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STATE LOAD DESPATCH CENTRE, NAYAGAON, JABALPUR 482 008
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ISO: 9001-2008

No.07-05/SG-9B-II/ 1558 Jabalpur, dated 17-07-2012

To

As per distribution list

Sub: Agenda of 29th meeting of Operation and Coordination Committee of MP.

The Agenda of 29th meeting of the Operation and Coordination Committee of MP **scheduled on 21st July 2012 at 11.00 AM** at State Load Despatch Centre, MPPTCL, Jabalpur has been uploaded on the website of SLDC 'www.sldcmpindia.com' and can be downloaded.

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

Encl : As above.

Distribution List

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The President, Shree Maheshwar Hydel Power Corporation Limited, “Abhyanchal Parisar”, Mandleshwar Distt : Khargone 451 221 **(Fax 07283-233830)**	Shri Rajiv Keskar, E. A. to Chairman MPPMCL, Energy Department, Vallabh Bhawan, Bhopal. **Fax No- 0755-2441691 / 2441642**
The Director (Projects), BLA Power Limited, At : Niwari, PO: Khorsipan, Tah : Gadarwara, Distt ; Narsinghpur 487 551 **Fax No. 07791-243667**	

AGENDA FOR 29TH MEETING OF OPERATION & COORDINATION COMMITTEE OF MP TO BE HELD ON 21ST JULY 2012 AT 11.00 AM AT JABALPUR.

ITEM NO. 1 : CONFIRMATION OF MINUTES : Minutes of 28th meeting of Operation & coordination committee of MP held on 21.04.2012 at State Load Despatch Centre, MPPTCL, Jabalpur were forwarded to the committee members vide No. No.07-05/SG-9B-II/1017 dated 16-05-2012. No comments have been received from the members. **Committee may confirm the minutes.**

ITEM NO. 2 :REVIEW OF SYSTEM OPERATION DURING THE MONTHS April to June 2012.

2.1 Frequency Particulars : During June 2012 the system frequency was below 49.5 Hz for 20.67% of time against 10.82% of time during May 2012. The system frequency was within the IEGC range of 49.5-50.2 Hz for 77.90 % of the time against 87.82 % of time during May 2012. The average monthly frequency was 49.70 Hz during June 2012 and in May 2012 it was 49.80 Hz. Regarding operation in high frequency range, frequency during the month of June 2012 was above 50.20 Hz for 1.43 % of time against 1.36 % of time during May 2012. The system frequency touched 48.8 Hz, 57 times in the month of June 2012.

The detailed frequency particulars for the month of April to June 2012 are enclosed at **Annexure-2.1**. The brief details of frequency profile is given hereunder :

Month	Average frequency	minimum integrated frequency over an hour	maximum integrated frequency over an hour	Instantaneous minimum frequency	Instantaneous maximum frequency
Apr 2012	49.90 Hz	49.50 Hz	50.35 Hz	49.08 Hz	50.66 Hz
May 2012	49.80 Hz	49.24 Hz	50.36 Hz	48.82 Hz	50.75 Hz
Jun 2012	49.70 Hz	48.97 Hz	50.50 Hz	48.75 Hz	50.68 Hz

Committee may like to note.

2.2 Operational Matters

2.2.1 Operational Discipline : System operated in terms of frequency profile for the months April to June 2012 is as given below for discussion by the committee :

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
Apr 2012	2.38 %	3.94%	93.68%	49.90 Hz	0
May 2012	10.82 %	1.36%	87.82%	49.80 Hz	0
Jun 2012	20.67 %	1.43%	77.90%	49.70Hz	57

Committee may like to note.

2.2.2 Messages for drawal curtailment : 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
Apr 2012	27	4	2	33
May 2012	92	22	65	179
Jun 2012	83	52	72	207

[Committee may please note & discuss.]

2.3.1 Voltage Profile : Date wise voltage profile at some of the important 400 KV and 220 KV substations during the months April to June 2012 is enclosed at **Annexure -2.3.1.**

During the months April to June 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	APRIL 2012				MAY 2012			
		Max. Voltage observed		Min. Voltage observed		Max. Voltage observed		Min. Voltage observed	
		Voltage	Date	Voltage	Date	Voltage	Date	Voltage	Date
1	Indore	425	01, 26.04.12	---	---	426	25.05.12	---	---
2	Itarsi	427	05,25.04.12	---	---	427	17.05.12	---	---
3	Bina	431	13.04.12	---	---	431	12.05.12	---	---
4	Gwalior	432	13.04.12	---	---	437	01.05.12	---	---
5	Nagda	428	25,26.04.12	---	---	429	31.05.12	---	---
6	Satpura	427	13,14,17.04.12	---	---	427	17.05.12	---	---
7	Birsingpur	---	---	---	---	---	---	---	---

SrNo	Name of 400 KV Substation	JUNE 2012			
		Max. Voltage observed		Min. Voltage observed	
		Voltage	Date	Voltage	Date
1	Indore	427	14,23.06.12	---	---
2	Itarsi	427	14.06.12	---	---
3	Bina	429	16.06.12	---	---
4	Gwalior	430	12.06.12	---	---
5	Nagda	428	17.06.12	---	---
6	Satpura	424	24.06.12	---	---
7	Birsingpur	427	13.06.12	---	---

[**Committee may please note & discuss]**

2.3.2 Status of Capacitor Banks in sub-transmission system : The updated information of the status of capacitor banks in sub-transmission system as on 30th June 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	631	449	28	96	--	225	38	46	52	57	101	82
CZ	8	721	3	34	-	24	3	16	0	588	0	373
EZ	415	237	12	18	-	94	18	38	--	--	--	--

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

Figures are in MVAR

SN	Particularas	WZ	CZ	EZ
1	MVAR capacity of connected capacitors in good condition	917.4	806.4	533.4
2	MVAR capacity of connected capacitors in partially good condition	109.5	42.6	14
3	MVAR capacity of connected capacitors in good condition including partially good condition.	1026.9	849.0	547.4
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	1126.5	1408.5	Nil

[Committee may please note & discuss.]

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 30th June 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 MPPTCL has also furnished the requirement of capacitor banks(in MVAR) in EHV Transmission system which is enclosed as **Annexure – 2.3.3** **[Committee may like to note]**

2.4.1 Status of completion of on going Transmission Schemes being executed by MPPTCL : The latest status of completion various ongoing Transmission Schemes for the current financial year i.e. Year

2012-2013 upto 30.06.2012 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).** [**Committee may like to note and discuss**]

2.4.2 U/F and df/dt Relay Operation

(i) **U/F and df/dt Relay Operation:** There was no under frequency operation as frequency did not touch 48.8 Hz during April 2012 & May 2012. However frequency touched 48.8 Hz during the month of June 2012 at 57 times. The date wise Operation of Under frequency for the month of June 2012 is given at **Annexure 2.4.2** [**Committee may like to note]**

Defective u/f, df/dt relays : MPPTCL has informed that there are no defective u/f and df/dt relays. [**Committee may like to note]**

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 February and March 2012 is enclosed at **Annexure 2.5(i). [Committee may like to note]**

(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	06
02		Sagar	02
03		Rewa	16
04		**Total**	**24**
05	WEST	Indore	22
06		Ujjain	11
07		**Total**	**33**
08	CENTRAL	Bhopal	04
09		Gwalior	04
10		**Total**	**08**
TOTAL		**Grand Total**	**31**

[**ACTION : DISCOMs]**

ITEM NO. 3 : OPERATIONAL PLANNNING

3.1 Anticipated availability for the Month of October 2012 to March 2013.: hourly average availability from MPPGCL and anticipated demand from Central and west Discom is not received so far. Therefore the details of Source wise anticipated availability, Demand and shortage / surplus for the period October 2012 to March-2013 could not be prepared. The same will be submitted in the meeting, if the required information is received from the respective entities.

[Committee may like to note]

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

SN	Description	Capacity	From	To	Reason
01	Amarkantak # 5	210 MW	11.07.2012	04.08.2012	AOH
02	Satpura # 5	62.5 MW	01.09.2012	21.09.2012	AOH
03	Satpura # 7	210 MW	12.08.2012	30.09.2012	AOH
04	Satpura # 9	210 MW	07.08.2012	25.09.2012	COH
05	SGTPS#1	210 MW	06.09.2012	30.09.2012	AOH
06	SGTPS#4	210 MW	07.07.2012	31.07.2012	AOH
07	SGTPS #5	500 MW	27.07.2012	30.08.2012	AOH

As per maintenance programme furnished by MPPGCL, the following 8 units of MPPGCL has been deferred :-

1. Amarkantak unit no 3 and 4
2. Satpura Unit no.3,4,6 and 8
3. SGTPS unit no. 2 and 3 **[Committee May like to note]**

3.3 Proposed shutdown programme of Transmission line / Transformers : The proposed shutdown of transmission elements for the period 01.08.2012 to 30.09.2012 submitted by MPPTCL is enclosed in **annexure 3.3.** The MPPGCL and NHDC have not submit the shutdown proposals **[Action MPPGCL/NHDC/T&C MPPTCL]**

3.4 Long Outages of transmission elements and protections : The transmission elements as detailed below are under long outages :

SN	Line/Transformer/Breaker/ Reactor etc under long outage	Outage date	Reason	Expected date of restoration as intimated for 29th 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, Expected till Nov'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. ABB, delivery, Readiness is confirmed by M/s ABB.
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	New CT received at site on 09.04.12. Erection / commissioning work shall be carried out on unit shut down n next opportunity
4	UAT 7-B at Satpura TPS	29.11.2011	Tripped on differential & Bucholtz relay protection due to internal fault in the transformer	PI-problem, IR-achieve, may be brought in service by end of Sep'12 after AOH
5	16MVA UAT of Unit # 4 at Amarkantat TPS	17.11.2011	Heavy oil leakage	Order placed to M/s Mohan Electrical Vadodara. After attending the leakage, put back into service by Sep'12.
6	16MVA UAT 5-A at Amarkantat TPS	Since commissioning of unit	Charged from HT side (Changeover scheme is to be commissioned by BHEL)	Shall be kept in service after AOH in July '12

7	16MVA UAT 5-B at Amarkantat TPS	Since commissioning of unit	Changed from HT side (Changeover scheme is to be commissioned by BHEL)	Shall be kept in service after AOH in July '12
8	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.
9	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.
10	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
11	400 KV Bus bar protection scheme at SGTPS Birsinghpur	Since commissioning of 220 KV switch yard	Under commission-ing state	BHEL engineers have been called for commissioning. Whereas BHEL saying the work should be completed by ABB.
12	UAT No. 1 at RABS Bargi HPS.	JUNE 2008	Not mentioned	Relay problem. Shall be ready by the end of Jul 12.
13	UAT No. 3 at RAJGHAT HPS.	JULY 2011	Not mentioned	Work Completed.
14	220 KV Bus bar differential protection at TONS HPS	Since commissioning	Not mentioned	New Scheme with digital relays is required to be procured & commissioned. Case is under progress
15	UAT No. 1 at Gandhi Sagar	Since 2008	Not mentioned	Commissioned in May'12, ready for operation.
16	UAT No. 2 at Gandhi Sagar	Since 2008	Not mentioned	Commissioned in May'12, ready for operation
17	400KV Nagda-Rajgarh Line-I circuit breaker at 400KV Nagda s/s.	03.12.2011	Due to outage of R & Y phase poles. Line can be charged from tie breaker.	As per information furnished by MPPTCL, the order has been placed to the manufacturers for spare of 400KV Circuit breaker installed on 400KV Nagda-Rajgarh-I at 400 KV S/S Nagda. It is still under persuasion. As soon as spares will be received the ckt breaker will be attended. Meanwhile the load is taken through tie CKT BKR.

[Action MPPGCL/MPPTCL]

ITEM NO. 4 : OPERATIONAL STATISTICS FOR THE MONTH OF APRIL 2012 TO JUNE 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. **[Committee may like to note]**

ITEM NO. 5 : SYSTEM DISTURBANCE IN MP DURING FEBRUARY & MARCH 2012 : There was no major grid disturbance in MP during the period April to June 2012. However the Grid Disturbance and Grid Incidents in MP during the period April 2012 to June 2012 are given in **Annexure 5.0**.

ITEM NO. 6.0 : <u>OTHER IMPORTATNT OPERATIONAL ISSUES</u>

6.1 Charging of 400 KV feeders through transfer bus at 400 KV Satpura :- It has been noticed that shifting of 400 KV feeders from main bus to transfer bus is being done by switching of the feeders at 400 KV Satpura. Generally transfer of any feeder from main bus to transfer bus is done on line. MPPGCL is requested to submit the reasons for such operations. **(Annexure-6.1)**

[Action MPPGCL]

6.2 Change of CT ratio of all feeders at Omkareshwar Hydel Power Stations :- It was decided in the earlier OCC meeting that the CT ratio of all the feeders emanating from Omkareshwar HPS shall be change to 800/1 Amp. The NHDC are requested to submit the progress report in this regard.

[Action : NHDC]

6.3 SETTINGS OF OVER VOLTAGE TRIP RELAY AND GT TAPS AT INDIRA SAGAR POWER STATION : - As decided in the last OCC, a meeting was held on dated 9.07.2012 at SLDC, Jabalpur to discuss the settings of over voltage trip relays and GT taps to be adopted at Indira Sagar Power Station (ISPS). The representative of ISPS has mentioned that the present tap position of GTs at ISPS is at normal tap position 3 which corresponds to 420 KV at HV side.. The GT tap set at 3 and each generator generally absorbs about 10-15 MVAR. The representative of ISPS further stated that the maximum MVAR that can be absorbed is about 30 MVAR for each unit. In view of prevailing high voltage at ISPS bus due to high system voltage at adjoining 400 KV sub stations, if the GT tap position is changed from 3 to 4 or 5, the LT side voltage of GT would be around 12 KV and it may pose difficulty in synchronizing of the unit with the grid. Hence it is agreed that the GT tap position will not be changed and shall be at normal tap position i.e.at 3.

After detailed discussion ,it has been agreed that the relay settings for tripping of tie lines on over voltage at ISPS and remote ends shall be set as follows:-

Sr.No.	Name of Tie Line	Present o/v stage I Setting with time delay	Proposed & agreed o/v stage I Setting with time delay
1,	400 KV ISP-Nagda	110% 5 Sec.	110% 4 Sec.
2.	400 KV ISP-Sarni	110% 5 Sec.	110% 5 Sec.
3.	400 KV ISP-Indore I	110% 5 Sec.	110% 5 Sec.
4.	400 KV ISP- Indore II (with Reactor)	110% 5 Sec.	110% 6 Sec.

[Action MPPGCL/MPPTCL/NHDC]

6.4 AMR of ABT Meters installed at BLA Power : A meeting was held on dated 26.06.2012 at SLDC, Jabalpur for resolving the issue of downloading and communicating the ABT meters data of M/s BLA Power Pvt. Ltd to SLDC for the purpose of energy accounting. In the meeting, it was decided that as per MPERC Balancing & Settlement code (BSC 2009) & CEA (Installation & Operation of Meters) regulation 2006 the M/s BLA power Pvt Ltd shall take necessary measures for manual downloading of meter readings through MRI by procuring requisite software for downloading of meter data and start the manual downloading of meter reading within a month in coordination with East Discom. However, Testing, verification & sealing of ABT meters shall be done by STU i.e. MPPTCL. It is further decided that matter shall be taken up by SLDC with BLA Power Pvt. Ltd. For providing necessary arrangements for downloading meter reading through Automatic Meter Readings (AMR). It is further decided that the EE(Meter Testing) of East Discom shall continue to download the meter readings of ABT meters through AMR in respect of BLA Power Pvt. Ltd and communicate the same to SLDC till the above mechanism become functional. **[Action : BLA/East Discom]**

6.5 FREQUENCY RESPONSE CHARACTERISTIC : The Western Regional Despatch Centre, POSOCO has filed a petition No. 51/MP/2012 before Central Electricity Regulatory Commission in the matter of "Enforcing Adequate Frequency Response" from all the control areas in the Indian Grid through availability of primary response from all generating stations in the grid". A copy of the said petition was furnished by SLDC to MPPGCL and NHDC.

In the hearing on 7th June 2012, the Commission observed that primary response from generators was important in light of the proposal for synchronization of the Southern Region, integration of National Grid to SAARC Grid and integration of renewable generators. The Commission directed NLDC to submit a draft "Procedure for Monitoring the Primary Response of Generators for Calculation of Frequency Response Characteristic (FRC) of Regional Control Areas", by formulating the procedure in consultation with the Load Despatchers & by inviting the comments, suggestions of all concerned parties. The draft procedure so formulated shall be submitted by POSOCO along with all relevant documents for approval of the Commission.

