MP POWER TRANSMISSION COMPANY LIMITED

STATE LOAD DESPATCH CENTRE, NAYAGAON, JABALPUR 482 008

ISO 9001-2008

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No.07-05/SG-9B-II/1450 Jabalpur, dated 20-07-2011.

To

As per distribution list

Sub: Minutes of 24th meeting of Operation and Coordination Committee of MP.

Dear Sir,

Please find enclosed herewith the minutes of 24th meeting of the Operation and Coordination Committee of MP held on 25st June 2011 at MP Poorva Kshetra Vidyut Vitaran Co. Ltd. Jabalpur, for further necessary action at your end please.

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Thanking you.

Yours faithfully,

(P.A.R. Bende)
Member Secretary, OCC
S.E.(LD-OPN), SLDC
MPPTCL, Jabalpur

Encl : As above.

Distribution List

The Chairman & Managing Director MP Power Transmission Co. Ltd, Jabalpur	The Chairman & Managing Director MP Power Generating Co. Ltd, Jabalpur
The Chairman & Managing Director MP Poorva Kshetra Vidyut Vitaran Co. Ltd, Jabalpur	The Chairman & Managing Director MP Paschim Kshetra Vidyut Vitaran Co. Ltd, Near Polo Ground, Jail Road, Indore.
The Chairman & Managing Director MP Madhya Kshetra Vidyut Vitaran Co. Ltd, Govindpura, Bhopal.	The Managing Director MP Power Trading Co. Ltd, Jabalpur
Te Chief Engineer (T&C), MP Power Transmission Co. Limited, Jabalpur.	The Superintending Engineer (DCC-WZ), DISCOM Control Centre, MP Paschim Kshetra Vidyut Vitaran Co. Limited, Near Polo Ground, Jail Road, Indore.
The Executive Director (T&P), MP Power Transmission Co. Limited, Jabalpur.	The Executive Engineer (DCC-EZ), DISCOM Control Centre, MP Poorva Kshetra Vidyut Vitaran Co. Limited, Jabalpur.
The Executive Director (Plg & PS), MP Power Transmission Co. Limited, Jabalpur	The Dy. Chief General Manger (LM), DISCOM Control Centre, MP Madhya Kshetra Vidyut Vitaran Co. Limited, Govindpura, Bhopal.
The Executive Director (O&M:Gen.), MP Power Generating Co. Limited, Jabalpur.	The Chief Engineer (PM&C), Narmada Hydroelectric Development Corpn. Ltd, NHDC Parisar, Shamla Hills, Bhopal – 462013.
The Chief Engineer (O&M:Hydel), MP Power Generating Co. Limited, Jabalpur.	The General Manager, Indira Sagar Power Station, NHDC Office complex, PO : Narmada Nagar, Distt : Khandwa (MP) – 450 119.
The Chief General Manager (S), MP Power Trading Company, Jabalpur.	The General Manager, Omkareshwar Power Station, Prashsnik Bhawan, Urja Vihar, Sidhwarkut, Distt : Khandwa (MP) – 450 554.
The Executive Engineer, Sub Load Despatch Centre, MPPTCL, Indore	The Executive Engineer, Sub Load Despatch Centre, MPPTCL, Bhopal
The President, Shree Maheshwar Hydel Power Corporation Limited, “Abhyanchal Parisar”, Mandleshwar Distt : Khargone 451 221 **(Fax 07283-233830)**	

MINUTES OF 24TH MEETING OF OPERATION & COORDINATION COMMITTEE OF MP HELD ON 25TH JUNE 2011 AT MP POORVA KSHETRA VIDYUT VITARAN COMPANY LIMITED JABALPUR.

24th meeting of Operation & Co-ordination Committee of MP was held on 25.06.2011 at MP Poorva Kshetra Vidyut Vitaran Company, Jabalpur. The list of participants is enclosed at Annexure-1.0.

The meeting commenced with welcoming the participants in the meeting by Director, DCC East DISCOM. He expressed sincere thanks to give the opportunity to East DISCOM for hosting the meeting.

