ALL THE FEEDERS ARE NOT COMING				
INDORE NZ 220KV S/s				
1	220KV Bus TRF	CB	Faulty	Open
2	132KV INDORE NZ -1	CB	Faulty	Close
3	132KV NZ- DEPALPUR -2	CB	Faulty	Close
4	132KV NZ- SANWER	MW,MVAR CB,SOE	Telemetry Not Available, Upgradation required	
5	132KV NZ- UJJAIN			
6	132KV TRACTION			
7	220KV MAIN BUS 2	VOLTAGE	0KV	230KV

TELEMETRY DISCRIPIENCY LIST FOR NAGDA T&C CIRCLE

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
NAGDA 400 KV S/S				
1	400KV NAGDA –SUJALPUR 1	CB	FAULTY	OPEN
2	400KV NAGDA –SUJALPUR 2	CB	FAULTY	CLOSE
3	400KV NAGDA –DEHGAON 1	CB	FAULTY	OPEN
4	400KV NAGDA –DEHGAON 2	CB	FAULTY	CLOSE
5	400Kv RAJGARH 1 & 2 TIE BREAKER	CB	FAULTY	CLOSE
6	400Kv SUJALPUR-1 & DEHGAON-1 TIE BREAKER	CB	FAULTY	CLOSE
7	400Kv SUJALPUR-2 & DEHGAON-2 TIE BREAKER	CB	FAULTY	CLOSE
8	400/220 KV ICT I	OLTC	17	9
9	400/220 KV ICT II & III	OLTC	N/C	7
NAGDA 220 KV S/S				
1	220/132 XMER(132 SIDE)-II	CB	OPEN	CLOSE
2	125 MVA TRANSFORMER	OLTC	9	8
3	160 MVA TRANSFORMER	OLTC	9	12
4	40 MVA TRANSFORMER –II	OLTC	17	5
5	**220/132 160 MVA XMER NEW**	CB, SOE, MW, MVAR	**Telemetry not available. RTU configuration required for upgradation already arranged by SLDC.**	
6	**220/33 100MVA XMER NEW**			
7	**220/132KV TRF-3**			
8	**132 GRASIM**	SOE,MW,MVAR,CB	**Telemetry not available. RTU configuration required for upgradation already arranged by SLDC.**	
9	**132 MAHIDPUR-2**			
10	**132KV BUSCOUPLER**	CB	FAULTY	CLOSE
RATLAM 220 KV S/S				
1	220/132 XMER-1	CB	FALTY	CLOSE
2	220KV RATLAM-NAGDA-I	CB	FAULTY	CLOSE
3	220 KV BADNAGAR-1	CB	FAULTY	CLOSE
4	220 KV BADNAGAR-2	CB	FAULTY	CLOSE
5	220 BUS XFER	CB	FAULTY	OPEN
6	132/33 KV TRANSFORMER -2	OLTC	N/C	7
7	**220KV RATLAM - NAGDA 2**	CB, SOE MW, MVAR	**TELEMETRY NOT AVAILABLE. UPGRADATION OF RTU REQUIRED TO BE UNDERTAKEN.**	
8	**132/33 TRF-2 & 3 (NEW)**			
9	**132KV RATLAM-SAILANA**			
NEEMUCH 220 KV S/S				
1	220/132 KV TRANSFORMER 1	CB,SOE	**TELEMETRY NOT AVAILABLE.PROVISION OF TELEMETRY ALREADY AVAILABLE**.	
2	220/132 KV TRANSFORMER 2	MW,MVAR, CB,SOE		
3	132 NEEMUCH UDEPUR	CB	FAULTY	OPEN
4	220/132 KV TRANSFORMER 1	OLTC	N/C	7
5	132 MANDSOR 1&2	CB	FAULTY	CLOSE
6	132 MALHARGARH	CB	FAULTY	CLOSE
7	132 MALHARGARH	MW	NOT COMING	
NOTE:-SOE DATA NOT RECEIVED.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				