In order to decide the draft procedure, the Forum of Load Despatchers in its 7th meeting held at National Load Despatch Centre, New Delhi on 14th June 2012 has presented the procedure for assessment of Frequency Response Characteristic (FRC) of control areas in Indian Power System and requested all the members to give their comments so that updated draft could be circulated to all Regional entities for further comments. A copy of the same has been furnished to ED (O&M:Gen.) MPPGCL, CE(O&M:Hydel) MPPGCL and CE (PM&C), NHDC, Bhopal for their comments. The CE(O&M:Hydel), MPPGCL has informed that they have no comments to offer. The comments from other entities have not been received by SLDC. **[Action : MPPGCL/NHDC]**

6.6 TECHNICAL DETAILS FOR DEVELOPMENT OF POWER MAPS : In the 7th meeting of Forum of Load Despatchers held at National Load Despatch Centre, New Delhi on 14th June 2012, it was agreed that SLDC / RLDC will submit upto date Power Maps along with other information in the specified formats by 30th June 2012 for preparation of Power Atlas. The Forum of Load Despatchers have prepared the Technical details for Development of Power Maps which has been sent to MPPGCL, MPPTCL & NHDC for furnishing the required information in hard & soft copies. The information from NHDC & MPPGCL has been received, however the information from MPPTCL is awaited. **[Action : CE(Plg &PS),MPPTCL]**

ITEM NO. 7 : <u>BLACK-START MOCK DRILL OF HYDEL POWER STATIONS :</u>

7.1 (i) Availability of DG set at Pench HPS : SE (O&M) Pench, MPPGCL, vide letter no. 565 dtd. 21.5.2012 has informed that the overhauling of the DG set completed and is now in healthy condition and could be run whenever required. He further informed that the No-load trial has been taken on 19.05.2012 and on load trial taken on 20.05.2012 by running auxiliaries. Now the units are available to participate for Black Start operation. **[Committee may like to note]**

7.2 (ii) Black Start mock drill at Bargi HPS: 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.

[**ACTION : MPPGCL]**

7.3 (iii) Black Start mock drill at other HPS: The proposed plan for black start mock drill of all Hydel Power Station (excluding ISP) is given below :

Name of Power Station	Proposed Date
Bargi	1st Week of Sep 12
Pench	2nd Week of Sep 12
Tons	4th Week of Sep 12
Omkareshwar	2nd Week of Oct 12
Gandhisagar	4th Week of Oct 12
Rajghat	1st week of Nov 12
Madikheda	3rd week of Nov 12
Birsingpur	1st week of Dec 12

[**ACTION : NHDC/T&C-MPPTCL/MPPGCL/ DISCOMs/SLDC]**

ITEM NO 8 SOME IMPORTANT MATTERS REQUIRED IMMEDIATE ATTENTION :

8.1 Quarterly Review of Crisis Management Plan : 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. Also, CEA is revising the document of CMP of power sector to be submitted to MOP by June 2012 All the constituents are requested to submit the CMP report for the Fourth quarter (January 2012 to March 2012) for the year 2012 & first quarter (April 2012 to June 2012) for the year 2012-13.

[**ACTION : MPPTCL/MPPGCL, NHDC]**

8.2 Status of Physical & Cyber Security in Power Sector regarding : The quarterly information for Fourth quarter (January 2012 to March 2012) for the year 2012 & first quarter (April 2012 to June 2012) for the year 2012-13 on status of physical & Cyber security in power sector may please be sent by MPPTCL, MPPGCL and NHDC directly to the Chief Engineer (GM), CEA New Delhi under intimation to SLDC Jabalpur and WRPC Mumbai . [**ACTION : MPPGCL,MPPTCL, NHDC]**

ITEM NO 9.0 <u>OTHER IMPORTATNT OPERATIONAL ISSUES :</u>

9.1 : Standard Operating Procedure for DCCs : The consultant appointed by SLDC for preparation of Standard Operating procedure for Distribution Control Centres has submitted the final SOP which has been forwarded to CMDs of DISCOMs and MD, MP Tradeco. The soft copy of SOP has also been emailed to the DCCs and MP Tradeco. 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

Action Point	Timeline	Updated Status
Feeder grouping, prioritization and mapping	30.04.2012	
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	
Technical proposal for development of IT tools	31.03.2012	

East Discom has intimated that the posts of Dy. Director (Accounts) and Account officer has been filled up in Discom Energy Accounting Group (DEAG) under Discom Control Centre.

Central Discom has submitted the updated status of implementation of SOP which is given below:

PROGRESS OF S.O.P. UNDER CZ (AS ON 13.07.12)

S.NO.	Targets	Achievements
1	Circle Level Meetings to educate about SOP to all AEs/JEs	Covered in all Circles
2	Pilot Exercise of 11 kV level load shedding from Aug-12	Sheopur & Vidisha Circle
3	Feeder Master/ Prioritisation of 11 kV feeders for all Circles	Completed
4	NDCC at Regional/ Circle and Division Level	Circle level NDCC established at Sheopur & Civil (O&M) Circles
5	Communication Channel	
	(A) DCC to NDCC(One land line phone for NDCC & Mobile to each person)	Provided
	(B) NDCC to Sub-Station (One land line phone for NDCC & Mobile to each person)	In progress
6	IT tools for DCC Management	In progress
7	Software for demand forecasting on 11 kV feeder level	Prepared and uploaded on website by Regional Office, MPPMCo.Ltd., Bhopal
8	Day ahead/ Weekly and Monthly forecasting	Received regularly from 10 Circles
9	Outage planning	Still not received from any Circle

ITEM NO 10.0 SCADA/EMS RELATED ISSUES :

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

(A) An order dated 13.01.2011 has been placed on M/s Chemtrol, Mumbai for installation of RTUs at 40 locations of MPPTCL. However, so far, only 6 RTU's at 220KV Sagar, 220KV Sukha, 220KV Mandideep, 220KV Indore East, 220KV Shivpuri, 132KV Sarangpur are commissioned & integrated with SCADA system. The RTU at 220KV Sidhi, 220KV Birsingpur and 132KV Harda could not be integrated into SCADA system due to non availability of communication channels. It must be ensure to establish communication channels before commissioning of RTU's, so as to avoid delay in integration of RTU with SCADA system and availability of telemetred data for grid operation may be ensured.

The present status of installation, commissioning and integration of RTU under phase-I are as detailed hereudner:-

SL No.	Name Of S/s	Present Position
01	220KV Sidhi S/s	RTU at these S/s Commissioned in the month of **March 2012** but could not be integrated into SCADA EMS system because of non availability of communication channels.
02	132KV Harda S/s	
03	220Kv Birsingpur S/s	RTU Commissioned but could not be tested because of failure in communication panel in the month of **April 2012**. Some process connections also pending.
04	220KV Rajgarh(Beora) S/s	RTU integrated but process connections pending.
05	220KV Julwaniya S/s	
06	220KV Seoni S/s	RTU commissioning pending due to non availability of control cable.
07	220KV Betul S/s	
08	220KV Chindwara S/s	
09	220KV Astha	
10	220KV Chegaon	
11	220KV Badnagar	
12	220Kv Nimrani	
13	220Kv Pipariya	Pending due to shortage of control cable and non availability of communication channels
14	132KV Khategaon	

(B) Further, delivery of RTU's for remaining twenty S/s under phase-II is also need to be expedite so that commissioning of all 40 RTU's may be completed as per the schedule submitted by MPPTCL in the petion No. 194/MP/2011 for " maintenance of communication facilities & availability of real time data at WRLDC".

(C.) As per MOM dated 19-07-2012, the RTU's for new S/s (220KV Shajapur, 220KV Mugaliachap, 220KV Gwalior-II, 220KV Gorabazar, 220KV Dhar, 220KV Datia, 220KV Panagar & 132KV Jeerapur) covered under JICA need to be arranged by placing of extention order, of the order dated 13-01-2011 placed on M/s Chemtrol Ltd Mumbai. SLDC vide UO No. 96 dated 26-11-2011, has already requested to initiate timely action in the matter. The present status of the telemetry equipments for S/s covered under JICA may please be provided. **Action:- CE(T&C)/CE(C&CM), MPPTCL**

10.2 Maintenance of RTU's and Availability of spares:-

MPPGCL:- Order placed and spares delivered at site.

MPPTCL:- Spare CPU's procured by MPPTCL for D20 RTU's is already exhausted. Spare CPU's along with D20 ME rack is required to be arranged by MPPTCL. The matter was discussed in last two OCCM meetings and T&C assured to initiate the action in the matter. The present status of the same may please be intimated. It is here to mention that RTU at Boregaon 132KV S/s is out due to non availability of CPU with MPPTCL.

Skilled persons for maintenance of RTU and communication channels need to be developed.

[ACTION : T&C, MPPTCL & MPPGCL]

10.3 Arrangement of telemetry equipments for Birsingpur HPS and Jhinna HPS

Vide UO No. 2122 dated 22-11-2011, it was intimated by ED(O&M:GEN) that the installation of RTU at Bansagar-IV (Jhinna) and Birsingpur HPS shall be completed by March 2013. In the last two OCCM meetings it was informed by MPPGCL that the relevant information is being collected. The present status need to be provided by MPPGCL. **[ACTION: HYDEL O&M ,MPPGCL]**

10.4. Status of telemetry arrangements for Satpura extention and Singaji TPS

ED(O&M:GEN) Vide UO No. 2122 dated 22-11-2011, has informed that " the installation of RTU's in respect of upcoming projects i.e. Satpura Extention and Singaji TPS are included in the project and will be completed by Nov. 2012 and march 2013 respectively**."** However, the details of RTU/IEC gateway, data list etc need to be provided for further needful in the mater. Also statuses of communication channel for both these projects need to be provided by MPPGCL/MPPTCL.

[ACTION : ED (O&M:GEN) ,MPPGCL]

10.5 The arrangement of data channel for remote VDU installed at GCC,DCC & CMD MPPTCL chamber

The remote VDU's are provided in the GENCO Control centre (GCC), East DISCOM Control Centre (DCC) and office of CMD MPPTCL using existing telephone cable from SLDC to Shakti Bhawan. The condition of cable is very poor causing frequent failures of remote VDU's. The telephone cable also does not support data speed more then 126 kbps. Hence reliable data channels supporting higher speed need to be arranged for healthy functioning of Remote VDU's.

Further, it is also to mention that the replacement of SCADA/EMS system is under process and for functioning of remote VDU's from new system, high speed reliable data channels is a prerequisite. Hence planning of data channel need to be initiated by concern utilities.

[ACTION: DCC, GCC, T&C, MPPTCL]

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

As informed several times, regarding telemetry discripiency, & upgradation of RTU's, WRLDC has filed a petion No. 194/MP/2011 in CERC. In response, SLDC has submitted that the work regarding telemetry discripiency and upgradation of RTU's shall be completed within six months i.e. by May 2012.

The present status of telemetry discipiency is enclosed herewith as **annexure-10.6(i)**. The circle wise list of total telemetred parameters v/s incorrect parameters is also enclosed herewith as **annexure-10.6(ii) & 10.6(iii)**. As may be seen from the annexure, the progress in the matter is not encouraging and hence suitable instructions need to be issued to the field officers to complete the work within time frame.

It is gathered that **SE(T&C) Indore**, has issued enquiry for upgradation of RTU through issue of turnkey contract to M/s HAIL. The latest status/progress of the matter may please be provided.

At SGTPS Power Station, for correction of telemetry discripiency, additional Analog and Digital input module need to be integrated into the RTU which involves modification of RTU configuration, internal wiring etc. Hence appropriate action for the same need to be initiated.

MPPGCL and MPPTCL may please provide completion schedule regarding rectification of telemetry discripiency and upgradation of RTU's. [**ACTION : T&C, MPPTCL & O&M :GEN,MPPGCL]**

10.7 Long Outage of RTU's /data channels,, non availability of alternate data channels :-

The Long Outage of RTU's along with their reasons is as detailed here udner:-

S. NO.	Name Of S/s	Remark/reason of outage
01	220KV Damoh S/s	The Telemetry of Damoh 220KV S/s is out since last three-four months & could not be restored despite all efforts by field officers as well as deputation of engineer from SLDC. The spare for the ABB RTU is not available. In view of the importance of telemetry of Damoh 220KV S/s, SLDC vide UO 141 dated 24-05-2012 has already requested either to arrange new RTU or shift RTU from 132KV S/s Sagar to 220KV S/s Damoh.
02	132KV Boragaon S/s	The telemetry is not functioning due to fault in CPU of D20 RTU. Spare CPU need to be arranged by MPPTCL.
03	132KV Morwa S/s	These RTU not functioning due to non availability/fault in communication channels.
04	220KV Tikamgad S/s	
05	220KV Satpura S/s	

The action for restoration of above telemetry need to be taken. **ACTION : T&C, MPPTCL**

10.8 Providing Alternate data channels & express Voice channels for RTU Stations:-

The alternate data communication channels of power stations i.e. SGTPS, ATPS,STPS, Tons HPS & Gandhisagar HPS is not functioning. The telemetry of Bansagar –II & Bansagar-III is very unreliable and fails too frequently because of improper functioning of communication channels.

Further, the Express Voice Channels ,up to SLDC are also not available for many of the stations. The present status of availability of alternate data channels as well as express voice channes are enclosed herewith as **annexure-10.8**. The action for restoration of alternate data channels, express voice channels as well as improving reliability of telemetry data channels need to be taken.

ACTION : T&C, MPPTCL & O&M :GEN,MPPGCL

10.9 Problem in 48V battery backup for telemetry :-

The existing 48V DC battery set/chargers provided at 220Kv Satna are not providing adequate backup support in case of outage of mains supply for even half hour. Separate battery bank/charger provided for wide band communication system is not in working condition.

The poor performance of 48V DC at RABS HPS Bargi is well known problem since long. Outage of telemetry is quite often in event of mains failure at Bargi which leads to outage of telemetry of Bargi HPS, 132KV Seoni S/s , 1322KV Balaghat S/s , 132KV Chnidwara S/s etc. No remedial measures have been taken so far. **ACTION : T&C, MPPTCL & Hydel O&M ,MPPGCL**

10.10 Non Availability of telemetry of BLA Power:-

The telemetry of BLA power has not yet commissioned. The present status of establishment of communication channel as well as IEC 101 gateway may please be provided.

[ACTION : M/s BLA POWER]

ITEM NO. 11. Any other issue with the permission of the chair.

ITEM No 12 : DATE AND VENUE OF NEXT OCC MEETING : It is proposed to hold 30th OCC meeting of Operation and Coordination Committee of MP on 22nd September 2012 at SLDC, Jabalpur. It is also proposed that the OCC members host the alternate OCC meeting. The roster for the same shall be discussed & finalized in the meeting.