Shri A.P. Bhairve, Chief Engineer, SLDC & Chairman OCC, has expressed his gratitude to East DISCOM for hosting the meeting and welcomed all the participant of OCCM from various entities and stated that the members are gathered here to discuss various important operational issues and the presence of the participants here shows their commitment towards maintaining a reliable and stable grid. The results of the efforts of discussions in the OCC have been quite positive. He further informed the committee that MP has set all time maximum demand met record of 8331 MW on 28.02.2011 and maximum unrestricted demand 8758 MW on 03.02.2011.

Chairman OCC stated that in May 2011 a great achievement has been achieved by successfully conducting black start mock drill in Madhya Pradesh by taking one machine of Indira Sagar Hydel Power Station in black start mode supplying power to islanded area of Jetpura (Indore) substation. He further mentioned that similar black start mock drills shall also be conducted form MPPGCL hydro stations also.

Chairman OCC further stated that the monsoon season will be very crucial as the demand will go down and system voltage may shoot up in the system. The great role has to be played by all concerns to control the system voltage to ensure safety of the grid.

Thereafter, Chairman, OCC requested Shri P.A.R. Bende, Member Secretary (OCC) to take up the agenda items for discussion**.**

ITEM NO. 1 : CONFIRMATION OF MINUTES : Member Secretary, OCC stated that the Minutes of 23rd meeting of Operation & coordination committee of MP held on 21st January 2011 at MPPaKVVCL, Indore were forwarded to the committee members vide No. No.07-05/SG-9B-II/584 dated 19-03-2011. No comments have been received from the members.

The representative from MPPGCL pointed out that deliberations made on point 3.5 of MOM - "**Long Outages of transmission elements",** are not correctly recorded. It is informed that in regard to outage of 40 MVA 132/33 KV transformer**,** the Hon'ble MPERC vide letter No. MPERC/D(T)/3348 dated 08.12.2010 addressed to the CMD, MP Poorva Kshetra Vidyut Vitaran Co. Ltd, has desired that in this matter alternate arrangement in case of any emergency be made available in all feeders being supplied by the existing arrangements. MPPGCL submitted a copy of the letter.

With the amendment to point 3.5, the minutes of the 23rd meeting of Operation & coordination committee of MP have been confirmed by the Committee.

ITEM NO. 2 :REVIEW OF SYSTEM OPERATION DURING THE MONTHS JANUARY-11 TO MAY-11.

2.1 Frequency Particulars : Member Secretary, OCC informed the committee that the system frequency was within the permissible range of 49.5-50.2 Hz for in May 2011 for 92.22% of time against 91.09% of time in April 2011. The system frequency was below 49.5 Hz during May 2011 for 3.12% of time as compared to 7.49% time during April 2011. The average frequency during May 2011 was 49.89

Hz and in April 2011 it was 49.79 Hz. Regarding operation in high frequency range , frequency in May 2011 was above 50.2 Hz for 4.66 % of time against 1.42% of time during April 2011. During April & May 2011 the system frequency did not touch 48.8 Hz.

The detailed frequency particulars for the month of January to May 2011 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**
Jan 2011	49.85 Hz	49.45 Hz	50.38 Hz	48.89 Hz	50.60 Hz
Feb 2011	49.88 Hz	49.45 Hz	50.48 Hz	49.01 Hz	50.67 Hz
Mar 2011	49.85 Hz	49.48Hz	50.23 Hz	49.00 Hz	50.64 Hz
Apr 2011	49.79 Hz	49.34 Hz	50.23 Hz	48.80 Hz	50.85 Hz
May 2011	49.89 Hz	49.38 Hz	50.69 Hz	49.00 Hz	50.95 Hz

2.2 Operational Matters

2.2.1 Operational Discipline : Member Secretary, OCC stated that the frequency profile for the months January to May 2011 was satisfactory with frequency within the permissible range for around 91% and average monthly frequency around 49.85 Hz. The committee noted the frequency profile details as given below :