TELEMETRY DISCRIPIENCY LIST FOR UJJAIN T&C CIRCLE

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
DEWAS 220 KV S/S				
1	132/33 KV TRANSFORMER 2	OLTC	N/C	7
2	220/132 KV TRANSFORMER 1	OLTC	N/C	7
3	220/132 KV TRANSFORMER 2	OLTC	N/C	7
4	132 /33 KV TRANSFORMER 1	OLTC	N/C	8
5	132/33KV 40 MVA XMER	CB	FAULTY	CLOSE
UJJAIN 220 KV S/S				
1	220/132 KV TRANSFORMER 4	OLTC	N/C	6
2	220/132 KV XMER-3	OLTC	N/C	6
3	132 BUS COUPLER	CB	FAULTY	OPEN
4	132/33 KV XMER-1	OLTC	N/C	6
SHUJALPUR 220 KV S/S				
1	160MVA TRANSFORMER-II	OLTC	2	10
2	132/33 63MVA XMER 2	CB, SOE	Telemetry Not Available	
3	132KV Shujalpur-Shajapur			
4	132KV Interconnector-1			
5	132KV Interconnector-2			
BADOD 220KV S/S				
1	220/132KV TRANSFORMR	OLTC	NA	
2	132KV BUS COUPLER	CB	FAULTY	
3	132/33KV Transformer	CB, SOE, MW, MAVR	Telemetry not available,Proces connection need to be done	
4	132 KV Badod- Gahosla			
5	132KV Badod- Suwasar			
RAJGARH DHAR 220 KV S/s				
	ALL CB AND SOE received as faulty			

TELEMETRY DISCRIPIENCY LIST FOR SATNA T&C CIRCLE

Sr.No	DESCRIPTION	Status	telemetry value at SLDC	actual value at site
Satna 220 KV S/S				
1	SATNA 220KV CHHATARPUR-1	CB	FAULTY	CLOSE
2	220/132 KV TRANSFORMER 2	OLTC	N/C	7
3	132/33 KV TRANSFORMER 1	OLTC	N/C	7
4	132/33 KV TRANSFORMER 2	OLTC	N/C	7
5	132KV SATNA- MANJHGAWAN	CB	FAULTY	CLOSE
6	132KV SATNA-PAWAI	CB	FAULTY	CLOSE
7	132KV SATNA- PRISM CEMENT	CB	FAULTY	CLOSE
8	132KV SATNA- PANNA	CB	FAULTY	CLOSE
9	132KV SATNA- MANJHGAWAN	MW,MVAR SOE	**Telemetry not available. RTU configuration done by SLDC. Transducer and CMr's required for upgradation is also provided to site along six months back.**	
10	132KV SATNA- PAWAI			
11	132KV SATNA- PRISM CEMENT			
12	132 SATNA-SATNA IC-1			
13	132 STANA-SATNA IC-2			
14	220KV KOTAR	CB	FAULTY	CLOSE
15	132 KV PANNA	MW,MVAR	N/C	
16	132KV SATNA CEMENT	MW,MVAR	N/C	
Morwa 132 KV S/S				
MORWA RTU FAILED TELEMETRY NOT COMING				
REWA 220KV S/s				
1	220KV SIRMOR-1	MW,	0	15
2	220KV SIRMOR-1	MVAR	0	3
3	220KV SIRMOR-2	MW	0	15
4	220KV SIRMOR-2	MVAR	0	3
5	220KV VOLTAGE	VOLTAGE	146	220
6	220KV FREQUENCY	FREQ	47.5	49.93
7	220KV SIRMOR-1	CB	FAULTY	CLOSE
8	220KV SIRMOR-2	CB	FAULTY	OPEN
9	220KV BUSCOUPLER	CB	FAULTY	CLOSE
10	220/132 XMER-1	CB	FAULTY	CLOSE
11	220/132KV XMER-2	CB,MW,MVAR	NOT CONNECTED	
12	220KV SATNA	CB	FAULTY	CLOSE
13	220KV SIDHI	CB	FAULTY	CLOSE
14	220KV BUS 2	VOLATAGE	105	220
SOE'S OF ALL THE FEEDERS ARE NOT COMING				