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FREQUENCY PARTICULARS

S. No.	Particulars	Apr-12		May-12		Jun-12	
1	**INTEGRATED OVER AN-HOUR**						
1.1	Maximum Frequency	50.35 Hz	Between 17.00 hrs & 18.00 Hrs on 22.04.12	50.36 Hz	Between 1700 Hrs & 1800 Hrs on 12.05.12	50.5 Hz	Between 1700 Hrs & 1800 Hrs on 03.06.12
1.2	Minimum Frequency	49.5 Hz	Between 21.00 hrs & 22.00 Hrs on 19.04.12	49.24 Hz	Between 23.00 hrs & 24.00 Hrs on 23.05.12	48.97 Hz	Between 10.00 hrs & 11.00 Hrs on 12.06.12
1.3	Average Frequency	49.9 Hz		49.8 Hz		49.7 Hz	
2	**INSTANTANEOUS FREQUENCY**						
2.1	Maximum Frequency	50.66 Hz	AT 18.32 HRS ON 29.04.12	50.75 Hz	AT 18.04 HRS ON 27.05.12	50.68 Hz	AT 18.04 HRS ON 03.06.12
2.2	Minimum Frequency	49.08 Hz	AT 19.07 HRS ON 19.04.12	48.82 Hz	AT 22.07 HRS ON 16.05.12	48.75 Hz	AT 11.04 HRS ON 12.06.12

3 Percentage of time when frequency was :-

	%age of time when frequency was	Apr-12	May-12	Jun-12
3.1	Below 48.5 Hz	0.00	0	0
3.2	Between 48.50 Hz and 48.8 Hz	0.00	0	0.08
3.3	Between 48.80 Hz and 49.2 Hz	0.10	1.08	3.92
3.4	Between 49.20 Hz and 49.5 Hz	2.28	9.74	16.67
3.5	Between 49.50 Hz and 49.7 Hz	13.34	26.24	28.67
3.6	Between 49.70 Hz and 50.2 Hz	80.34	61.58	49.23
3.7	Between 50.20 Hz and 50.3 Hz	2.85	1.11	1
3.8	Between 50.30 Hz and 51.0 Hz	1.09	0.25	0.43
3.9	Between 51.0 Hz AND 51.5 Hz	0.00	0	0
3.1	Above 51.5 Hz	0.00	0	0
4.1	No. of times frquency touched 48.80 Hz	0	0	57
4.2	No. of times frquency touched 48.60 Hz	0	0	0
4.3	No. of times frquency touched 51.0 Hz	0	0	0

Voltage Profile During the Month of APR- 2012

Date	Indore		Itarsi		Bina		Gwalior		Nagda		Birsingpur		Satpura	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	425	407	426	408	429	408	427	401	427	406	418	406	425	417
2	421	400	420	402	419	409	424	389	423	399	413	406	423	417
3	423	400	421	404	422	407	421	400	424	398	413	405	426	417
4	424	404	423	407	420	403	419	393	423	402	416	407	423	416
5	424	406	427	408	422	408	421	394	426	406	415	405	424	414
6	422	404	424	407	425	408	423	397	423	404	416	407	425	414
7	421	402	420	404	418	404	419	397	421	402	413	404	423	414
8	424	408	423	410	427	409	427	401	424	407	416	401	425	417
9	423	400	419	402	420	408	426	392	423	397	415	404	424	412
10	424	406	421	403	429	414	431	409	424	404	415	410	426	419
11	424	403	425	406	427	417	429	411	425	399	416	412	425	417
12	422	407	423	409	429	416	428	403	423	404	417	410	425	411
13	424	400	424	403	431	410	432	406	423	399	416	410	427	416
14	422	405	424	409	425	418	430	408	423	403	415	407	427	414
15	424	403	421	404	424	414	426	401	424	402	416	408	426	411
16	424	409	424	412	430	413	428	402	426	406	419	408	425	416
17	423	397	419	400	425	406	429	390	423	400	416	405	427	413
18	423	404	423	406	426	406	422	386	423	403	415	407	423	413
19	424	410	425	413	428	409	424	399	424	409	416	408	426	412
20	424	411	425	411	429	409	430	400	426	410	416	408	426	415
21	424	406	425	409	425	407	423	401	425	405	415	405	426	414
22	424	408	426	411	425	407	428	402	427	409	416	405	425	411
23	425	406	425	409	424	405	425	399	426	409	416	407	426	413
24	423	400	426	400	426	414	426	407	426	400	415	408	424	409
25	425	411	427	412	425	413	424	405	428	413	416	410	425	416
26	425	400	426	413	427	412	428	404	428	400	417	408	426	411
27	424	400	424	406	426	413	426	405	427	400	415	407	423	415
28	425	409	425	410	427	407	428	399	426	411	417	404	424	415
29	423	404	423	409	420	407	424	399	426	405	414	405	424	415
30	424	400	424	406	426	408	424	400	426	401	413	406	426	413
Max / Min	**425**	**397**	**427**	**400**	**431**	**403**	**432**	**386**	**428**	**397**	**419**	**401**	**427**	**409**

Voltage Profile During the Month of MAY 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	406	424	411	428	403	437	394	425	406	416	408	424	417
2	423	406	424	411	421	408	422	396	425	406	417	404	422	416
3	425	411	426	413	428	413	424	394	428	412	416	407	426	418
4	424	408	423	410	423	403	419	397	427	410	415	401	423	416
5	422	409	421	410	423	405	420	393	424	411	414	406	422	417
6	424	409	424	409	424	407	419	391	426	410	416	405	424	419
7	421	405	421	406	417	400	416	390	425	407	411	404	423	414
8	424	404	423	406	421	402	417	392	427	406	412	405	425	414
9	425	400	424	402	425	403	424	399	427	402	414	405	422	412
10	423	409	424	410	426	405	426	390	427	411	414	406	426	419
11	426	408	424	406	425	411	425	402	427	411	415	407	425	415
12	424	404	424	404	431	406	431	399	427	406	416	408	425	415
13	423	410	422	402	427	410	423	397	425	411	416	405	423	418
14	424	406	422	409	425	415	422	405	426	409	413	407	423	414
15	423	403	423	407	422	403	418	391	425	406	412	405	422	411
16	424	406	425	408	424	410	422	400	425	408	416	401	422	414
17	428	400	427	403	428	403	429	403	426	404	415	406	427	410
18	421	402	421	407	422	408	421	395	424	407	414	408	421	413
19	422	400	421	405	422	405	419	389	426	403	415	407	420	412
20	423	407	422	408	419	405	422	397	427	411	415	407	421	412
21	424	397	423	402	422	406	423	398	429	402	417	406	420	409
22	421	399	420	403	417	402	417	391	424	403	415	410	419	407
23	422	400	419	404	415	402	418	394	426	404	417	411	419	409
24	423	399	423	404	419	402	416	387	427	401	419	413	423	409
25	426	403	424	406	421	404	419	395	427	404	415	408	423	414
26	423	399	423	403	420	398	419	392	424	401	416	408	424	407
27	423	409	424	412	425	409	421	395	426	411	419	415	421	415
28	421	407	423	410	425	412	421	394	424	411	419	410	418	412
29	424	407	423	413	425	415	423	403	428	410	414	405	423	418
30	425	407	426	409	423	411	421	400	427	409	416	408	426	416
	427	410	423	408	422	407	419	395	429	411	415	408	423	413
Max / Min	**428**	**397**	**427**	**402**	**431**	**398**	**437**	**387**	**429**	**401**	**419**	**401**	**427**	**407**

Voltage Profile During the Month of Jun 2012

Date	Indore		Itarsi		Bina		Gwalior		Nagda		Birsingpur		Satpura	
	Max	Min	Max	Min	Max	Min	Max	Min	4 27	Min	Max	Min	Max	Min
1	426	406	424	409	420	404	417	390	427	409	419	408	425	415
2	421	407	421	409	422	410	417	379	424	410	416	412	423	414
3	421	407	421	409	429	408	429	397	424	410	420	411	424	416
4	423	408	421	409	429	412	428	401	425	410	418	407	421	414
5	421	408	422	408	429	411	426	404	425	410	418	408	423	414
6	419	403	417	407	425	413	421	402	423	406	418	407	418	411
7	422	405	420	403	422	409	419	399	424	403	419	413	421	411
8	423	407	424	407	425	411	423	398	426	409	418	414	421	417
9	426	410	425	413	427	410	422	387	428	411	418	415	424	419
10	424	411	423	413	425	410	419	391	424	411	418	414	425	420
11	424	406	423	410	426	410	421	396	427	406	418	412	425	417
12	426	404	423	409	429	404	430	383	428	407	416	412	422	411
13	425	404	426	407	426	408	421	365	426	406	418	410	427	411
14	427	407	427	411	425	415	421	388	427	410	420	415	427	421
15	425	406	426	411	425	404	419	388	426	410	417	413	426	419
16	425	409	424	410	429	402	423	376	425	409	413	413	425	417
17	427	414	425	412	428	405	420	379	428	416	413	413	425	419
18	423	408	424	408	428	402	420	382	424	408	416	413	423	419
19	426	411	424	411	421	399	418	381	426	410	419	413	424	419
20	427	410	425	409	420	403	416	387	427	411	420	415	426	416
21	426	410	426	411	421	402	419	386	426	411	423	416	426	417
22	426	413	425	415	426	417	418	393	426	413	424	418	425	419
23	422	410	425	411	427	407	419	384	427	411	423	415	426	417
24	426	411	425	413	429	404	428	390	427	411	424	415	424	417
25	425	411	423	409	425	405	422	379	427	411	419	413	423	415
26	425	411	426	413	425	412	420	385	426	411	422	416	426	419
27	424	409	422	411	423	411	422	390	428	409	420	414	422	415
28	423	408	421	410	425	408	420	392	426	409	419	413	421	414
29	423	408	423	410	425	408	420	392	426	409	420	414	421	415
30	423	405	423	405	427	408	421	383	426	408	419	415	421	414
31														
Max / Min	**427**	**403**	**427**	**403**	**429**	**399**	**430**	**365**	**428**	**403**	**424**	**407**	**427**	**411**

Requirement of 36 kv capacitor bank						
S. No.	**T&C Circle**	**Name of 220/132KV Sub-station**	**Sub station installed capacity**		**Requirement (1x12 MVAR)**	**REMARKS**
			MVA (XMER)	**MVAR (CAP)**		
1	Ujjain	Ratlam220	143	15	2	
2	Jabalpur	Chhindwara	120	15	2	
3	Ujjain	Jaora	123	25	2	
4	Bhopal	Harda	103	20	1	
5	Ujjain	Khachrod	80	10	1	
6	Ujjain	Alot	80	10	1	
7	Jabalpur	Katni	80	5	1	
8	Ujjain	Nagda220	140	10	2	On 100 MVA Xmer
9	Jabalpur	Narsingpur	80	10	1	
10	Sagar	Damoh 220KV	120	10	2	
11	Ujjain	Sailana	60	0	1	
12	Ujjain	Suwasra	95.5	15	1	
13	Ujjain	Chapda	115.5	10	2	
14	Indore	Kanwan	60	10	1	
15	Sagar	Sagar	115.5	15	1	
16	Jabalpur	Amarwara	40	0	1	
17	Jabalpur	Kymore	56	5	1	
18	Satna	Rewa 220KV	80	0	1	
19	Indore	Khargone	115.5	30	1	
20	Ujjain	Garoth	60	10	1	
21	Ujjain	Dewas220	80	0	1	
22	Indore	Barwani	80	15	1	
23	Satna	Kotma	100	0	1	
24	Ujjain	Kannod	56	15	1	
25	Ujjain	Ratangarh	60	10	1	
26	Ujjain	Mandsaur	103	25	1	
27	Jabalpur	Shahpura	45	5	1	
28	Ujjain	Neemuch	60	10	1	
29	Ujjain	Manasa	60	10	1	
30	Bhopal	Berasia	56	5	1	
31	Jabalpur	Katni 220KV	60	0	1	
32	Bhopal	Hoshangabad 220KV	80	10	1	
33	Ujjain	Malhargarh	80	10	1	
34	Bhopal	Chambal Bhopal	143	15	2	
35	Sagar	Khajuraho	40	0	1	
36	Satna	Rampur	80	0	1	
37	Bhopal	Multai	80	5	1	
38	Bhopal	Sarni 220KV	60	0	1	
39	Indore	Sanawad	60	10	1	
40	Gwalior	Morar	63	0	1	
41	Gwalior	Morena	80	10	1	
42	Jabalpur	Seoni220	40	0	1	
43	Satna	Rewa	120	10	1	
		Total			**50**	

ANNEXURE - VII

M.P POWER TRANSMISSION COMPANY LIMITED

TRANSMISSION WORKS COMPLETED DURING 2012-13 (UP TO 30.06.2012)

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
	Sub-Total (C)		**35.46**	**66.00**			**1694.00**	**0.00**	**0.00**	**30.54**	**35.46**
	Total (EHV LINES) (A + B + C)		**37.06**	**69.20**			**1852**	**3.2**	**0**	**30.54**	**35.46**
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		
	Sub Total (B) (220KV S/s)			**320**			**2332**	**0**	**320**	**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.	132/33	1x40	40	June'2012	14.06.2012	606	0	40	0	0
	Sub Total (C.b) (ADDITIONAL TRANSFORMER)			**40**			**606**	**0**	**40**	**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		
	Sub Total (C.c) (AUGMENTATION OF CAPACITY)			**23**			**720**	**0**	**23**	**0**	**0**
	Sub-Total (C) (132 kv Sub-stations)			**63**			**1326**	**0**	**63**	**0**	**0**
	Total (EHV SUB - STATIONS) (A+B+C)			**383**			**3658**	**0**	**383**	**0**	**0**
										5.7.2012	

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

Date	Month : April-2012				Month : May-2012				Month : June-2012			
	U/F 48.8 Hz		U/F 48.6 Hz		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	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	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4	0	0.0	0	0.0	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	0	0.0	0	0.0
6	0	0.0	0	0.0	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	0	0.0	0	0.0
8	0	0.0	0	0.0	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	0	0.0	0	0.0
10	0	0.0	0	0.0	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	2	**21.2**	0	0.0
12	0	0.0	0	0.0	0	0.0	0	0.0	8	**109.2**	0	0.0
13	0	0.0	0	0.0	0	0.0	0	0.0	6	**117.9**	0	0.0
14	0	0.0	0	0.0	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	0	0.0	0	0.0
16	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
17	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
18	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
19	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
20	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
21	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
22	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
23	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
24	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
25	0	0.0	0	0.0	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	0	0.0	0	0.0
27	0	0.0	0	0.0	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	0	0.0	0	0.0
29	0	0.0	0	0.0	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	0	0.0	0	0.0
31					0	0.0	0	0.0				
TOTAL	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	0	**0.00**	**16**	**117.90**	0	**0.00**

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

Annexure-2.5(i)

Discoms wise Average Supply Hours

PARTICULARS	East Zone			Central Zone		
	Apr-12	May-12	Jun-12	Apr-12	May-12	Jun-12
Commissinary HQ	23:48	24:00	23:57	23:53	24:00	24:00
District HQ	22:41	24:00	24:00	23:54	24:00	24:00
Tehsil HQ	19:04	20:49	19:25	23:09	23:39	23:05
Rural -3Phase	14:02	16:46	13:51	16:23	18:55	13:30
Rural -1Phase	0:00	0:00	0:00	0:00	0:00	0:00
Total Rural	14:02	16:46	13:51	16:23	18:55	13:30
PARTICULARS	**West Zone**			**MP**		
	Apr-12	**May-12**	**Jun-12**	**Apr-12**	**May-12**	**Jun-12**
Commissinary HQ	24:00	24:00	24:00	23:53	24:00	23:58
District HQ	23:28	24:00	24:00	23:17	24:00	24:00
Tehsil HQ	18:34	21:54	20:10	20:16	22:02	20:49
Rural -3Phase	13:52	17:21	12:09	14:44	17:37	13:16
Rural -1Phase	0:00	0:00	0:00	0:00	0:00	0:00
Total Rural	13:52	17:21	12:09	14:44	17:37	13:16

LIST OF 33KV FEEDERS UNDER MPPKVVCL, JABALPUR

(For which group to be allocated)

JABALPUR REGION

Name of EHV Substation	Name of 33kV feeder
132KV	
132kV Marhotal	33kV Sewer Plant (Kathonda)
	33KV Sihora
	33kV Sewage
132KV Shahpura	33KV Belkheda-III
132KV Mansakra	33KV Hargarh (INDUSTRIAL)
220kV Pipariya	33kV Panagar
SAGAR REGION	
132KV	
132kV Khajuraho	33kV Airport
132kV Bijawar	33kV Bada Malhara
REWA REGION	
132KV	
132kV Maihar	33kV Reliance
132kV Waidhan	33kV Rajmilan
132kV Rampur	33kV Sajjanpur
	33kV JP Agri
132kV Beohari	33kV Madwas
132kV Rajmilan	33kV Kanua Khas
	33kV Khutar
	33kV Rajmilan
132KV Nagod	33KV Nagod
	33KV Raikwara
	33KV Jasso
	33KV Singhpur
220KV	
220kV Satna	33kV Bhilai JP
	33KV Raigaon
220kV Kotar	33kV Semariya
220kV Maihar	33kV Reliance

LIST OF 33KV FEEDERS UNDER MPPKVVCL,BHOPAL

(For which group to be allocated)

BHOPAL REGION

Name of EHV Substation	**Name of 33KV feeder**
132KV	
132KV Ayodhyanagar	33KV BMC
132KV Raisen	33KV Paimad
132KV Gudgaon	33KV Gudgaon
132KV Kurawar	33KV Oswal Denim
220KV	
220KV Mandideep	33KV Mahapet
220KV Rajgarh (Biora)	33KV M&B Switch Gear
220KV Betul	33KV Junawani
220KV Bairagarh	33KV Iser

LIST OF 33KV FEEDERS UNDER MPPKVVCL,INDORE
(For which group to be allocated)
INDORE REGION

Name of EHV Substation	Name of 33KV feeder
132KV	
132KV Betma	33KV Chiklonda
	33KV Gohan
132KV Dhamnod	33KV NVDA
132KV Manawar	33KV NVDA
	33KV Anjanda
132KV Jamli	33KV MES (Karbala)
132KV Barwani	33KV Rehgun
132KV Kanwan	33KV Rajod
132KV Sanwer	33KV Panth Piplai-II
	33KV Panth Piplai-III
132KV Kukshi (Susari)	33KV Water Works
132KV Petlawad	33KV Raipuriya
	33KV Sarangi
	33KV Kothara
	33KV Bolasa
220KV	
220KV Jetpura (Indore)	33KV BPCL
	33KV Industtrial
	33KV PGCIL
220KV Pithampur	33KV Nalrip Water Works
	33KV MPAKVN
	33KV Sagore
220KV Indore EAST (Bicholi)	33KV Kannod (Industrial)

UJJAIN REGION

Name of EHV Substation	Name of 33KV feeder
132KV	
132KV Manasa	33KV Kukdewshawar
132KV Alot	33KV Patan
132KV Jaora	33KV Suzlon-III
	33KV Suzlon-IV
132KV Daloda	33KV Suzlon-i
132KV Susner	33KV Suzlon-i
	33KV Suzlon-II
132KV Agar	33KV Suzlon-i
	33KV Suzlon-II
132KV Berchha	33KV Shet Khedi
220KV	
220KV Ratlam	33KV Ganga Sagar