Month	**% of time Frequency Below 49.5 Hz**	**% of time Frequency above 50. 2 Hz**	**% of time frequency within the permissible range of 49.5-50.2 Hz**	**Average monthly frequency**	**No. of times frequency dipped below 48.8 Hz**
Jan 2011	5.42	4.82	89.76	49.85 Hz	0
Feb 2011	4.49	6.62	88.89	49.88 Hz	0
Mar 2011	3.53	2.33	94.14	49.85 Hz	0
Apr 2011	7.49	1.42	91.09	49.79 Hz	0
May 2011	3.12	4.66	92.22	49.89 Hz	0

2.3.1 Voltage Profile : Committee noted the date wise voltage profile at some of the important 400 KV and 220 KV substations during the months January to May 2011 had already been conveyed with the agenda at Annexure -2.3.

During the months April and May 2011, the deviation of voltage from the accepted limit on either side was recorded at following location in MP Grid.

Sr .No.	Name of Substation	APRIL 2011				MAY 2011			
		Max. Voltage observed		Min. Voltage observed		Max. Voltage observed		Min. Voltage observed	
		Voltage	Date	Voltage	Date	Voltage	Date	Voltage	Date
1	Indore	426	1,3,15	388	24	427	10,11,22	395	31
2	Itarsi	424	1,3,5,16	400	4,18,30	427	18	395	31
3	Bina	430	17	395	5,30	434	22	393	31
4	Gwalior	433	17	376	30	437	22	379	20
5	Nagda	429	3,8,17	399	16,17,18,30	430	22,26,29	397	23,31

2.3.2 Status of Capacitor Banks in sub-transmission system : Member Secretary, OCC has appreciated the efforts made by all three DISCOMs in furnishing the capacitor bank progress details in time. The information as submitted by DISCOMs as on 31st March 2011 is as 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	489	322	28	108	9	305	38	46	150	136	44	37
CZ	8	721	3	34	-	24	3	16	0	588	0	441
EZ	396	232	19	39	-	148	23	48	-	-	-	-

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	679.8	805.4	516.0
2	MVAR capacity of connected capacitors in partially good condition	137.5	42.6	43.4
3	MVAR capacity of connected capacitors in good condition including partially good condition.	817.3	848.0	559.4
4	MVAR capacity of connected capacitors covered under ABT T-V Scheme.	253.2	705.6	Nil
5	G. total MVAR of capacitors including that are proposed in ADB T-V scheme	1070.5	1553.6	Nil

Member Secretary requested all DISCOMs to submit the information regularly for inclusion in the agenda.

2.4.1 Status of completion of on going Transmission Schemes being executed by MPPTCL : The Committee noted the updated status as on 31st May 2011 of various ongoing Transmission Schemes for the current financial year i.e. Year - 2011-2012 as submitted by MPPTCL and enclosed atannexure 2.4.1(i) & (ii).

2.4.2 U/F and df/dt Relay Operation

(i) **U/F and df/dt Relay Operation:** The Committee noted that During April & May 2011 the system frequency did not dip below 48.8 Hz. The committee also noted the details of under frequency and df/dt relay operation as enclosed at Annexure 2.4.2.

(ii) **Defective u/f, df/dt relays :** The CE(T&C), MPPTCL has submitted the updated list of installation of u/f relays at following EHV substations :

S.No.	Name of EHV Substation	T&C Circle	Present Status
1	**220KV Pipariya**	**Bhopal**	Installed
2	**220KV Ashta**	**Bhopal**	Installed
3	**132KV Shyampur**	**Bhopal**	Installed
4	**132KV Chegaon**	**Indore**	Installed
5	**132KV Badgaon**	**Indore**	Installed
6	**132KV Kasrawad**	**Indore**	Installed
7	**132KV Petlawad**	**Ujjain**	Installed
8	**132KV Betma**	**Indore**	Installed
9	**220KV Badod**	**Ujjain**	Installed
10	**132KV Zarda**	**Ujjain**	Installed
11	**132KV Mazgawan**	**Satna**	Installed
12	**132KV Pawai**	**Satna**	Installed
13	**132KV Kolaras**	**Gwalior**	Installed

T&C, MPPTCL representative informed that the u/f relays has been installed at all sub stations of MPPTCL.