TELEMETRY DISCRIPIENCY LIST FOR JABALPUR T&C CIRCLE

Sr.No	DESCRIPTION	Status	telemetry value at SLDC	actual value at site
NARSINGPUR 220KV S/s				
1	220KV NARSINGPUR-PIPARIYA	CB	FULTY	CLOSE
2	220KV NARSINGPUR-ITARSI	CB	OPEN	CLOSE
3	220/132 TRANSFORMER-2	CB	OPEN	CLOSE
4	220 KV TRB	CB	FAULTY	CLOSE
5	220/132 KV TRANSFORMER 1	OLTC	N/C	7
6	220/132 KV TRANSFORMER 2	OLTC	N/C	5
7	132/33 KV TRANSFORMER 1	OLTC	N/C	6
8	220/132 KV TRANSFORMER 2	MW	456	147
9	220/132 KV TRANSFORMER 2	MVAR	456	6
10	132 BUS TRANSFER	CB	FAULTY	CLOSE
11	132 Narsingpur-Barman-2	CB,SOE,MW,MVAR	TELEMETRY NOT AVAILABLE	
12	132/33 TRANSFORMER-2			
SOE'S OF ALL THE FEEDERS ARE NOT COMING				
Jabalpur 220 KV S/S				
1	220/132 KV TRANSFORMER 1	CB	FAULTY	CLOSE
2	220 KV TRB	CB	FAULTY	OPEN
3	JABALPUR 132 KV- MADHOTAL	CB	FAULTY	CLOSE
4	132 KV BUS TRF	CB	FAULTY	CLOSE
5	220KV JABALPUR-BIRSINGHPUR 1	CB & SOE	NOT AVAILABLE	CONNECTION TO BE EXTENDED
6	220KV JABALPUR-BIRSINGHPUR 2	CB & SOE	NOT AVAILABLE	
7	132/33 KV TRANSFORMER 2	CB	FAULTY	CLOSE
8	220/132KV XMER-1 132 SIDE	CB	FAULTY	CLOSE
KATNI 220 KV S/S				
1	220 KV BUS COUPLER	CB	FAULTY	CLOSE
2	220 KV TRB	CB	FAULTY	OPEN
3	220/132 KV TRANSFORMER 2	MW,MVAR	NOT AVAILABLE	
4	220/132 KV TRANSFORMER 2	CB,OLTC	NOT AVAILABLE	
5	132/132 KV TRANSFORMER 1	MW,MVAR	NOT AVAILABLE	
6	220/132 KV TRANSFORMER 1 132 SIDE	CB	FAULTY	CLOSE
7	132/33 KV TRANSFORMER 1& 2	MW,MVAR,OLTC	NOT AVAILABLE	
8	132/33 KV TRANSFORMER 1& 2	CB,SOE	NOT AVAILABLE	
9	132KV Interconnector 1 & 2	MW,MVAR		
10	132/33 TR-1	CB	FAULTY	OPEN
11	132/33 IC-1 &	CB	FAULTY	OPEN
12	132/33 KYMORE-1 & 2	CB	FAULTY	OPEN
SOE'S OF ALL THE FEEDERS ARE NOT COMING				

TELEMETRY DISCRIPIENCY LIST FOR GWALIOR T&C CIRCLE

Sr.No	DESCRIPTION	Status	telemetry value at SLDC	actual value at site
GUNA 220 KV S/S				
1	220KV BUSCOUPLER	CB	FAULTY	**CLOSE**
2	220/132KV XMER-1	OLTC	17	**7**
3	40MVA XMER 1&2	OLTC	NOT AVAILABLE	
SOE'S OF ALL THE FEEDERS ARE NOT COMING IN GUNA 220 S/S				
GWALIOR 220 KV S/S				
1	132/33 TRF 2	OLTC	NC	8
2	132/33 TRf-4	OLTC	NC	7
3	220/132KV XMER-1 132 SIDE	CB	FAULTY	**CLOSE**
4	220/132KV XMER-2 132 SIDE	CB	FAULTY	**CLOSE**

TELEMETRY DISCRIPIENCY LIST FOR BHOPAL T&C CIRCLE

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
BHOPAL 400 KV S/S				
1	400/220 KV DAMOH-1	CB	FAULTY	CLOSE
2	400 KV DAMOH 1&2 TIE BREAKER	CB	FAULTY	CLOSE
3	220KV BAIRAGARH	CB	FAULTY	CLOSE
PIPARIA 132 KV S/S				
1	132KV BARELI	CB	FAULTY	OPEN
2	132/33KV 20MVA XMER	OLTC	N/C	
3	132/33KV 40MVA XMER	OLTC	N/C	
SOE'S OF ALL THE FEEDERS ARE NOT COMING IN PIPARIYA 132 S/S				
SARNI 220 KV S/S				
RTU FAILED TELEMETRY NOT COMING				
BAIRAGARH 220 KV S/S				
1	220 KV BUS 1	VOLTAGE	126	227
2	220 KV BUS 1	FREQUENCY	N/C	49.78
3	220/132 XMER –I	CB	FAULTY	CLOSE
4	220/132 XMER (160MVA) NEW II	CB	**TELEMETRY NOT AVAILABLE AND NEED TO BE PROVIDED BY UPGRADATION OF RTU**	
5	220/132 XMER (160MVA) NEW II	MW,MVAR		
7	132/33 XMER (20 MVA) NEW IV	CB,OLTC		
8	132/33 XMER (20 MVA) NEW IV	MW		
9	132/33 XMER (20 MVA) NEW IV	MVAR		
10	132KV BHOPAL -2	CB,MW,MVAR,SOE		
11	BAIRAGRAH 132KV-LALGHATI II	CB	FAULTY	OPEN
12	220KV BUS COUPLER	CB	FAULTY	CLOSE
13	132KV BUS COUPLER	CB	FAULTY	CLOSE
Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
HANDIA 220 KV S/S				
1	220KV HANDIA –ITARSI –I	CB	FAULTY	CLOSE
2	220KV HANDIA 220/132 TR-2	CB	FAULTY	CLOSE
3	132KV HANDIA 220/132 TR-2 132 SIDE	CB	FAULTY	CLOSE
4	132 KV HARDA	CB	FAULTY	CLOSE
5	220/132 TR-2	OLTC	N/C	
NOTE:-SOE DATA NOT RECEIVED EXCEPT BARWAHA FEEDER.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				