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

13-Jul-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		
AM -II	4	Deferred														0		
AMK EXT	5	11-Jul-12	04-Aug													25	A.O.H.	
STP-I	1	23-Apr-12	25-May													33	C.O.H.	
STP-I	2	26-May-12	17-Jun													23	A.O.H.	
STP-I	3	Deferred														0	A.O.H.	
STP-I	4	Deferred														0		
STP-I	5	1-Sep-12	21-Sep													21	A.O.H.	
STP-II	6	Deferred														0		
STP-II	7	12-Aug-12	30-Sep													50	C.O.H.	Econ.LTSH RH APH Repl
STP-III	8	Deferred														0		
STP-III	9	7-Aug-12	25-Sep													50	C.O.H.	Econ.LTSH RH APH Repl
SGTPS - I	1	6-Sep-12	30-Sep													25	A.O.H.	
SGTPS - I	2	Deferred														0		
SGTPS - II	3	Deferred														0		
SGTPS - II	4	7-Jul-12	31-Jul													25	A.O.H.	
SGTPS - III	5	27-Jul-12	30-Aug													35	A.O.H.	IP & LP Module

	APR		MAY		JUN		JUL		AUG		SEP		OCT		NOV		DEC		JAN		FEB		MAR				
Capacity under Planned Maintenance	0	21	63	63	63	21	140	587	640	920	623	602	0	0	0	0	0	0	0	0	0	0	0	0			
PLANNED MAINTENANCE %	0	1	2	2	2	1	5	20	22	31	21	21	0	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		1788		1455		1696		2221		2259		2262		2262		2262		2262				
Generation In MU	1635		1582		1508		1331		1082		1221		1652		1627		1683		1683		1574		1683				
PUF In %	77		73		71		61		50		58		76		77		77		77		77		77				

Annexure-3.3

Proposed shut down of transmission elements during 01-08-12 to 30-09-12

S.No	Name of Sub station	Details of Transmission Element	Date of Maintenance	Time	Remark
Nagda					
1	Nagda 400	400KV Indore Main Bay	03-Sep-12	08:00hrs-17:00hrs	For Post monsoon maintenance
2	Nagda 400	400KV Main Bus-I	05-Sep-12	08:00hrs-17:00hrs	For Post monsoon maintenance
3	Nagda 400	400KV Main Bus-I	06-Sep-12	08:00hrs-17:00hrs	For Post monsoon maintenance
4	Nagda 400	400KV Rajgarh-I Main Bay	08-Sep-12	08:00hrs-17:00hrs	For Post monsoon maintenance
5	Nagda 400	400KV Main Bus-I	10-Sep-12	08:00hrs-17:00hrs	For Post monsoon maintenance
6	Nagda 400	400KV Main Bus-I	11-Sep-12	08:00hrs-17:00hrs	For Post monsoon maintenance
7	Nagda 400	400KV 315MVA Transformer-I Main Bay	17-Sep-12	08:00hrs-17:00hrs	For Post monsoon maintenance
8	Nagda 400	400KV 315MVA Transformer-II Main Bay	24-Sep-12	08:00hrs-17:00hrs	For Post monsoon maintenance
9	Nagda 400	400KV 315MVA Transformer-II Main Bay	25-Sep-12	08:00hrs-17:00hrs	For Post monsoon maintenance
Indore					
NIL					
Jabalpur					
NIL					

Annexure-3.3

Proposed shut down of transmission elements during 01-08-12 to 30-09-12

S.No	Name of Sub station	Details of Transmission Element	Date of Maintenance	Time	Remark
Sagar					
1	Bina 400	400KV Bhopal-I	14-Sep-12	09:00hrs-17:00hrs	For maintenance work
2	Bina 400	400KV Bhopal-II	15-Sep-12	09:00hrs-17:00hrs	For maintenance work
3	Bina 400	315MVA Transformer-I	17-Sep-12	09:00hrs-17:00hrs	For maintenance work
4	Bina 400	315MVA Transformer-I, Main, Tie and 220KV side	18-Sep-12	09:00hrs-17:00hrs	For maintenance work
5	Bina 400	315MVA Transformer-II	19-Sep-12	09:00hrs-17:00hrs	For maintenance work
6	Bina 400	315MVA Transformer-II, Main, Tie and 220KV side	20-Sep-12	09:00hrs-17:00hrs	For maintenance work
7	Bina 400	315MVA Transformer-III	21-Sep-12	09:00hrs-17:00hrs	For maintenance work
8	Bina 400	315MVA Transformer-III, Main, Tie and 220KV side	27-Sep-12	09:00hrs-17:00hrs	For maintenance work
Bhopal					
1	Bhopal 400	220KV Shujalpur-I	22-Sep-12	09:00hrs to 17:00hrs	For maintenance work
2	Bhopal 400	315MVA Transformer-I	24-Sep-12	09:00hrs to 17:00hrs	For maintenance work
3	Bhopal 400	315MVA Transformer-I & Tie Bay	25-Sep-12	09:00hrs to 17:00hrs	For maintenance work
4	Bhopal 400	220KV ICT-I	26-Sep-12	09:00hrs to 17:00hrs	For maintenance work
5	Bhopal 400	315MVA Transformer-II	27-Sep-12	09:00hrs to 17:00hrs	For maintenance work
6	Bhopal 400	315MVA Transformer-II & Tie Bay	28-Sep-12	09:00hrs to 17:00hrs	For maintenance work

Unitwise / Stationwise Genration in MU

A. Thermal

Stn. Name	UNIT No.	Capacity MW	Apr-12	May-12	Jun-12
AMARKANTAK	3	120	41.15	52.75	47.94
	4	120	61.68	60.09	35.65
	PH II	**240**	**102.82**	**112.84**	**83.59**
	PH III	**210**	**142.06**	**143.45**	**128.91**
	TOT	**450**	**244.89**	**256.29**	**212.50**
SATPURA	1	62.5	18.45	4.82	13.23
	2	62.5	23.06	23.34	12.58
	3	62.5	22.16	27.14	18.18
	4	62.5	30.34	31.90	28.13
	5	62.5	27.01	29.49	22.33
	PH I	**312.5**	**121.02**	**116.69**	**94.45**
	6	200	107.92	106.62	97.70
	7	210	103.56	103.95	99.48
	PH II	**410**	**211.48**	**210.57**	**197.18**
	8	210	122.67	112.71	100.55
	9	210	102.33	104.25	87.01
	PH III	**420**	**225.00**	**216.96**	**187.56**
	TOT	**1142.5**	**557.49**	**544.22**	**479.19**
SANJAY GANDHI	1	210	129.41	134.07	125.23
	2	210	123.96	114.29	122.70
	PH I	**420**	**253.37**	**248.36**	**247.93**
	3	210	105.66	109.46	108.19
	4	210	110.68	121.79	104.88
	PH II	**420**	**216.34**	**231.25**	**213.06**
	PH III	**500**	363.22	302.16	355.30
	TOT	**1340**	**832.93**	**781.76**	**816.29**
MPPGCL THERMAL		**2932.5**	**1635.31**	**1582.28**	**1507.98**

AMARKANTAK POWER HOUSE-I RETIRED FROM SERVICE WEF 01.04.2009

B. Hydel

Station Name	Capacity MW	Apr-12	May-12	Jun-12
GANDHISAGAR	**115.0**	25.00	26.08	0.32
R.P.SAGAR	**172.0**	0.01	0.11	1.19
J.SAGAR	**99.0**	0.22	0.90	1.67
CHAMBAL	**386.0**	**25.23**	**27.09**	**3.19**
M.P.CHAMBAL	**193.0**	**12.61**	**13.54**	**1.60**
PENCH	**160.0**	19.58	12.91	10.14
M.P.PENCH	**107.0**	**13.05**	**8.60**	**6.76**
BARGI	**90.0**	53.25	23.93	8.86
TONS	**315.0**	54.09	95.11	113.91
BIRSINGHPUR	**20.0**	0.00	0.00	0.64
B.SGR(DEOLONDH)	**60.0**	0.00	0.00	0.00
B.SGR(SILPARA)	**30.0**	5.53	6.89	7.60
RAJGHAT	**45.0**	0.00	0.00	0.00
M.P.RAJGHAT	**22.5**	**0.00**	**0.00**	**0.00**
B.SGR(JINHA)	**20.0**	4.91	6.92	8.70
MADIKHEDA	**60.0**	0.00	0.00	0.00
TOTAL HYDEL	**1186.0**	**162.59**	**172.85**	**153.03**
MPPGCL Hydel	**915.0**	**162.36**	**171.84**	**150.16**
MPSEB HYDEL Share	**917.5**	**143.45**	**155.00**	**148.06**

C. NHDC (Ex-Bus Gen)

Station Name	Capacity MW	Apr-12	May-12	Jun-12
Indira Sagar Hydel Project	1000	157.83800	186.56580	109.35600
Omkareshwar Hydel Project	520	72.58470	89.80020	56.84450

MP SUPPLY EXCLUDING AUXILIARY CONS.
in Million Units

S.No.	Particulars	Apr-12	May-12	Jun-12
1	MP Thermal Availability	1437.52	1385.22	1322.13
2	MP Hydel Availability	141.60	152.38	145.45
3	Indira Sagar	157.63	186.20	109.23
4	Omkareshwar	72.58	89.80	56.84
5	Schedule / Drawal From Central Sector	1444.08	1560.93	1475.90
6	Schedule of DVC	189.36	183.01	211.92
7	Schedule of Sujen	46.44	46.42	39.48
8	Sardar Sarovar	80.48	150.39	84.58
9	Additional Power Purchase	0.00	112.63	63.68
10	Sale of Power	-53.70	-97.67	-29.86
11	Banking of Power	43.30	-73.58	-188.85
12	Energy Exchange	0.00	0.00	0.00
13	Unschedule Interchange	-188.19	-157.93	-116.37
14	Other Imp / Exp	116.99	129.79	143.02
15	**Total MP Supply excl. Aux. Cons.**	**3488.09**	**3667.59**	**3317.14**
16	Average Supply per Day	116.27	118.31	110.57
17	Maximum Daily M.P. Supply	122.20	124.02	123.93
18	Minimum Daily M.P. Supply	108.53	104.07	93.99
19	Registered Demand : MW	6729	6638	6536
20	Unrestricted Demand : MW	8190	7308	7290

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- April 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	49.88	2255	2052	284	316	145	13	-2	2807	1943	271	62	13	10	64	0	0	0	2	16	2381	5176	2316	-66	-1	5122	712	1	713	5141	5853
2:00	49.89	2250	2047	278	242	101	13	-2	2680	1947	271	62	13	10	64	0	0	0	2	16	2386	5052	2295	-91	-1	4974	712	11	723	5002	5714
3:00	49.96	2253	2050	270	175	73	14	-8	2573	1950	271	62	13	10	65	0	0	0	8	16	2395	4955	2300	-95	-1	4873	788	10	798	4888	5677
4:00	49.96	2248	2046	241	153	69	14	-8	2514	1951	271	62	13	10	65	-10	0	0	8	16	2386	4887	2213	-173	-1	4727	609	6	615	4738	5347
5:00	49.87	2248	2046	222	131	64	14	-8	2468	1951	265	62	13	10	66	-34	0	0	8	16	2357	4812	2142	-215	-1	4609	595	5	600	4632	5227
6:00	50.00	2262	2058	190	138	64	14	-4	2460	1949	265	62	13	10	61	-47	0	0	4	16	2334	4780	1974	-360	-1	4433	626	0	626	4433	5058
7:00	50.04	2267	2063	153	120	57	14	-9	2398	1941	245	62	13	10	56	-95	0	0	9	16	2258	4642	1785	-473	-1	4182	641	0	641	4177	4817
8:00	50.07	2261	2057	143	113	55	13	-14	2367	1938	236	62	13	10	51	-85	0	0	14	16	2255	4609	1780	-475	-1	4147	342	0	342	4138	4480
9:00	50.03	2260	2056	150	116	57	13	-7	2386	1935	236	62	14	10	51	-106	0	0	7	16	2224	4598	2040	-185	-1	4425	459	27	486	4448	4907
10:00	50.02	2259	2055	162	120	61	12	-6	2404	1926	233	62	73	10	54	-83	0	0	6	16	2297	4689	2126	-170	-1	4529	518	10	528	4536	5054
11:00	49.90	2261	2057	181	135	64	12	-5	2444	1921	232	62	73	10	55	-59	0	0	5	16	2316	4748	2228	-88	-1	4672	652	0	652	4685	5337
12:00	49.95	2258	2055	186	138	69	12	-3	2458	1920	227	62	73	10	58	-75	0	0	3	16	2293	4739	1990	-302	-1	4448	702	1	703	4456	5158
13:00	50.01	2245	2043	175	123	68	12	-3	2418	1918	226	62	73	10	61	-90	0	0	3	16	2278	4684	1974	-304	-1	4391	775	2	777	4393	5168
14:00	49.91	2254	2051	182	120	59	12	-3	2420	1912	214	62	73	10	61	-79	0	0	3	16	2271	4680	1961	-310	-1	4381	798	0	798	4393	5191
15:00	49.87	2261	2058	169	108	55	11	0	2402	1908	214	62	70	10	61	-204	0	0	0	16	2136	4526	1713	-424	-1	4113	1049	2	1051	4131	5181
16:00	49.92	2238	2037	165	91	52	11	-1	2354	1904	214	62	14	10	58	-238	0	0	1	16	2041	4385	1784	-257	-1	4138	971	12	983	4160	5130
17:00	50.07	2244	2042	161	54	48	11	-1	2315	1901	218	62	14	10	57	-236	0	0	1	16	2043	4347	1701	-342	-1	4015	877	14	891	4020	4897
18:00	50.16	2248	2046	150	43	50	11	-3	2297	1906	216	62	14	10	57	-148	0	0	3	16	2135	4421	1741	-395	-1	4037	606	11	616	4028	4634
19:00	49.88	2259	2055	183	209	88	12	-8	2540	1894	283	62	368	10	60	-72	0	0	8	16	2628	5157	2447	-181	-1	4987	790	0	790	5005	5795
20:00	49.94	2298	2091	270	390	168	12	-1	2931	1907	301	62	541	10	60	-61	0	0	1	16	2835	5754	2504	-331	-1	5435	1142	0	1142	5444	6586
21:00	49.90	2307	2099	307	539	228	12	-1	3185	1910	301	62	550	10	65	-22	0	0	1	16	2893	6066	2633	-260	-1	5817	1121	39	1160	5874	6995
22:00	49.92	2303	2096	330	630	276	12	-1	3343	1915	301	62	483	10	65	-8	0	0	1	16	2844	6175	2757	-88	-1	6099	788	59	847	6173	6961
23:00	49.80	2282	2077	324	620	275	12	0	3307	1928	301	62	117	10	64	-15	0	0	0	16	2483	5778	2359	-124	-1	5666	912	76	988	5775	6688
24:00	49.93	2264	2060	306	577	253	12	1	3210	1926	301	62	18	10	65	-21	0	0	-1	16	2375	5572	2212	-163	-1	5421	817	48	865	5480	6297
Avg.	49.95	2262	2058	216	225	104	12	-4	2612	1925	255	62	111	10	60	-74	0	0	4	16	2353	4968	2124	-245	-1	4735	750	14	764	4756	5506
00 TO 06 HRS.	49.93	2253	2050	247	192	86	13	-5	2584	1949	269	62	13	10	64	-15	0	0	5	16	2373	4944	2207	-166	-1	4790	674	6	679	4806	5479
06 TO 12 HRS.	50.00	2261	2057	163	124	61	13	-7	2410	1930	235	62	43	10	54	-84	0	0	7	16	2274	4671	1992	-282	-1	4400	552	6	559	4407	4959
12 TO 18 HRS.	49.99	2248	2046	167	90	55	11	-2	2368	1908	217	62	43	10	59	-166	0	0	2	16	2151	4507	1812	-339	-1	4179	846	7	853	4187	5033
06TO 18 HRS.	50.00	2255	2052	165	107	58	12	-5	2389	1919	226	62	43	10	57	-125	0	0	5	16	2212	4589	1902	-310	-1	4290	699	7	706	4297	4996
18 TO 24 HRS.	49.90	2285	2080	287	494	215	12	-1	3086	1913	298	62	346	10	63	-33	0	0	1	16	2676	5750	2485	-191	-1	5571	928	37	965	5625	6554