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

(i) The Committee noted the details of Discom-wise Power cuts and Regulatory measures during January to May 2011 as enclosed at Annexure 2.5 which is reproduced hereunder :-

Discoms wise Average Supply Hours

PARTICULARS	East Zone					Central Zone				
	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jan-11	Feb-11	Mar-11	Apr-11	May-11
Commissionary HQ	22:06	22:03	22:26	22:18	22:59	21:49	21:44	22:54	22:54	22:48
District HQ	20:00	19:50	21:05	20:51	21:30	19:17	19:20	21:46	21:02	20:28
Tehsil HQ	13:15	15:37	17:15	16:01	16:34	14:32	15:35	18:40	17:43	16:36
Rural -3Phase	10:03	10:01	11:07	11:47	12:19	9:56	9:37	11:46	12:54	12:13
Rural -1Phase	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Total Rural	10:03	10:01	11:07	11:47	12:19	9:56	9:37	11:46	12:54	12:13
PARTICULARS	**West Zone**					**MP**				
	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jan-11	Feb-11	Mar-11	Apr-11	May-11
Commissionary HQ	23:01	23:00	23:47	23:11	23:28	22:10	22:07	22:55	22:43	23:00
District HQ	19:31	19:20	22:29	20:58	21:57	19:38	19:32	21:44	20:57	21:19
Tehsil HQ	13:29	15:59	17:39	16:36	16:35	13:44	15:42	17:49	16:44	16:34
Rural -3Phase	9:54	10:05	11:12	12:30	12:27	9:58	9:55	11:21	12:20	12:20
Rural -1Phase	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Total Rural	9:54	10:05	11:12	12:30	12:27	9:58	9:55	11:21	12:20	12:20

(ii) Group allocation to new feeders : The representative of ED(Plg & PS), MPPTCL has informed that despite agreeing in the last OCCM of MP, the East DISCOM is not sending proposals to the Power System for group allocation to new feeders. As per the list of feeders for which group allocation proposals are to be received from East & West Discoms and the group allocation is pending at Central Discom as submitted by the MPPTCL and enclosed at Annexure 2.5(ii) of agenda, the position is as given hereunder :-

SN	DISCOM	No of 33 KV feeders for which groups to be allocated
01	EAST	33
02	WEST	09
03	CENTRAL	16
TOTAL		58

After detailed deliberations East and West DISCOMs have assured to submit proposals for allocation of group. The Central DISCOM also assured to allocate the groups to 16 feeders within their jurisdiction.

Member Secretary stated that in the last OCC meetings the East and West DISCOMs had agreed to take up the group allocation work. He inquired the progress in the matter. As no action has been initiated, he requested the East & West DCC in-charge present in the meeting to take up the matter with their authorities in this regard.

ITEM NO. 3 : OPERATIONAL PLANNNING

3.1 Anticipated Power Supply Position for the Month of July 2011 to March-2012 and Demand estimation : The Committee noted the details of Source wise Availability for the period July 2011 to March-2012, worked out on the basis availability as furnished by the respective authorities for 2011-12 as enclosed at Annexure-3.1.

3.2 Demand Response : Member Secretary stated that the Clause 5.4.2(d) of IEGC 2010 stipulates necessity to formulate and implement state of the art demand management schemes for automatic demand management to restrict over drawal at low frequency. He informed thatb the matter was discussed in the last OCC meeting and it was gathered that the DISCOMs are in process of implementation of the ERP in their respective control areas. The SLDC desired that the State-of-the-art demand side management (DSM) schemes for automatic demand management like rotational load shedding, demand response etc may be included in the ERP package so that the DCCs are able to carry out the demand management functions efficiently, otherwise as an alternative, in case any activity is being initiated for conducting computer study for long term demand side management then this requirement could also be included in the same for which DISCOMs had agreed to look into the matter.

Member Secretary further stated that this issue was again came up for discussion in the 424th OCC meeting of WRPC held at Mumbai on 14th June 2011 and the Sub Committee approved this point for inclusion in the Operating Procedure for WR.