Bina 400 KV S/S				
1	400/220 KV XMER III Primary side	CB	FAULTY	CLOSE
2	400/220 KV XMER III Secondary side	CB	FAULTY	CLOSE
Bina 220 KV S/S				
6	132KV BINA –GANGBASODA	CB	N/C	
7	132KV BINA - BORL 1 &2	CB,SOE MW,MVAR	NOT AVAILABLE	
8	132KV BINA - BORL 1 &2			
5	132KV BINA – MUNGAWALI	CB,SOE,MVAR		
SOE DATA NOT RECEIVED.CONNECTIONS FOR GWALIOR-2,GUNA-1 FEEDERS HAVE TO BE VERIFIED				
Telemetry Discripiency List of Tikamgar 220,Sagar 132 not prepared because all three RTU's are not functioning				

TELEMETRY DISCRIPIENCY LIST FOR SAGAR T&C CIRCLE

Telemetry Discripiency at power stations

Sr No	DESCRIPTION	Status	telemetry value at SLDC	actual value at site
SATPURA TPS				
1	STPS BUS 1	VOLTAGE	360	415
2	GT 6	MW	152	170
3	GT6	MVAR	1	45
4	GT7	MW	190	150
5	GT7	MVAR	56	65
6	GENERATOR 7	CB	FAULTY	OPEN
7	GENERATOR 8	CB	OPEN	CLOSE
SANJAY GANDHI THERMAL POWER STATION				
1	400/220KV TRANSFORMER	CB	FAULTY	CLOSE
2	400KV STATION TRANSFORMER	CB	FAULTY	CLOSE
3	400KV BUS COUPLER	CB	FAULTY	OPEN
4	400KV BUS TIES	CB	FAULTY	CLOSE
5	400KV DAMOH-3 (MP)	CB	FAULTY	CLOSE
6	400KV DAMOH-1	CB	FAULTY	CLOSE
7	400KV DAMOH-2(PG)	CB	FAULTY	CLOSE
8	220KV BUS COUPLER	CB	FAULTY	CLOSE
9	220/6.9 STN TRF	CB	FAULTY	CLOSE
AMARKANTAK THERMAL POWER STATION				
1	132KV RAJMILAN-1	CB	FAULTY	CLOSE
2	132KV RAJMILAN-2	CB	FAULTY	CLOSE
3	132/33 KV TRNSFRMER 4 & 5	OLTC	N/C	6
4	220KV SUKHA	CB	OPEN	CLOSE
5	132KV BUS COUPLER	CB	N/C	CLOSE
6	220KV BUS 2	FREQUENCY	N/C	
7	220/132 XMER-1 132 SIDE	CB	OPEN	CLOSE
8	132KV BUS	FREQUENCY	N/C	

BARGI HPS				
Note :- The circuit breaker status of all generator/bus coupler etc. are displayed correctly in On condition. However, in off condition, the same is received as faulty.				
TONS HPS				
1	220/33 20 MVA XMER	CB	FAULTY	OPEN
2	GENERATOR-2	CB	FAULTY	OPEN
3	220KV REWA-2	CB	FAULTY	CLOSE
4	BUS COUPLER	CB	FAULTY	OPEN
Note:- **SOE CONNECTION NOT DONE FOR ANY FEEDER AT TONS HPS**				
GANDHISAGAR HPS				
1	132/33 KV XMER	OLTC	6	9
2	132/33 KV XMER	CB	OPEN	CLOSE
3	GENERATOR 1	CB	FAULTY	CLOSE
RAJGHAT HPS				
1	RAJGHAT132 KV-LALITPUR	CB	FAULTY	OPEN
2	GEN1	CB	FAULTY	CLOSE
3	GEN2	CB	FAULTY	CLOSE
NOTE SOE'S OF ALL THE FEEDERS ARE NOT COMING.				