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- May 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	49.72	2134	1942	334	459	193	12	22	2962	2036	280	60	99	10	-213	-46	151	0	-22	17	2372	5322	2274	-98	-2	5234	263	123	386	5402	5665
2:00	49.69	2129	1937	327	372	166	12	20	2834	2036	277	60	87	10	-210	-46	151	0	-20	17	2363	5185	2277	-86	-2	5109	257	127	384	5283	5540
3:00	49.75	2140	1948	312	296	126	12	19	2712	2034	276	60	75	10	-210	-16	151	0	-19	17	2379	5079	2327	-51	-2	5038	266	122	388	5198	5465
4:00	49.81	2133	1941	302	249	108	12	14	2625	2034	276	60	75	10	-210	-16	151	0	-14	17	2384	4998	2297	-88	-2	4920	116	179	294	5127	5243
5:00	49.69	2116	1926	275	214	94	12	12	2532	2033	276	60	75	10	-217	-23	151	0	-12	17	2371	4892	2277	-94	-2	4807	155	111	266	4963	5118
6:00	49.97	2126	1935	243	142	74	12	12	2417	2033	273	60	76	10	-217	-46	151	0	-12	17	2346	4751	2098	-248	-2	4513	162	94	255	4610	4772
7:00	49.92	2118	1927	101	39	67	12	-6	2140	2009	168	60	76	10	-54	-196	151	0	6	17	2247	4375	1759	-488	-2	3896	303	0	303	3906	4208
8:00	50.00	2112	1922	100	87	65	12	-5	2180	2005	168	60	76	10	-54	-315	151	0	5	17	2124	4293	1615	-509	-2	3794	223	0	223	3794	4017
9:00	49.90	2098	1909	100	100	67	12	0	2189	2003	172	60	76	10	-54	-362	151	0	0	17	2074	4250	1650	-423	-2	3837	231	0	231	3848	4078
10:00	49.96	2076	1889	98	103	67	12	4	2173	2002	167	60	235	10	-60	-356	151	0	-4	17	2224	4385	1709	-515	-2	3880	235	2	237	3887	4122
11:00	49.80	2096	1907	104	110	69	12	8	2210	2003	191	60	309	10	-59	-369	151	0	-8	17	2307	4505	2023	-283	-2	4231	279	11	291	4269	4548
12:00	49.81	2106	1916	119	137	74	12	17	2275	2007	200	60	308	10	-59	-347	151	0	-17	17	2332	4595	2219	-113	-2	4492	381	42	423	4560	4941
13:00	49.90	2094	1906	133	138	67	12	20	2276	2009	200	60	308	10	-60	-220	151	0	-20	17	2456	4720	2392	-64	-2	4666	400	32	432	4712	5113
14:00	49.80	2106	1916	169	145	74	12	20	2336	2014	194	60	308	10	-60	-67	151	0	-20	17	2609	4933	2541	-67	-2	4875	292	102	394	5007	5298
15:00	49.76	2094	1905	175	169	82	12	25	2368	2022	194	60	160	10	-62	-44	151	0	-25	17	2484	4840	2409	-75	-2	4775	244	158	401	4968	5211
16:00	49.89	2111	1921	165	185	87	12	24	2394	2021	201	60	95	10	-59	-61	151	0	-24	17	2412	4794	2214	-198	-2	4606	218	151	369	4773	4991
17:00	49.93	2088	1900	137	182	90	12	22	2344	2016	190	60	95	10	-56	-225	151	0	-22	17	2238	4570	1907	-331	-2	4249	358	43	401	4301	4659
18:00	50.15	2115	1925	149	173	87	12	14	2359	2024	190	60	95	10	-56	-262	151	0	-14	17	2217	4564	1884	-333	-2	4240	311	12	323	4234	4545
19:00	50.00	2119	1928	269	286	128	12	-3	2621	2016	222	60	355	10	-37	-57	151	0	3	17	2741	5351	2788	47	-2	5407	74	35	109	5443	5517
20:00	49.86	2140	1947	377	440	192	12	23	2991	2035	320	60	536	10	-37	-19	151	0	-23	17	3051	6030	3066	15	-2	6055	202	206	408	6287	6489
21:00	49.83	2149	1955	390	536	246	12	25	3164	2036	322	60	560	10	-37	-8	151	0	-25	17	3087	6239	3043	-44	-2	6205	143	226	369	6463	6606
22:00	49.67	2147	1954	378	547	257	12	26	3173	2033	323	60	512	10	-37	-20	151	0	-26	17	3025	6185	2902	-123	-2	6072	201	182	383	6315	6516
23:00	49.57	2123	1932	377	547	255	12	26	3149	2049	324	60	179	10	-37	-23	151	0	-26	17	2705	5842	2553	-152	-2	5699	266	143	409	5915	6181
24:00	49.84	2129	1937	352	541	248	13	27	3117	2048	322	60	113	10	-218	-20	151	0	-27	17	2458	5563	2320	-138	-2	5435	306	184	490	5645	5951
Avg.	49.84	2117	1926	229	258	124	12	15	2564	2023	239	60	204	10	-99	-132	151	0	-15	17	2441	5011	2273	-186	-2	4835	245	95	340	4954	5200
00 TO 06 HRS.	49.77	2130	1938	299	289	127	12	16	2681	2034	276	60	81	10	-213	-32	151	0	-16	17	2369	5038	2258	-111	-2	4937	203	126	329	5097	5300
06 TO 12 HRS.	49.90	2101	1912	104	96	68	12	3	2195	2005	178	60	180	10	-57	-324	151	0	-3	17	2218	4401	1829	-389	-2	4022	275	9	284	4044	4319
12 TO 18 HRS.	49.90	2101	1912	155	165	81	12	21	2346	2018	195	60	177	10	-59	-146	151	0	-21	17	2403	4737	2225	-178	-2	4569	304	83	387	4666	4970
06TO 18 HRS.	49.90	2101	1912	129	131	74	12	12	2270	2011	186	60	179	10	-58	-235	151	0	-12	17	2310	4569	2027	-283	-2	4295	289	46	336	4355	4644
18 TO 24 HRS.	49.79	2134	1942	357	483	221	12	21	3036	2036	305	60	376	10	-68	-24	151	0	-21	17	2844	5868	2778	-66	-2	5812	199	163	361	6011	6210

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- June 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	49.67	2096	1908	231	314	153	14	29	2648	1978	299	53	18	9	-233	0	93	0	-29	15	2203	4837	2219	16	-2	4865	336	199	535	5111	5448
2:00	49.69	2095	1907	229	253	129	14	27	2559	1978	298	53	18	9	-233	0	93	0	-27	15	2205	4750	2245	40	-2	4802	335	127	462	4975	5310
3:00	49.79	2098	1910	216	151	72	14	22	2383	1984	298	53	18	9	-233	0	101	0	-22	15	2223	4593	2291	68	-2	4672	337	116	453	4817	5154
4:00	49.80	2096	1907	199	119	33	14	18	2289	1977	295	53	18	9	-233	-7	91	0	-18	15	2201	4477	2082	-119	-2	4369	482	65	548	4461	4943
5:00	49.72	2089	1901	193	106	43	14	15	2272	1981	295	53	18	9	-233	-17	86	0	-15	15	2192	4451	2018	-174	-2	4288	469	30	499	4354	4824
6:00	49.93	2097	1908	176	33	49	14	14	2194	1983	297	53	18	9	-233	-64	86	0	-14	15	2150	4330	1868	-283	-2	4059	456	7	463	4074	4530
7:00	49.86	2094	1906	158	0	38	13	-13	2102	1991	264	53	18	9	-366	-38	86	0	13	15	2046	4135	1804	-242	-2	3904	294	2	297	3924	4218
8:00	50.01	2085	1898	152	0	36	13	-13	2086	1993	264	53	18	9	-366	-55	86	0	13	15	2031	4104	1639	-392	-2	3723	251	3	254	3725	3977
9:00	49.87	2088	1900	150	3	36	13	-13	2090	1990	262	53	18	9	-366	-55	86	0	13	15	2025	4102	1724	-301	-2	3812	194	10	203	3837	4030
10:00	49.83	2078	1891	150	3	38	13	-3	2092	1986	272	53	144	9	-366	-159	86	0	3	15	2043	4122	1631	-412	-2	3721	278	4	283	3744	4023
11:00	49.60	2062	1876	175	10	39	13	13	2127	1993	289	53	179	9	-367	-101	86	0	-13	15	2142	4255	2061	-81	-2	4186	267	42	309	4279	4546
12:00	49.82	2065	1879	188	6	9	13	22	2116	1995	293	53	179	9	-367	-58	86	0	-22	15	2184	4288	2109	-76	-2	4223	333	113	446	4359	4691
13:00	49.82	2069	1883	200	6	7	13	26	2135	1995	288	53	176	9	-367	-27	86	0	-26	15	2203	4324	2193	-10	-2	4325	501	82	582	4431	4932
14:00	49.68	2050	1866	194	10	7	14	25	2115	1991	282	53	155	9	-367	-7	86	0	-25	15	2193	4294	2159	-34	-2	4271	547	141	688	4454	5001
15:00	49.59	2043	1860	183	9	5	14	27	2098	1995	285	53	68	9	-367	-10	86	0	-27	15	2107	4191	2010	-97	-2	4105	591	107	698	4263	4853
16:00	49.77	2056	1871	168	13	7	14	26	2099	1991	280	53	32	9	-367	-20	86	0	-26	15	2052	4137	1938	-113	-2	4035	419	172	591	4235	4654
17:00	49.89	2064	1879	150	47	24	14	18	2132	1988	281	53	32	9	-367	-54	86	0	-18	15	2025	4143	1783	-242	-2	3913	572	34	606	3960	4532
18:00	50.06	2059	1873	160	59	31	14	3	2140	1981	291	53	32	9	-367	-97	86	0	-3	15	2000	4126	1771	-229	-2	3909	450	12	462	3914	4363
19:00	49.86	2096	1907	203	213	81	14	6	2425	1959	292	53	276	9	-53	-149	86	0	-6	15	2482	4893	2276	-206	-2	4699	294	0	294	4718	5012
20:00	49.73	2106	1917	267	505	223	14	25	2951	1952	294	53	385	9	-53	-95	86	0	-25	15	2622	5560	2559	-63	-2	5509	465	43	508	5597	6062
21:00	49.74	2126	1935	285	562	256	14	29	3080	1947	293	53	402	9	-53	0	93	0	-29	15	2730	5797	2603	-127	-2	5681	438	105	543	5830	6267
22:00	49.68	2121	1930	290	558	253	14	27	3073	1943	293	53	382	9	-53	0	93	0	-27	15	2708	5767	2644	-64	-2	5715	456	112	568	5881	6337
23:00	49.66	2103	1914	282	459	222	14	28	2919	1960	295	53	120	9	-53	0	93	0	-28	15	2464	5370	2403	-62	-2	5320	605	68	673	5443	6048
24:00	49.64	2099	1910	265	402	194	14	27	2811	1963	295	53	18	9	-234	0	93	0	-27	15	2184	4982	2188	4	-2	4997	590	164	754	5215	5805
Avg.	49.78	2085	1897	203	160	83	14	16	2372	1979	287	53	114	9	-262	-42	88	0	-16	15	2211	4584	2092	-133	-2	4463	415	73	488	4567	4982
00 TO 06 HRS.	49.77	2095	1907	207	162	80	14	21	2391	1980	297	53	18	9	-233	-15	91	0	-21	15	2196	4573	2120	-75	-2	4509	403	91	493	4632	5035
06 TO 12 HRS.	49.83	2079	1891	162	4	33	13	-1	2102	1991	274	53	93	9	-366	-78	86	0	1	15	2079	4168	1828	-251	-2	3928	270	29	299	3978	4248
12 TO 18 HRS.	49.80	2057	1872	176	24	14	14	21	2120	1990	284	53	82	9	-367	-36	86	0	-21	15	2096	4203	1975	-121	-2	4093	513	91	604	4209	4723
06TO 18 HRS.	49.82	2068	1882	169	14	23	13	10	2111	1991	279	53	88	9	-367	-57	86	0	-10	15	2087	4185	1902	-186	-2	4011	391	60	452	4094	4485
18 TO 24 HRS.	49.72	2108	1919	265	450	205	14	24	2877	1954	294	53	264	9	-83	-41	90	0	-24	15	2532	5395	2446	-86	-2	5320	475	82	557	5447	5922

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month :- April 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	49.88	1625	1833	207	129	0	1839	1968	1722	1647	-75	165	0	1839	1818	1863	1642	-221	475	0	1839	2122
2:00	49.89	1597	1794	198	141	7	1808	1949	1692	1585	-107	162	5	1808	1758	1805	1595	-211	436	0	1808	2036
3:00	49.96	1576	1798	222	142	3	1802	1944	1670	1500	-170	227	9	1802	1737	1758	1576	-183	614	0	1802	2191
4:00	49.96	1557	1782	224	78	12	1796	1874	1644	1464	-180	124	0	1796	1590	1728	1481	-247	627	0	1796	2109
5:00	49.87	1541	1681	140	119	10	1698	1818	1623	1434	-189	132	0	1698	1572	1701	1493	-207	545	5	1698	2049
6:00	50.00	1519	1462	-57	135	0	1462	1598	1594	1357	-237	133	0	1462	1490	1665	1613	-52	441	0	1462	2054
7:00	50.04	1493	1299	-194	94	0	1297	1392	1564	1295	-269	129	0	1297	1422	1639	1588	-51	392	0	1297	1978
8:00	50.07	1482	1105	-377	91	7	1110	1201	1553	1272	-281	96	0	1110	1365	1623	1769	146	512	0	1110	2277
9:00	50.03	1476	1195	-281	98	18	1211	1309	1547	1186	-360	131	0	1211	1316	1615	2044	429	487	0	1211	2529
10:00	50.02	1504	1242	-262	92	16	1257	1350	1572	1126	-447	122	0	1257	1247	1656	2162	506	585	0	1257	2746
11:00	49.90	1518	1446	-72	89	4	1454	1543	1592	1196	-396	141	0	1454	1341	1680	2030	350	644	0	1454	2680
12:00	49.95	1517	1418	-99	95	1	1421	1516	1592	1264	-328	135	0	1421	1401	1679	1766	87	608	0	1421	2377
13:00	50.01	1509	1345	-164	86	0	1345	1431	1579	1322	-257	129	0	1345	1451	1664	1724	60	637	0	1345	2361
14:00	49.91	1506	1444	-62	102	0	1448	1549	1579	1295	-284	127	0	1448	1426	1661	1642	-19	612	0	1448	2258
15:00	49.87	1456	1422	-34	70	1	1429	1499	1528	1218	-310	127	0	1429	1350	1595	1473	-122	607	0	1429	2085
16:00	49.92	1413	1403	-11	57	5	1411	1467	1484	1151	-333	95	0	1411	1249	1537	1584	47	572	0	1411	2160
17:00	50.07	1403	1219	-184	59	16	1232	1291	1473	1131	-342	95	0	1232	1224	1514	1665	151	551	0	1232	2213
18:00	50.16	1426	1110	-316	64	13	1118	1182	1498	1290	-208	105	0	1118	1389	1542	1637	95	510	0	1118	2139
19:00	49.88	1637	1577	-60	109	10	1592	1701	1691	1618	-73	160	0	1592	1783	1842	1793	-49	401	0	1592	2201
20:00	49.94	1800	1885	85	129	10	1898	2027	1864	1787	-77	164	0	1898	1954	2109	1763	-347	448	7	1898	2221
21:00	49.90	1876	2213	338	106	21	2241	2347	1947	1878	-69	153	0	2241	2037	2246	1726	-520	419	27	2241	2178
22:00	49.92	1903	2119	216	124	41	2165	2289	1986	1865	-121	190	0	2165	2060	2310	2115	-195	351	10	2165	2482
23:00	49.80	1780	1974	195	116	27	2013	2129	1883	1765	-118	185	0	2013	1960	2145	1927	-218	490	0	2013	2429
24:00	49.93	1720	1817	97	147	11	1831	1978	1828	1692	-136	179	0	1831	1874	2055	1913	-142	438	0	1831	2354
Avg.	**49.95**	**1576**	**1566**	**-11**	**103**	**10**	**1578**	**1681**	**1654**	**1431**	**-224**	**142**	**1**	**1578**	**1576**	**1776**	**1738**	**-38**	**517**	**2**	**1578**	**2260**
00 TO 06 HRS.	49.93	1569	1725	156	124	5	1734	1858	1658	1498	-160	157	2	1734	1661	1753	1567	-187	523	1	1734	2094
06 TO 12 HRS.	50.00	1498	1284	-214	93	8	1292	1385	1570	1223	-347	126	0	1292	1349	1649	1893	244	538	0	1292	2431
12 TO 18 HRS.	49.99	1452	1324	-128	73	6	1330	1403	1524	1235	-289	113	0	1330	1348	1585	1621	35	582	0	1330	2203
06TO 18 HRS.	50.00	1475	1304	-171	83	7	1311	1394	1547	1229	-318	119	0	1311	1348	1617	1757	140	560	0	1311	2317
18 TO 24 HRS.	49.90	1786	1931	145	122	20	1957	2079	1866	1767	-99	172	0	1957	1945	2118	1873	-245	425	7	1957	2311