Chief Engineer, SLDC requested the DISCOMs to expedite the implementation of State-of-the-art demand management schemes for automatic demand management.

The Director (DCC), East DISCOM informed that under RAPDRP project SCADA system for DISCOMs is being implemented. Dy. General Manager (DCC) Central DISCOM informed that they are in process of implementing in-house SCADA system and 26 substations have been included for data acquisition of 33 KV feeders. He further mentioned that if permitted by MPPTCL,

they will implement the supervisory functions in the in-house SCADA system for remote operation of 33 KV feeders emanating from 132 KV substations.

3.3 Generating Units under planned outage and proposed maintenance programme : The committee noted the details of proposed maintenance programme for July 2011 to August 2011 (Revised R-2) as furnished by MPPGCL and enclosed at Annexure-3.3. The generating units under planned outages for the period July to August 2011 shall be as under :

SN	Description	Capacity	From	To	Reason
01	Amarkantak TPS # 3	120 MW	16.09.2010	30.09.2011	COH/R&M
02	Amarkantak TPS # 4	120 MW	01.06.2011	31.08.2011	COH – IP rotor damage
03	Satpura TPS # 4	62.5 MW	25.07.2011	14.08.2011	AOH
04	Satpura TPS #6	200 MW	20.07.2011	07.09.2011	COH., Pent house repair,Eco., LTSH
04	Satpura TPS #7	201 MW	01.07.2011	20.07.2011	AOH
05	SGTPS #1	210 MW	10.08.2011	03.09.2011	AOH
06	SGTPS #3	210 MW	16.07.2011	05.08.2011	AOH

3.4 Proposed shutdown programme of Transmission lines / Transformers : Committee noted that there is no proposed maintenance programme for transmission lines/transformers for the period 25th June 2011 to 25th August 2011. Member Secretary requested representative from CE(T&C), MPPTCL to regularly furnish the compiled information of proposed maintenance programme for transmission lines/transformers from EHT as well as T&C, as at present the information required for OCCM (WR as well as MP) is received separately from CE(EHT:C&M) office and 400 KV substations. The representative from CE(T&C), MPPTCL assured to do the same.

3.5 Long Outages of transmission elements: The committee noted 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.
1	63 MVAR Bus-I Reactor at Satpura TPS.	24.05.2005	Damage of all three limbs along with reactor tank.	Order has been placed to BHEL. The work is expected to be completed by September 2011.

The representative of MPPGCL has informed that the delivery, installation and commissioning by September 2011. He has further informed that the as per guidelines of MPERC, The CE (Rewa Region) MPPuKVVCL, has been requested to make alternate arrangement for transfer of load of faulty 40 MVA X'mer at Amk.

ITEM NO. 4 : OPERATIONAL STATISTICS FOR THE MONTH OF JANUARY 2011 TO MAY 2011 :

The committee noted the details of actual generation, schedule from Central Sector, demand etc. as enclosed at Annexure 4.1 to 4.4.

ITEM NO. 5 : SYSTEM DISTURBANCE IN MP DURING APRIL AND MAY 2011 :

The committee has been informed that there was no significant system disturbance reported during the period April and May 2011.

ITEM NO. 6.0 : ADDITIONAL OPERATIONAL ISSUES :

6.1 Black-Start mock drill at Indirasagar Power station : Member Secretary, OCC informed that the mock black-start exercise for Indira Sagar Hydro units was carried out successfully on 22nd May,2011. SLDC has appreciated the cooperation, assistance and efforts made by engineers from Indira Sagar HPS, WRLDC, Mumbai, 400/220 kV Indore substation, 220/132/33 KV Jetpura substation and West DISCOM during the mock self-start exercise. This exercise involved two major stages:

- **Stage-I**: Creating an islanded subsystem by separating out unit #5 (125 MW) at Indira Sagar Plant (ISP) along with radial load at 220/132/33 kV Jetpura s/s fed through 400/220 kV Indore s/s, followed by operation of the created island around the ISP unit for some time.

- **Stage-II**: Creating a blackout in the islanded subsystem created with one unit (125 MW unit #5) of ISP and radial load at 220/132/33 kV Jetpura, self-start of one unit at ISP, charging of one dead 400 KV bus at ISP, charging 400 kV ISP-Indore-II line, islanded operation of the ISP unit with radial load at Jetpura fed through 400/220 kV Indore s/s followed by synchronising this island at 400/220 kV Indore(MP) substation.

Stage-I of the exercise was partially successful. Though the subsystem was successfully created it survived for about 70 seconds only and collapsed on low frequency (at 45 hz) while trying to stabilize the is-land by manually controlling the governor in absence of primary response. The exercise in Stage-II was completely successful as far as black start & islanded operation of the unit (for close to one hour) are concerned. However on synchronisation at Indore, unit-5 at ISP tripped on excitation system protection.

The report on the exercise prepared by WRLDC is attached as Annexure 6.1 of agenda. Member Secretary stated that the report highlights few shortcomings identified during the exercise which need to be addressed by the concerned utilities.

These shortcomings as detailed below have been discussed by the committee members :

1. Primary response is mandatory for a unit while separating out from the rest of the grid that survives to operate in is-landed mode. The same was absent at ISP causing collapse of the is-land within seventy seconds from separation while attempting to stabilize the subsystem through manual control of the generation as it was not possible to operate the unit under speed control mode under normal operation. **Representative from ISP assured that as proposed by WRLDC necessary modifications shall be explored to ensure that this is possible under normal mode of operation.**

2. Even 15 minutes after opening the 400 kV bus-coupler at ISP voltage of around 200 kV was appearing on 400kV Main Bus-B at ISP though it was zero immediately after the unit tripped at 10:15:06 hrs. Surprisingly Indore bus-I was also showing similar value (200 kV approximately) at its end. Though it was assumed to be an instrument error, the voltage became zero only after opening the CB of ISP-Indore-II from ISP end. **Representative from MPPTCL assured to investigate the problem.**

3. After successfully running ISP machine in is-landed mode for around one hour, the check-synchronisation at 400 kV Indore B/C was done with due diligence and care but the unit experienced perceptible jerk and tripped on excitation failure alarm. This requires checking of healthiness of the synchronising trolley at 400/220 kV Indore S/S. **Representative from MPPTCL assured to investigate the problem.**

Chairman, OCC requested NHDC and MPPTCL to investigate the problems faced during mock drill and inform the results.

Member Secretary, OCC informed that similar black start mock exercise is also required to be done in MP system at each half year period during July to December and January to June. The representative of MPPGCL has informed that DG sets at all Hydel power stations do not have auto start facility and the DG set at Pench HPS is having problems and may not be available for operation. **Chief Engineer, SLDC requested MPPGCL to explore the possibility of equipping the generators with auto start facility for which MPPGCL representative agreed.**

It was also agreed that the plan for black start mock drill of MPPGCL Hydel power stations will be finalised by the middle of August 2011 in consultation with MPPGCL, MPPTCL and concerned DISCOM.

6.2 Tripping of Units at Omkareshwar Power Station on 10th June 2011: Member Secretary raised the issue of simultaneous tripping of all four running units at Omkareshwar Power Station on 10.06.2011 at 15:59 Hrs on tripping of 220 KV OSP-Nimarani and OSP-Khandwa lines. However, from the tripping report furnished by OSP it is observed that on tripping of lines, the running units should not have got tripped. Such instances also happened in the past also. Member Secretary requested NHDC to investigate the problem for avoiding repetition in future. NHDC representative informed that the matter needs consultation with MPPTCL for protection setting issues. **It was agreed that the matter shall be sorted out by Omkareshwar HPS in coordination with E.E.(T&C) 400 KV s/s Indore.**

The representative from CE(T&C), MPPTCL has inquired about the progress of replacement of existing 500/1 Amp CTs with 800/1 Amp CTs. NHDC representative informed that the procurement for new CTs is under finalisation.

6.3 High Voltage problems in Western Region particularly at Nagda : The Committee discussed the high voltage problems in the Western Region particularly at Nagda which is posing a serious threat to the grid security. He further stated that West DISCOM has informed that due to lifting of load shedding during high voltage conditions, the supply hours are more in the vicinity of Nagda area as compared to rest of the area in West DISCOM which is causing public discontent on account of unequal supply hours in the area of company and increased supply hours also attribute in enhancing input of company according to which revenue target is fixed by GoMP.