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month :- May 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	49.72	1662	1829	167	68	0	1845	1912	1731	1667	-63	56	0	1845	1738	1942	1737	-205	144	0	1845	1896
2:00	49.69	1630	1797	167	32	26	1840	1872	1697	1619	-78	68	0	1840	1702	1874	1693	-181	118	6	1840	1833
3:00	49.75	1603	1786	183	44	32	1831	1876	1670	1590	-80	59	0	1831	1662	1818	1661	-157	110	12	1831	1796
4:00	49.81	1585	1776	190	12	40	1825	1837	1650	1592	-58	21	0	1825	1623	1781	1552	-229	127	14	1825	1702
5:00	49.69	1558	1735	177	0	4	1755	1755	1617	1528	-89	49	0	1755	1591	1739	1544	-195	200	12	1755	1771
6:00	49.97	1521	1601	81	0	4	1606	1606	1574	1450	-124	41	0	1606	1493	1672	1461	-210	141	12	1606	1616
7:00	49.92	1418	1442	24	6	15	1460	1466	1468	1305	-163	36	0	1460	1344	1527	1150	-378	84	30	1460	1266
8:00	50.00	1383	1288	-95	6	28	1316	1322	1430	1259	-171	30	0	1316	1289	1486	1247	-240	81	12	1316	1339
9:00	49.90	1371	1233	-139	7	26	1263	1269	1418	1184	-233	42	0	1263	1230	1482	1420	-62	65	12	1263	1501
10:00	49.96	1415	1169	-245	17	21	1192	1210	1448	1164	-284	42	0	1192	1208	1543	1547	4	174	0	1192	1723
11:00	49.80	1447	1325	-123	33	7	1340	1372	1476	1224	-253	40	0	1340	1271	1581	1683	102	138	0	1340	1832
12:00	49.81	1470	1396	-74	40	5	1409	1449	1500	1315	-185	43	0	1409	1365	1615	1782	166	151	14	1409	1957
13:00	49.90	1511	1552	41	42	7	1564	1606	1544	1381	-163	51	0	1564	1436	1669	1733	63	142	7	1564	1887
14:00	49.80	1569	1645	76	26	23	1678	1705	1610	1371	-240	47	0	1678	1425	1747	1860	112	128	13	1678	2012
15:00	49.76	1533	1623	90	22	20	1654	1676	1585	1330	-255	43	0	1654	1383	1704	1821	117	118	8	1654	1960
16:00	49.89	1518	1558	40	15	18	1581	1596	1572	1336	-236	21	0	1581	1361	1686	1712	26	85	8	1581	1812
17:00	49.93	1455	1416	-39	7	13	1432	1439	1500	1294	-207	23	0	1432	1320	1608	1540	-68	98	0	1432	1641
18:00	50.15	1456	1364	-92	14	14	1372	1386	1504	1350	-154	21	0	1372	1365	1608	1526	-82	100	0	1372	1619
19:00	50.00	1707	1765	59	33	10	1776	1809	1754	1573	-181	17	0	1776	1590	1957	2068	111	110	0	1776	2179
20:00	49.86	1883	2107	223	29	14	2130	2159	1925	1838	-87	18	0	2130	1865	2217	2110	-107	100	0	2130	2220
21:00	49.83	1937	2206	269	37	20	2237	2274	1983	1931	-52	20	0	2237	1961	2325	2068	-257	113	0	2237	2192
22:00	49.67	1921	2139	218	54	10	2170	2224	1966	1906	-60	23	0	2170	1947	2307	2028	-279	97	0	2170	2145
23:00	49.57	1813	1998	185	55	17	2040	2095	1910	1790	-120	29	0	2040	1842	2162	1911	-250	99	0	2040	2034
24:00	49.84	1727	1875	148	69	25	1909	1977	1791	1719	-72	44	0	1909	1771	2046	1841	-204	132	0	1909	1982
Avg.	**49.84**	**1587**	**1651**	**64**	**28**	**17**	**1676**	**1704**	**1638**	**1488**	**-150**	**37**	**0**	**1676**	**1533**	**1796**	**1696**	**-100**	**119**	**7**	**1676**	**1830**
00 TO 06 HRS.	49.77	1593	1754	161	26	18	1784	1810	1657	1575	-82	49	0	1784	1635	1804	1608	-196	140	9	1784	1769
06 TO 12 HRS.	49.90	1417	1309	-109	18	17	1330	1348	1457	1242	-215	39	0	1330	1285	1539	1471	-68	115	12	1330	1603
12 TO 18 HRS.	49.90	1507	1526	19	21	16	1547	1568	1553	1344	-209	34	0	1547	1382	1670	1699	28	112	6	1547	1822
06TO 18 HRS.	49.90	1462	1418	-45	20	16	1438	1458	1505	1293	-212	37	0	1438	1333	1605	1585	-20	114	9	1438	1712
18 TO 24 HRS.	49.79	1831	2015	184	46	16	2044	2090	1888	1793	-95	25	0	2044	1829	2169	2004	-164	109	0	2044	2126

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month :- June 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	49.67	1533	1608	75	138	95	1719	1857	1581	1565	-16	98	4	1719	1682	1732	1692	-40	216	47	1719	1972
2:00	49.69	1506	1614	108	139	70	1700	1839	1550	1528	-22	98	20	1700	1660	1675	1661	-14	229	55	1700	1960
3:00	49.79	1472	1587	115	119	79	1676	1795	1520	1510	-9	123	12	1676	1655	1605	1575	-30	239	43	1676	1867
4:00	49.80	1444	1564	121	117	62	1636	1753	1491	1469	-22	107	13	1636	1598	1560	1336	-224	250	77	1636	1671
5:00	49.72	1437	1522	85	74	18	1553	1627	1481	1460	-22	112	4	1553	1588	1547	1306	-241	366	20	1553	1703
6:00	49.93	1403	1414	11	55	5	1422	1477	1445	1331	-113	88	0	1422	1422	1483	1313	-170	318	6	1422	1640
7:00	49.86	1360	1299	-61	27	4	1309	1335	1401	1205	-196	73	0	1309	1283	1427	1400	-27	268	0	1309	1675
8:00	50.01	1353	1205	-148	24	9	1214	1238	1394	1136	-257	67	0	1214	1203	1417	1382	-35	285	0	1214	1667
9:00	49.87	1350	1199	-151	24	13	1217	1241	1391	1072	-318	66	0	1217	1143	1415	1540	125	273	0	1217	1819
10:00	49.83	1357	1230	-128	15	12	1248	1263	1386	1113	-273	66	0	1248	1184	1423	1378	-45	231	3	1248	1619
11:00	49.60	1391	1302	-89	39	2	1320	1359	1415	1225	-189	66	0	1320	1306	1467	1659	192	253	3	1320	1935
12:00	49.82	1404	1357	-46	43	6	1371	1414	1429	1297	-133	72	0	1371	1376	1486	1569	83	268	8	1371	1853
13:00	49.82	1413	1416	4	79	14	1439	1518	1440	1413	-26	73	0	1439	1494	1498	1496	-2	265	9	1439	1778
14:00	49.68	1403	1397	-6	83	13	1423	1506	1430	1394	-35	73	0	1423	1481	1487	1480	-7	252	19	1423	1765
15:00	49.59	1365	1390	25	46	52	1459	1505	1398	1306	-92	74	0	1459	1396	1438	1409	-28	264	8	1459	1698
16:00	49.77	1349	1328	-21	50	45	1382	1432	1385	1228	-157	76	0	1382	1312	1416	1480	64	269	16	1382	1775
17:00	49.89	1350	1249	-102	35	30	1282	1317	1387	1119	-268	79	0	1282	1201	1420	1546	126	295	3	1282	1849
18:00	50.06	1354	1227	-127	27	24	1249	1276	1390	1161	-229	46	0	1249	1205	1432	1521	89	278	3	1249	1799
19:00	49.86	1565	1473	-92	28	36	1515	1542	1596	1446	-149	57	0	1515	1509	1738	1780	42	270	0	1515	2057
20:00	49.73	1731	1826	95	46	51	1892	1938	1761	1761	0	59	0	1892	1834	2041	1922	-119	278	0	1892	2215
21:00	49.74	1806	1957	150	33	72	2044	2077	1842	1797	-45	53	0	2044	1864	2164	1927	-237	277	0	2044	2219
22:00	49.68	1786	1890	104	32	66	1974	2006	1825	1801	-23	62	0	1974	1881	2140	2023	-116	345	2	1974	2390
23:00	49.66	1680	1731	51	138	36	1784	1923	1732	1707	-25	78	0	1784	1803	1977	1882	-94	266	29	1784	2196
24:00	49.64	1564	1620	56	128	61	1699	1827	1617	1604	-14	87	0	1699	1708	1806	1774	-33	274	62	1699	2129
Avg.	**49.78**	**1474**	**1475**	**1**	**64**	**37**	**1522**	**1586**	**1512**	**1402**	**-110**	**77**	**2**	**1522**	**1491**	**1616**	**1585**	**-31**	**272**	**17**	**1522**	**1885**
00 TO 06 HRS.	49.77	1466	1552	86	107	55	1618	1725	1511	1477	-34	104	9	1618	1601	1600	1480	-120	270	41	1618	1802
06 TO 12 HRS.	49.83	1369	1265	-104	29	8	1280	1308	1403	1175	-228	68	0	1280	1249	1439	1488	49	263	2	1280	1761
12 TO 18 HRS.	49.80	1372	1335	-38	53	30	1372	1426	1405	1270	-135	70	0	1372	1348	1448	1489	40	270	9	1372	1777
06TO 18 HRS.	49.82	1371	1300	-71	41	19	1326	1367	1404	1222	-181	69	0	1326	1299	1444	1488	45	267	6	1326	1769
18 TO 24 HRS.	49.72	1689	1749	61	68	54	1818	1886	1729	1686	-43	66	0	1818	1767	1978	1885	-93	285	15	1818	2201

Annexure 5.0

System Disturbance / System Incidence : April 2012 to June 2012

1. **System disturbance on 05.04.12 at 00.30 Hrs at 220KV switch yard STPS, Sarni :-** On dated 05.04.12 at around 00.25 hrs, MP system was running normal at frequency 49.90 Hz. At around 00.30 Hrs, it has been reported that at Satpura TPS, 220KV Main Bus-I PT (B-phase make SCT Ghaziabad) got burst out. Consequently Bus bar differential protection Zone-I (R&B phase) and Zone-II (R-phase) operated. On account of operation of Bus bar differential protection all connected lines and generators on 220KV Bus-I & II tripped. Afer isolating faulty Bus-I PT, the 220 KV main Bus-II was charged at 01.10 Hrs with back feed supply taken from 220 KV Itarsi s/s. There was no consumer load loss due to this tripping, however there was generation loss of 470 MW and energy loss of about 4.0 MU.

2. **System disturbance on 14.04.12 at 15.40 Hrs at 220KV switch yard SGTPS, Birsinghpur :-** On dated 14.04.12 at around 14.35 hrs, MP system was running normal at frequency 49.85 Hz. At around 14.40 Hrs, it has been reported that at SGTPS Birsinghpur, 220/6.9KV 40 MVA Station X'mer tripped on under voltage protection. Due to tripping of station X'mer important station auxiliaries tripped. This has resulted into tripping of running unit No. 1, 2 & 3. Station X'mer was charged at 15.50 hrs and unit No. 1, 2 & 3 were synchronized in due course of time. There was no consumer load loss due to this tripping, however there was generation loss of 524 MW and energy loss of about 2.5 MU.

3. **System disturbance on 04.05.12 at 07.45 Hrs at 220KV S/s Bina :-** On dated 04.05.12 at around 07.45 hrs, 132KV double circuit tower of 132KV Bina-Chanderi and 132KV Bina-Rajghat lines collapsed at location No. 256. This has resulted tripping of 132KV Bina-Chanderi line on C-ph, Zone-1 (but A-ph pole of CB not tripped, Later trip coil was found burnt). The tilting & collapsing of tower resulted in fault on A-ph and heavy fault current, Both 220/132KV X-mer tripped. Hence total supply failed at 132KV s/s Bina causing interruption to 132KV Refinery feeder, Railway traction and some of the load of 33KV feeders. System was normalized in due course of time. There was a load loss of around 58 MW for 15 to 20 Minutes.

4. **System disturbance on 07.05.12 at 15.06 Hrs at 220KV S/s Ujjain :-** On dated 07.05.12 at around 15.16 hrs, 132KV Ujjain-Ghosla line tripped from both ends, during tripping a line fault occurred at location no. 554 top conductor and disc flash over was found in 5 nos. disc insulators. During tripping of 132KV Ujjain-Ghosla line at Ujjain end, its B-ph pole of MOCB got stuck-up. This resulted in heavy fault current fed and tripping occurred from all connected sources. Total supply was interrupted at 220/132KV s/s Ujjain. System was normalized in due course of time. There was a load loss of around 60 MW and energy loss of about 30 Mwh.

5. **System disturbance on 11.05.12 at 00.58 Hrs at 220KV S/s Burwaha :-** On dated 11.05.12 at around 00.58 Hrs, Y-ph L.A. of 220KV Itarsi line got burst at Burwaha sub station. DPR of this line did not operate due to V.T. fuse fail hance line tripped on back up E/F. During this tripping 220KV Omkareshwar-Burwaha and Omkareshwar-Nimrani line alongwith five running machines at OSP also tripped. There was no consumer load loss due to this tripping, however there was generation loss at OSP of 250 MW and energy loss of about 125 Mwh.

6. **System disturbance on 13.05.12 at 14.40 Hrs at 132KV S/s Chhindwara :-** On dated 13.05.12 at around 14.40 Hrs, C-ph CT of 132KV interconnector-III failed at 132KV sub station Chhindwara. This has created Bus fault and total supply failed at 132KV sub station Chhindwara. System was normalized in due course of time. There was consumer load loss of around 77 MW for 20 Min at Chhindwara & Khapaswami area.

7. **System disturbance on 24.05.12 and 27.05.12 at 220KV S/s Chhindwara :-** On dated 24.05.12 at around 11.51 Hrs, C-ph CT of 220KV Seoni ckt-I failed at 220KV sub station Chhindwara. This has created Bus fault and total supply failed at 220KV sub station Betul. System was normalized in due course of time. There was consumer load loss of around 36 MW for 4 Min only at Betul area.

   On dated 27.05.12 at around 07.12 Hrs, C-ph CT of 220KV Bus-coupler failed at 220KV sub station Chhindwara. The 220KV Chhindwara-Seoni ckt–I was already out from 24.05.2012. The load of 220KV Chhindwara-Seoni ckt–II was on Bus-coupler bkr due to outage of DPR of main breaker from 24.12.2011/ 23.20 Hrs. Due to failure of Bus-coupler, total supply failed at 220KV sub station Chhindwara and Betul. The 220 KV System was normalized in due course of time, the interruption to 220 KV Bus at Chhindwara and Betul was for about 3 hours. There was consumer load loss of around 56 MW for 04 Minutes only at Betul area.

8. **System disturbance on 27.05.12 at 21.45 Hrs at 220KV S/s Jabalpur and Bargi HPS :-** On dated 27.05.12 at around 21.40 hrs, MP system was running normal at frequency 49.90 Hz with N-E-W grid. At around 21.45 Hrs, it has been reported that, 132KV B-ph CT of Bus-coupler bay at Bargi HPS got burst and created bus fault resulting all 132KV out going feeders tripped from remote end, including 45 MW running

machine No-1. Due to delayed opening of 132KV breaker of Bargi-Jabalpur Ckt-II at 220KV s/s Jabalpur, its B-ph pole got burst. This has created Bus fault on 132KV bus, resulting into tripping of all three X'mer (220/132KV) along with 132KV outgoing feeders at Jabalpur 132KV sub station. System was normalized in due course of time. There was consumer load loss of around 260 MW (energy loss about 108 Mwh) and generation loss at Bargi HPS was 31 MW (energy loss of about 98 Mwh).

9. **System disturbance on 16.06.12 at 15.40 Hrs at 220KV S/s Damoh :-** On dated 16.06.12 at around 15.40 hrs, due to heavy thunder and storm 220KV take off gentry collapsed at 220KV S/s Damoh. This gentry coloume fall on 220KV Main Bus-II structure & the conductor of all the three phases of 132KV Narsinggarh feeder dropped on 220KV Main Bus-I, resulting Bus fault. All out going feeders tripped from remote end. Supply of 220KV S/s Damoh got normalized from 132KV Garhakota-Damoh feeder & supply at 132KV S/s Damoh normalized from 132KV Hatta-Damoh feeder. There was consumer load loss of around 25 MW for 50 Minutes only.