The representative from CE(T&C), MPPTCL informed that 2x50 MVAR bus reactor at 400 KV s/s Nagda would be commissioned by August 2011, which will help controlling high voltage problem to a great extent. The issue of tap changing of Generator Transformers at ISP has also been discussed. The representative from Indirasagar Power Station informed that as the voltages in the remote end remain high they are not able to change the tap position of GT corresponding to 400 KV as it would be difficult to synchronise the units. They further agreed to explore the possibility of changing the tap position when bus reactors are installed at Nagda and if required the same shall be done after consultation with SLDC and WRLDC.

6.4 Load Management particularly during low load conditions: Member Secretary, informed that during the period 06:00 to 09:00 and 17:00 to 19:00 the system generally frequency remain high with overall under drawal by MP, the same situation also persists sometimes for other duration of the day also. During these periods, East and Central DISCOMs underdraws from the grid by considerable quantum, which do not show significant improvement even though load shedding is lifted by concerned DISCOM or demand control measure is exercised by SLDC.

The CE (SLDC) has expressed his concern over not responding by East DCC when prompt action is required and requested the DISCOMs to bring under DCCS the load shedding from 11 KV level/affixed

hour plan and differential load shedding as at present such load shedding is not controllable by the DCCs.

6.5 Preparation of contingency scheme by DISCOMs: Member Secretary informed that the issue of preparation of contingency schemes by distribution companies was discussed in earlier OCC meetings. This has necessitated on account of CERC order dated 28.04.2010 in the Suo-Motu petition no.246/2009, which requires that SLDC and Distribution Companies in the State should be prepared with contingency scheme to handle the unprecedented situations endangering the safety and security of the grid. Member Secretary further stated that the contingency schemes furnished by DISCOMs is inadequate to handle contingency situations as by large it contained only schedule load shedding scheme. The DISCOMs had agreed in the 22nd and 23rd OCC meetings, to prepare revised contingency plan in which identified 33 KV feeders with average loads shall be included for hand tripping in case of distress situations. The DISCOMs were also advised during workshop for Demand estimation & Demand Control held at SLDC, Jabalpur on 11.01.2011 to prepare the contingency plan accordingly. However, the revised contingency plan from DISCOMs is not received.

The representative of DISCOMs have informed that it is very difficult to identify the 33 KV feeders as most of the feeders are tapped to different substations which may also be under load shedding when contingency situation arise. The matter was discussed and it was felt necessary to prepare the plan such that during different time periods, different set of feeders for contingency operation are identified. The representatives from DISCOMs have assured to look into the matter and prepare the contingency plan accordingly.

6.6 Status of Restricted Governor mode of Operation (RGMO) : Member Secretary stated that WRLDC has intimated that out of 188 eligible units in the Western Region, only 63 units have confirmed participation and for 19 units matter had been taken up with CERC for exemption by the concerned utilities. For remaining 106 units, various problems have been cited by the generators. Further a total of 9 No. Thermal Generating Units and 12 No. Hydro Units of MPPGCL have not participated for RGMO. WRLDC has also requested to make all efforts to ensure participation of all eligible units as per IEGC 5.2 (f), otherwise exemption need to be obtained from CERC for none participation. WRLDC has further mentioned that in case of non-participation or not seeking exemption, WRLDC would be constrained to take up the matter with the appropriate authority (i.e. CERC).

The representative from ED(O&M:Gen), MPPGCL assured that they will file petition before Hon'ble CERC for exemption of the units which are not participating in Restricted Governor mode of Operation (RGMO).

ITEM NO 7 : <u>SCADA/EMS RELATED ISSUES :</u>

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

MPPTCL has informed that the delivery of RTUs for new substation and required PLCC equipments at substations is expected to commence soon.