10. **System disturbance on 20.06.12 at 15.23 Hrs at 220KV S/s Jabalpur :-** On dated 20.06.12 at around 15.23 hrs, due to heavy raining with thunder storm, the earth wire of 132KV Jabalpur-VFJ feeder no-II was felt on phase conductor creating line fault. The line was tripped from both ends. 132KV S/s Vinoba Bhave & Jabalpur city partially affected. After six hours alternate supply arrangement made from 132KV S/s VFJ, There was consumer load loss of around 50 to 60 MW for six hours.

11. **System disturbance on 28.06.12 at 23.33 Hrs at Amarkantak TPS Chachai :-** On dated 28.06.12 at around 23.25 Hrs MP system was running normal with N-E-W grid. At around 23.33 Hrs, it has been reported that, R-ph CVT of 220KV Traction feeder No.-I got burst at ATPS end, resulting tripping of all connected feeders from remote end along with all running units No.3, 4 & 5. The 220KV Bus & 132KV Far Bus at ATPS Chachai became dead (except Shahdol & Rajmilan feeder No.2, which is on 132KV Near Bus). System was normalized in due course of time. There was consumer load loss of around 60 MW and (energy loss about 50 Mwh) and generation loss at ATPS Chachai was 325 MW (energy loss of about 3154 Mwh).

12. **System disturbance on 30.06.12 at 18.05 Hrs at 220KV S/s Pithampur :-** On dated 30.06.12 at around 18.05 Hrs, during tripping of the 220KV Pithampur-Rajgarh ckt-II, its C-ph pole delayed tripped at 220KV S/s Pithampur causing LBB operation, which resulted tripping of 160 MVA X-mer No.-II and 220KV feeders. MPPTCL are requested to takeup the matter with PGCIL for LBB setting. Total interruption occurred at Pithampur, Jamli, Betma and Bagdi area. System was normalized in due course of time. There was consumer load loss of around 95 MW and energy loss of about 56 Mwh.

Annexure – 6.1.

No. Addl.CE/O&M-II/STP/ET&I/III/ 293 Sarni/dt. 6 JUL 2012

From:- To

Addl.Chief Engineer(O&M)II
MPPGCL, Sarni
Fax no. 07146-278908

The C.E(SLDC)
MPPTCL, Jabalpur.
Fax no. 0761-2664343

Sub: Standard practice at STPS for charging of any 400 KV feeder through Through transfer bus.

Ref.: Letter No.505/1100/2*250 MW /LD/1268 Dated 03.07.2012

-:XOX:-

At Satpura Thermal Power Station 400KV switch yard during charging of any feeder through Transfer Bus PG Isolator of respective feeder heavy sparking was observed, hence following procedure is being adopted since beginning for charging of any of the 400 KV feeder through Transfer Bus.

1) Switch Off the 400 KV breaker of the respective feeder.
2) Open the line and bus isolator.
3) Close the transfer bus isolator of respective feeder.
4) Close the Tie breaker PG Isolator(main bus side as well as Transfer bus side.)
5) Shift the protection of respective breaker to Tie Breaker.
6) Switch on the tie breaker.

This is submitted for your kind information please.

ADDL.CHIEF ENGINEER(O&M)II
MPPGCL:SARNI

Copy to:-
1/ The Chief Engineer(Gen), MPPGCL, Sarni/
2/ The Addl.Chief Engineer(Constn.)MPPGCL,Sarni
3/ The Supdtg.Engineer(ET&I)III,MPPGCL,Sarni.
4/ The Supdg. Engineer(OPN)PH.3, Sarni.

To,

Annexure-10.6(i)

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 /132 KV TRANSFORMER 1	CB	FAULTY	CLOSE
3	BURWAHA 132KV-CHEGAON	CB	FAULTY	CLOSE
4	BURWAHA 220 KV NIMRANI	CB	FAULTY	CLOSE
5	132BUS COUPLER	CB	FAULTY	CLOSE
6	220/132KV 160 MVA XMER-	OLTC	17	3
7	220/132KV 3X40 MVA XMER	OLTC	17	3
8	63 MVA XMER	OLTC	17	4
9	132 KV CHOTI KHARGONE	MW	0	52
10	132 KV CHOTI KHARGONE	CB	OPEN	CLOSE
11	40 MVA XMER	OLTC	17	4
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
4	132KV NEPA –CHEGAON -1	CB	FAULTY	CLOSE
5	132/33 XMER (20 MVA) NEW	CB,MW,MVAR,SOE	**Telemetry Not available**	
6	132 KV NAPA-BADGAON			
7	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 PITAMPUR -BADNAGAR	CB	FAULTY	CLOSE
2	220KV PITHAMPUR - RAJGARH I	CB	NC	CLOSE
3	220KV PITHAMPUR- RAJGARH II	CB	NC	CLOSE
4	220/132 XMER 1	CB	FAULTY	CLOSE
5	220/132 XMER 2	CB	FAULTY	CLOSE
6	220KV BUS COUPLER	CB	FAULTY	CLOSE
7	132/33 KV TRANSFORMER 3	OLTC	N/C	11
8	PITAMPUR 132 KV-HML	CB	FAULTY	OPEN
9	132 KV TRB	CB	FAULTY	OPEN
10	132 KV BUS COUPLE	CB	FAULTY	CLOSE
11	132/33 KV 40 MVA TRANSFORMER 1	CB	FAULTY	CLOSE
12	132/33 KV TRANSFORMER 2	CB	OPEN	CLOSE
13	132 KV IC-2	CB	OPEN	CLOSE
14	132KV HML	MW,MVAR	**NOT AVAILABLE,UPGRADATION OF RTU REQUIRED**	
15	132KV PARASRAMPURIYA	MW,MVAR		
16	132KV JAMLI	MW,MVAR,CB		
17	132/33 KV TRANSFORMER 2	MW,MVAR,CB,OLTC		
18	132/33 KV TRANSFORMER 3	MW,MVAR,CB,OLTC		
19	132/33 KV TRANSFORMER 3	CB	OPEN	CLOSE
20	132/33 KV TRANSFORMER 2	OLTC	N/C	8
21	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	400/220 KV ICT I	OLTC	17	9
7	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 FEEDER**	CB	FAULTY	CLOSE
9	**132 GRASIM**	SOE,MW,MVAR	**Telemetry not available. RTU configuration required for upgradation already arranged by SLDC.**	
10	**132 MAHIDPUR-2**			
11	**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	132/33 KV TRANSFORMER -2	OLTC	N/C	7
5	**220KV RATLAM - NAGDA 2**	CB, SOE MW, MVAR	**TELEMETRY NOT AVAILABLE. UPGRADATION OF RTU REQUIRED TO BE UNDERTAKEN.**	
6	**132/33 TRF-2 & 3 (NEW)**			
7	**132KV RATLAM-SAILANA**			
NEEMUCH 220 KV S/S				
1	220/132 KV TRANSFORMER 2	CB,SOE	**TELEMETRY NOT AVAILABLE.PROVISION OF TELEMETRY ALREADY AVAILABLE**.	
2	220/132 KV TRANSFORMER 2	MW,MVAR		
3	132 NEEMUCH UDEPUR	CB	FAULTY	OPEN
4	220/132 KV TRANSFORMER 1	OLTC	N/C	7
5	132 MALHARGARH	CB	FAULTY	CLOSE
6	132 RATANGARH	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	132KV DEWAS IC-I	CB	NOT CONNECTED	
2	132 KV BUS COUPLER	CB	FAULTY	CLOSE
4	132/33 KV TRANSFORMER 2	OLTC	N/C	7
5	220/132 KV TRANSFORMER 1	OLTC	N/C	7
6	220/132 KV TRANSFORMER 2	OLTC	N/C	7
7	132 /33 KV TRANSFORMER 1	OLTC	N/C	8
10	132/33KV 40 MVA XMER	CB,SOE,MW, MVAR,OLTC	NOT CONNECTED	
UJJAIN 220 KV S/S				
1	220KV JETPURA NZ-1	CB	FAULTY	CLOSE
2	132KV UJJAIN –GHOSLA	CB	FAULTY	CLOSE
3	UJJAIN 132 BUS SECTION	CB	FAULTY	OPEN
4	UJJAIN 132 BUS TRANSFER	CB	FAULTY	CLOSE
5	220/132 KV TRANSFORMER 4	OLTC	N/C	6
6	220/132 KV XMER-3	OLTC	N/C	6
SHUJALPUR 220 KV S/S				
1	160MVA TRANSFORMER-II	OLTC	2	10
2	132/33 63MVA XMER 2	CB, SOE, MW, MAVR	Telemetry Not Available	
3	132KV Shujalpur-Shajapur			
4	132KV Interconnector-1			
5	132KV Interconnector-2			
6	220/132 XMER-1 132 SIDE	CB	FAULTY	CLOSE
7	220/132 XMER-3	CB	N/C	CLOSE
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			
6	132KV BADOD-MODAK	CB	FAULTY	CLOSE
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 upgradation is required to be done**	
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 KV 220 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
AMARKANTAK THERMAL POWER STATION				
1	ATPS 220/6.6 KV Stn Xmer A & B	CB	OPEN	CLOSE
2	132KV RAJMILAN-1	CB	FAULTY	CLOSE
3	132KV RAJMILAN-2	CB	FAULTY	CLOSE
4	132/33 KV TRNSFRMER 4 & 5	OLTC	N/C	6
5	220KV TRACTION 1	CB	FAULTY	CLOSE
6	132KV BUS COUPLER	CB	N/C	CLOSE
7	220KV BUS 2	VOLTAGE	0	231
8	220KV BUS 2	FREQUENCY	N/C	
9	220/132 XMER-1 132 SIDE	CB	OPEN	CLOSE
10	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**				
BANSAGAR-II HPS				
1	132/33KV STN XMER	CB	FAULTY	CLOSE
2	BUSCOUPLER	CB	FAULTY	CLOSE
3	220/132KV 160MVA XMER	CB	FAULTY	CLOSE

4	132/33 40 MVA XMER	CB	FAULTY	CLOSE
5	220KV MANGAWAN & SIDHI	CB,MW,MVAR	N/C	
6	220KV MANGAWAN & SIDHI	CB	FAULTY	CLOSE
7	220/132 160 MVA XMER	CB,MW,MVAR	N/C	
8	132KV VOLTAGE	VOLTAGE	125	130
9	132KV FREQUENCY	FREQ	47.5	49.9
10	132KV DEOLONE-1 & 2	MW	0	4
11	132 IC-1 & 2	MW,MVAR	N/C	
12	132KV DEOLONE-1 & 2	CB	FAULTY	CLOSE

Note**:-** **SOE CONNECTION NOT DONE FOR ANY FEEDER AT BANSAGAR-II 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

NOTE SOE'S OF ALL THE FEEDERS ARE NOT COMING.

SATPURA TPS

1	STPS PH II BUS TIE	CB	FAULTY	CLOSE
2	STPS PH II ICT-1	CB	OPEN	CLOSE
3	GT 6	MW	152	170
4	GT6	MVAR	1	45
5	GT7	MW	190	150
6	GT7	MVAR	56	65
7	GENERATOR 7	CB	FAULTY	OPEN
8	GENERATOR 8	CB	OPEN	CLOSE

SANJAY GANDHI THERMAL POWER STATION

1	400/220KV TRANSFORMER	CB	FAULTY	CLOSE
2	STATION TRANSFORMER	CB	FAULTY	CLOSE
3	400KV BUS COUPLER	CB	FAULTY	OPEN
4	400KV BUS TIES	CB	FAULTY	CLOSE
4	400KV DAMOH-3 (MP)	CB	FAULTY	CLOSE
4	400KV DAMOH-2(PG)	CB	FAULTY	CLOSE
4	220KV BUS COUPLER	CB	FAULTY	CLOSE
4	220/6.9 STN TRF	CB	FAULTY	CLOSE

Annexure- 10.6(ii)

CIRCLE WISE INCORRECT TELEMETRED POINTS

Name of circle/PS	No. of Oints received correctly in SCADA	Total No. Of Points considered for telemetry	**No. OF POINTS WHOSE TELEMETRY NEED TO BE CORRECTED**
T&C CIRCLE			
Sagar	319	373	**54**
Bhopal 400	190	207	**17**
Bhopal T&C	271	329	**58**
Indore	471	556	**85**
Jabalpur	316	400	**84**
Nagda	256	335	**79**
Gwalior	256	266	**10**
Satna	157	206	**49**
Ujjain	208	274	**66**
POWER STATIONS			
Thermal	381	416	**35**
Hydel	309	339	**30**

		400 KV SUBSTATIONS													
S.NO	**SUBSTATIONS**	**MW**		**MVAR**		**KV**		**HZ**		**OLTC**		**CB**		**SOE**	
1	**BINA400**	7	7	8	8	2	2	2	2	2	3	13	14	13	14
1	**BINA220(400/220)**	13	13	13	13	2	2	1	1			14	15	14	15
2	**TIKAMGARH220**	2	2	2	2	2	2	1	1	0	1	2	4	2	4
2	**TIKAMGARH132**	6	6	6	6	1	1			0	1	7	9	7	9
3	**Bina 220**	6	6	6	6	1	1	1	1	2	2	7	7	7	7
3	**Bina 132**	10	13	10	13	1	1			1	1	13	17	13	17
4	**SAGAR 220**	15	15	17	17	3	3	3	3	3	3	17	17	17	17
5	**SAGAR132**	6	6	6	6	1	1			3	3	4	6	4	6
6	**DMH220**	5	6	5	6	1	1	1	1			10	14	0	0
6	**DMH132 (220/132)**	2	3	2	3							4	7	0	0
		65	68	68	71	13	13	8	8	11	14	77	110	77	89
7	**BPL400**	9	9	9	9	2	2	2	2	3	3	11	14	11	14
7	**BPL220 (400/220)**	13	13	13	13	2	2	1	1			15	15	15	15
8	**BPL220 (220/132)**	7	8	7	8	2	2	1	1	3	4	9	10	9	10
8	**BPL220 (132)**	9	10	9	10	1	1	1	1			13	15	13	15
		38	40	38	40	7	7	5	5	6	7	48	54	48	54
9	**ITARSI220**	12	12	12	12	2	2	1	1	2	2	13	14	13	14
9	**ITARSI132**	7	7	7	7	1	1			2	2	8	10	8	10
10	**HANDIA220**	6	6	6	6	1	1	1	1	1	2	5	7	5	7
	HANDIA132	4	4	4	4	1	1					7	9	7	9
11	**BAIRAGARH220**	3	4	3	4	2	2	1	1	1	1	3	6	3	6
	BAIRAGARH132	6	8	6	8	1	1			1	1	7	11	7	11
12	**ASTHA132**	7	7	7	7	0	2					6	7	6	7
13	**PIPARIYA132**	5	5	5	5	1	1	1	1	0	2	4	7	4	7
14	**SARNI S/S 220**	3	3	3	3	1	1	1	1	2	2	1	4	1	4
	SARNI S/S132	7	7	7	7	0	1	1	1	0	2	9	10	9	10
		60	63	60	63	10	13	6	6	9	14	63	85	63	85
15	**IND400**	11	11	11	11	2	2	2	2	3	4	13	13	13	13
	IND220 (400/220)	10	10	10	10	2	2	1	1			15	16	15	16
16	**BARWAHA220**	8	8	8	8	2	2	1	1	2	2	6	10	6	10
	BARWAHA132	7	7	7	7	1	1	1	1	2	2	8	10	8	10
17	**NEPANAGAR220**	4	4	4	4	1	1	1	1	2	2	4	5	4	5
	NEPANAGAR132	5	7	6	8	1	1			1	1	7	10	7	10
18	**INDORE NZ 220**	6	6	6	6	2	2	1	1	1	2	8	8	8	8
	INDORE NZ 132	6	6	6	6	1	1			1	1	8	9	8	9
19	**INDORE SZ 220**	7	7	7	7	1	1	1	1	1	4	8	8	8	8
	INDORE SZ 132	14	17	14	17	2	2	1	1	3	4	20	23	20	23
20	**PITHAMPUR220**	6	6	6	6	2	2	1	1	1	2	3	8	3	8
	PITHAMPUR132	6	6	7	7	2	2			0	1	6	16	6	16
21	**IND CHAMBLE132**	7	10	7	10	1	1			2	3	7	7	7	7
		97	105	99	107	20	20	10	10	19	28	113	143	113	143
22	**KTN400**	4	4	4	4	2	2	2	2	0	1	3	3	3	3
23	**KATNI220**	6	6	6	6	1	1	1	1			8	10	0	0
	KATNI 132	2	2	2	2	1	1	1	1			1	9	0	0
24	**NARSINGPUR220**	6	8	6	8	2	2	1	1	0	2	7	9	7	9
	NARSINGPUR132	4	6	4	6	2	2	1	1	0	2	7	8	7	8
25	**JABALPUR220**	11	11	11	11	2	2	2	2	3	3	8	13	8	13
	JABALPUR132	10	12	10	12	1	1	1	1	1	2	9	15	9	15
26	**PANDURNA220**	3	3	3	3	1	1	1	1	1	1	4	4	4	4
	PANDURNA132	7	7	7	7	1	1	1	1	1	2	7	9	7	9
27	**BALAGHAT132**	4	5	4	5	0	1	0	1			6	8	0	0
28	**SEONI132**	5	8	5	8	1	1	1	1			4	11	0	0
29	**BOREGAON132**	3	3	3	3	1	1			0	1	4	4	4	4
30	**CHHINDWARA132**	8	8	8	8	1	1	1	1	2	3	8	9	8	9
		73	83	73	83	16	17	13	14	8	17	76	112	57	74
31	**NAGDA220**	4	6	4	6	1	1	1	1	0	2	4	7	4	7

S.NO	SUBSTATIONS	MW		MVAR		KV		HZ		OLTC		CB		SOE	
		400 KV SUBSTATIONS													
	NAGDA132	9	9	10	10	1	1			0	2	6	13	6	13
32	**NGD220 (400/220)**	9	9	9	9	2	2	1	1			13	13	13	13
	NGD400	11	11	11	11	2	2	2	2	1	3	10	17	10	17
33	**NEEMUCH220**	3	4	3	4	1	1	1	1	2	2	4	5	4	5
	NEEMUCH132	8	8	8	8	1	1			1	2	6	11	6	11
34	**RATLAM220**	5	6	5	6	2	2	1	1	2	2	5	8	5	8
	RATLAM132	10	12	10	12	1	1	1	1	1	1	8	12	8	12
		59	65	60	66	11	11	7	7	7	14	56	86	56	86
35	**GWL220**	6	6	6	6	1	1	1	1	2	2	6	7	6	7
	GWL132	10	10	11	11	1	1			1	3	15	15	15	15
36	**MALANPUR220**	6	6	6	6	1	1	1	1	2	2	6	8	6	8
	MALANPUR132	7	7	7	7	1	1			0	2	11	11	11	11
37	**MEHGAON220**	3	3	3	3	1	1	1	1	1	1	4	4	4	4
	MEHGAON132	8	8	10	10	1	1					11	11	11	11
38	**GUNA220**	4	4	4	4	1	1	1	1	1	1	5	5	5	5
	GUNA132	7	7	7	7	1	1					8	8	8	8
		51	51	54	54	8	8	4	4	7	11	66	69	66	69
39	**BANSAGAR-II220**	5	6	5	6	2	2	1	1			2	7	0	0
	BANSAGAR132	3	3	3	3	1	1	1	1			6	6	0	0
40	**SATNA220**	10	10	10	10	2	2	2	2	2	2	11	12	11	12
	SATNA132	5	10	5	10	2	2			2	2	7	13	7	13
41	**MORWA132**	8	9	8	9	1	1	1	1	0	3	7	9	7	9
42	**Satna 132**	6	6	6	6	1	1			1	2	3	7	3	7
		37	44	37	44	9	9	5	5	5	9	36	54	28	41
43	**BADOD220**	5	5	5	5	1	1			0	1	5	5	5	5
	BADOD132	4	6	4	6	1	1					2	7	2	7
44	**DEWAS220**	6	6	6	6	1	1	1	1	0	2	3	7	3	7
	DEWAS132	7	7	7	7	1	1	1	1	1	2	7	9	7	9
45	**SHUJALPUR220**	7	7	7	7	1	1	1	1	2	3	8	8	8	8
	SHUJALPUR132	6	10	7	11	1	1	1	1	0	2	6	11	6	11
46	**RAJGARH220**	4	4	4	4	1	1					4	6	4	6
	RAJGARH132	5	6	5	6	1	1					4	7	4	7
47	**SHAJAPUR132**	6	6	6	6	1	1			1	2	6	7	6	7
		50	57	51	58	9	9	4	4	4	12	45	67	45	67
48	**STP400**	9	9	11	11	2	2	2	2			11	12	11	12
49	**STP-I**	18	19	18	19	2	2	2	2			13	13	13	13
	STP PH-II	6	6	6	6	0	2	0	1			5	6	5	6
50	**SGTPS**	8	8	8	8	2	2	2	2			6	8	6	8
	BPUR TPS 220	20	20	20	20	2	2	2	2			23	24	23	24
51	**AMK220 TH**	19	20	19	20	1	2	1	2	2	2	18	21	18	21
	AMK132	13	13	13	13	1	1	0	1	0	3	10	13	10	13
		93	95	95	97	10	13	9	12	2	5	86	97	86	97
52	**TONS**	8	8	8	8	2	2	2	2	1	1	5	9	0	9
53	**BARGI132**	7	7	7	7	2	2	1	1	1	1	7	7	7	7
54	**PENCH132**	7	7	7	7	2	2	1	1	0	1	5	8	5	8
55	**GANDHISAGAR132**	12	12	12	12	2	2	1	1	1	1	11	12	11	12
56	**MADHIKHEDA132**	5	5	5	5	1	1	1	1			5	5	5	5
57	**RAJGHAT132HPS**	4	4	4	4	1	1	1	1			0	6	0	0
58	**ISP400**	12	12	12	12	2	2	2	2			14	14	14	14
59	**OSP**	15	15	15	15	2	2	2	2			14	14	14	14
60	**BANSAGARIII132**	5	5	5	5	1	1	1	1			6	7	6	7
		75	75	75	75	15	15	12	12	3	4	67	82	62	76

Annexure - 10.8

Details of existing RTUs/ New RTUs, status of alternate data channel and status of express communication channel

1.(A) Existing RTU connected to SLDC Jabalpur :

Sr. No.	Name of RTU	Critical / Non Critical	Status of first data channel	Status of second data channel	Status of Express communication channel
1	BANSAGAR-I HPS (TONS)	Critical	Channel working	channel not working	Channel not working
2	SATNA 132 kV	Non critical	Channel working	NA	NA
3	SATNA 220 kV	Critical	Channel working	channel not working	NA
4	BIRSINGHPUR TPS	Critical	Channel working	channel not working	Channel not working
5	REWA BANSAGAR II HPS	Critical	Channel working	channel not working	Channel not working
6	BANSAGAR III HPS	Critical	Channel working	channel not working	Channel not working
7	MORWA132 kV	Critical	Channel working	channel not working	Channel not working
8	KATNI 220 kV	Non critical	Channel working	NA	NA
9	KATNI 400 kV	Critical	Channel working	channel not working	NA
10	DAMOH 220 kV	Non critical	Channel working	NA	Channel not working
11	TIKAMGARH 220 kV	Non critical	Channel not working	NA	NA
12	AMARKANTAK TPS	Critical	Channel working	Channel working	Channel not working
13	NARSINGPUR 220 kV	Critical	Channel working	channel not working	NA
14	JABALPUR 220 kV	Critical	Channel working	Channel working	NA
15	SAGAR 132 kV	Non critical	Channel not working	NA	NA
16	BARGI HPS 132 kV	Critical	Channel working	channel not working	Channel not working
17	JABALPUR 400 kV	Non critical	Channel working	NA	NA
18	PENCH HPS 132 kV	Critical	Channel working	channel not working	Channel not working
19	SEONI 132 kV	Non critical	Channel working	NA	NA
20	BALAGHAT 132 kV	Non critical	Channel working	NA	NA
21	CHHINDWARA 132 kV	Non critical	Channel working	NA	NA
22	BOREGAON 132KV	Non critical	Channel working	NA	NA
23	PANDHURANA 220 KV	Non critical	Channel working	NA	Channel not working
24	BINA 220 kV	Critical	Channel working	Channel working	NA
25	BINA 400 kV	Critical	Channel working	Channel working	NA

1. (B) New RTU being connected to SLDC Jabalpur :

1	Sukha 220 KV	Non critical	channel required	NA	Channel required upto nearest WB node
2	Chindwara 220 KV	Non critical	channel required	NA	NA
3	Seoni 220 KV	Non critical	channel required	NA	Channel required upto nearest WB node
4	Birsingpur 220 KV	Non critical	channel required	NA	Channel required from Birsinghpur HPS to Jabalpur WB
5	Sagar 220 KV	Critical	channel required	channel required	NA
6	Sidhi 220 KV	Non critical	channel required	NA	NA
7	Kotar 220 KV	Non critical	channel required	NA	NA
8	Chichli 220 KV	Non critical	channel required	NA	NA
9	Waidhan 132 KV	Non critical	channel required	NA	Channel required upto nearest WB node
10	Amarpatan 132 KV	Non critical	channel required	NA	NA
11	Beohari 132 KV	Non critical	channel required	NA	NA
12	Rampur Niken 132 KV	Non critical	channel required	NA	NA
13	Kotma 132 KV	Critical	channel required	channel required	Channel required upto nearest WB node
14	Benegaon 132 KV	Non critical	channel required	NA	Channel required upto nearest WB node
15	Maihar 220	Non critical	channel required	NA	NA
16	Anoopur 220	Non critical	channel required	NA	NA
17	Chhatarpur 220 KV	Non critical	channel required	NA	NA

2.(A) Existing RTU connected to Sub LDC Bhopal :

1	GWALIOR 220 kV	Non critical	Channel working	NA	Channel not working
2	MARHIKHEDA HPS 132 kV	Non critical	Channel working	NA	Channel not working
3	RAJGHAT HPS 132 kV	Critical	Channel working	channel not working	Channel not working
4	ASTA 132 kV	Non critical	Channel working	NA	NA
5	HANDIA 220 kV	Non critical	Channel working	NA	NA
6	BHOPAL 400 kV	Critical	Channel working	channel not working	NA
7	BHOPAL 220 kV	Critical	Channel working	channel not working	NA
8	PIPARIA 132 kV	Non critical	Channel working	NA	NA
9	ITARSI 220 kV	Critical	Channel working	channel not working	NA
10	SATPURA 220 kV S/S	Critical	Channel working	channel not working	NA
11	SATPURA TPS 400 kV	Critical	Channel working	Channel working	Channel not working
12	MALANPUR 220 kV	Critical	Channel working	Channel working	Channel not working
13	MEHGAON 220 kV	Non critical	Channel working	NA	Channel not working
14	GUNA 220 kV	Non critical	Channel working	NA	NA
15	BERAGARH 220 KV	Non critical	Channel working	NA	NA
16	SATPURA TPS 220 kV S/S	Critical	Channel working	Channel working	Channel not working

2.(B) New RTU being connected to Sub LDC Bhopal :

1	Mandideep 220 KV	Non critical	channel required	NA	NA
2	Shivpuri 220 KV	Non critical	channel required	NA	NA
3	Astha 400 KV	Critical	channel required	channel required	NA
4	Betul 220 KV	Non critical	channel required	NA	NA
5	Pipariya 220 KV	Non critical	channel required	NA	NA
6	Harda 132 KV	Non critical	channel required	NA	NA
7	Sarangpur KV 132	Non critical	channel required	NA	NA
8	Rajgarh (Biora) 220 KV	Critical	channel required	channel required	NA
9	Sabalgarh 220 KV	Non critical	channel required	NA	NA
10	Vidisha 220 KV	Non critical	channel required	NA	NA
11	Pichhore 132 KV	Non critical	channel required	NA	Channel required upto nearest WB node
12	Sheopurkalan 132 KV	Critical	channel required	channel required	Channel required upto nearest WB node

13	Hoshangabad 220 KV	Non critical	channel required	NA	NA
14	Malanpur 220 KV	Non critical	channel required	NA	Channel required upto nearest WB node

3.(A) Existing RTU connected to Sub LDC Indore :

1	SHUJALPUR 220 KV	Non critical	Channel working	NA	Channel not working
2	Badod 220 KV	Non critical	Channel working	NA	Channel not working
3	KV	Critical	Channel working	channel not working	Channel not working
4	NAGDA 220 KV	Non critical	Channel working	NA	NA
5	NAGDA 400 KV	Critical	Channel working	channel not working	Channel not working
6	NEEMUCH 220 KV	Non critical	Channel working	NA	NA
7	INDORE-II 220 KV	Non critical	Channel working	NA	NA
8	UJJAIN 220 KV	Critical	Channel working	channel not working	NA
9	SHAJAPUR 132 KV	Non critical	Channel working	NA	NA
10	INDORE (Chambal) 132 KV	Non critical	Channel working	NA	NA
11	PITHAMPUR 220 KV	Non critical	Channel working	NA	NA
12	BURWAHA 220 KV	Non critical	Channel working	NA	NA
13	NEPANAGAR 220 KV	Critical	Channel working	channel not working	NA
14	INDORE 400 KV	Critical	Channel working	Channel working	NA
15	RATLAM 220 KV	Non critical	Channel working	channel not working	NA
16	DEWAS 220 KV	Critical	Channel working	Channel working	NA
17	INDORE 220 KV (SZ)	Non critical	Channel working	NA	NA
18	Rajgarh(Dhar) 220 KV	Non critical	Channel working	NA	Channel not working

3.(B) New RTU being connected to Sub LDC Indore :

1	Indore(EAST) 220 KV	Non critical	channel required	NA	NA
2	Chhegaon 400 KV	Critical	channel required	channel required	NA
3	Julwaniya 220 KV	Non critical	channel required	NA	NA
4	Badnagar 220 KV	Non critical	channel required	NA	NA
5	Khategaon 132 KV	Non critical	channel required	NA	NA
6	Pithampur 400 KV	Critical	channel required	channel required	NA
7	Julwaniya 400 KV	Critical	channel required	channel required	NA
8	Daloda 220 KV	Non critical	channel required	NA	NA
9	Bahadurpur 132 KV	Non critical	channel required	NA	Channel required upto nearest WB node
10					

List of New RTUs having requirement of alternate data channel and express voice communication channel

1.(A) New RTU being connected to SLDC Jabalpur :

Sr. No.	Name of RTU	Critical / Non Critical	Status of first data channel	Status of second data channel	Status of Express communication channel
1	Sukha 220 KV	Non critical	channel required	NA	Channel required upto nearest WB node
2	Chindwara 220 KV	Non critical	channel required	NA	NA
3	Seoni 220 KV	Non critical	channel required	NA	Channel required upto nearest WB node
4	Birsingpur 220 KV	Non critical	channel required	NA	Channel required from Birsinghpur HPS to Jabalpur WB
5	Sagar 220 KV	Critical	channel required	channel required	NA
6	Sidhi 220 KV	Non critical	channel required	NA	NA
7	Kotar 220 KV	Non critical	channel required	NA	NA
8	Chichli 220 KV	Non critical	channel required	NA	NA
9	Waidhan 132 KV	Non critical	channel required	NA	Channel required upto nearest WB node
10	Amarpatan 132 KV	Non critical	channel required	NA	NA
11	Beohari 132 KV	Non critical	channel required	NA	NA
12	Rampur Niken 132 KV	Non critical	channel required	NA	NA
13	Kotma 132 KV	Critical	channel required	channel required	Channel required upto nearest WB node
14	Benegaon 132 KV	Non critical	channel required	NA	Channel required upto nearest WB node
15	Maihar 220	Non critical	channel required	NA	NA
16	Anoopur 220	Non critical	channel required	NA	NA
17	Chhatarpur 220 KV	Non critical	channel required	NA	NA

2.(A) New RTU being connected to Sub LDC Bhopal :

1	Mandideep 220 KV	Non critical	channel required	NA	NA
2	Shivpuri 220 KV	Non critical	channel required	NA	NA
3	Astha 400 KV	Critical	channel required	channel required	NA
4	Betul 220 KV	Non critical	channel required	NA	NA
5	Pipariya 220 KV	Non critical	channel required	NA	NA
6	Harda 132 KV	Non critical	channel required	NA	NA
7	Sarangpur KV 132	Non critical	channel required	NA	NA
8	Rajgarh (Biora) 220 KV	Critical	channel required	channel required	NA
9	Sabalgarh 220 KV	Non critical	channel required	NA	NA
10	Vidisha 220 KV	Non critical	channel required	NA	NA
11	Pichhore 132 KV	Non critical	channel required	NA	Channel required upto nearest WB node
12	Sheopurkalan 132 KV	Critical	channel required	channel required	Channel required upto nearest WB node
13	Hoshangabad 220 KV	Non critical	channel required	NA	NA

3.(A) New RTU being connected to Sub LDC Indore :

1	Indore(EAST) 220 KV	Non critical	channel required	NA	NA
2	Chhegaon 400 KV	Critical	channel required	channel required	NA
3	Julwaniya 220 KV	Non critical	channel required	NA	NA
4	Badnagar 220 KV	Non critical	channel required	NA	NA

5	Khategaon 132 KV	Non critical	channel required	NA	NA
6	Pithampur 400 KV	Critical	channel required	channel required	NA
7	Julwaniya 400 KV	Critical	channel required	channel required	NA
8	Daloda 220 KV	Non critical	channel required	NA	NA
9	Bahadurpur 132 KV	Non critical	channel required	NA	Channel required upto nearest WB node
10	Nimarani 220 KV	Non critical	channel required	NA	NA

Note : Coloured area shows RTU station for which RTU inspection carried out earlier.