7.2 DISCREPANCY IN TELEMETRERED VALUES RECEIVED FROM DIFFERENT EHV S/S & POWER STATIONS : Member Secretary informed that the discrepancy in telemetered values from Power Stations & S/s is being brought to the notice of the concerned officials from time to time, however, though action is being taken for restoration of some of the parameters, many telemetered values are still not received correctly in SCADA system or are not extended / configured in the telemetry equipments in the field. The list of faulty telemetered values/process connections is detailed in annexure 7.2(i) & 7.2(ii).

7.3 UPGRADATION OF EXISTING RTUS : The status of upgradation of the existing RTUs on account of commissioning of new feeders and transformers has been furnished by T&C, MPPTCL.

Shri Rajesh Gupta, Executive Engineer (LD:E&T) through a presentation, attached at annexure 7.3, explained the problems being faced in upgradation of RTUs and pending connections at RTUs specifically at Amarkantak TPS, 400 KV substation Nagda and Bhopal and in general wrong telemetry of OLTC from most of the RTU locations. He requested the representatives from CE(T&C) and ED(O&M:Gen) to take-up the matter with field units in this regard.

MPPTCL and MPPGCL representatives assured that they will take-up the matter with concerned field units to rectify the problems and also for upgradation of the existing RTUs.

ITEM No 8 : DATE AND VENUE OF NEXT OCC MEETING : It is proposed to hold 25th meeting of Operation and Coordination Committee of MP on 19th August 2011 at SLDC, Jabalpur. The exact date and venue shall be communicated shortly.

****

FREQUENCY PARTICULARS

S. No.	Particulars	Jan-11		Feb-11		Mar-11		Apr-11		May-11	
1	**INTEGRATED OVER AN-HOUR**										
1.1	Maximum Frequency	50.38 Hz	Between 01.00 hrs & 02.00 Hrs on 02.01.11	50.48 Hz	Between 0300 Hrs & 0400 Hrs on 15.02.11	50.23 Hz	Between 03.00 hrs & 04.00 Hrs on 04.03.11	50.23 Hz	Between 1800 Hrs & 1900 Hrs on 24.04.11	50.69 Hz	Between 02.00 hrs & 03.00 Hrs on 22.05.11
1.2	Minimum Frequency	49.45 Hz	Between 14.00 hrs & 15.00 Hrs on 05.01.11	49.45 Hz	Between 06.00 hrs & 07.00 Hrs on 03.02.11	49.48 Hz	Between 15.00 hrs & 16.00 Hrs on 15.03.11	49.34 Hz	Between 23.00 hrs & 24.00 Hrs on 23.04.11	49.38 Hz	Between 00.00 hrs & 01.00 Hrs on 01.05.11
1.3	Average Frequency	49.85 Hz		49.88 Hz		49.85 Hz		49.79 Hz		49.89 Hz	
2	**INSTANTANEOUS FREQUENCY**										
2.1	Maximum Frequency	50.6 Hz	AT 18.02 HRS ON 26.01.11	50.67 Hz	AT 05.04 HRS ON 21.02.11	50.64 Hz	AT 18.03 HRS ON 10.03.11	50.65 Hz	AT 17.34 HRS ON 20.04.11	50.95 Hz	AT 03.09 HRS ON 22.05.11
2.2	Minimum Frequency	48.89 Hz	AT 18.29 HRS ON 06.01.11	49.01 Hz	AT 05.27 HRS ON 19.02.11	49 Hz	AT 22.32. HRS ON 24.03.11	48.8 Hz	AT 19.06 HRS ON 11.04.11	49 Hz	AT 03.09 HRS ON 16.05.11

3 Percentage of time when frequency was :-

	%age of time when frequency was	Jan-11	Feb-11	Mar-11	Apr-11	May-11
3.1	Below 48.5 Hz	0.00	0	0.00	0	0.00
3.2	Between 48.50 Hz and 48.8 Hz	0.00	0	0.00	0	0.00
3.3	Between 48.80 Hz and 49.2 Hz	0.35	0.17	0.12	0.64	0.20
3.4	Between 49.20 Hz and 49.5 Hz	5.07	4.32	3.41	6.85	2.92
3.5	Between 49.50 Hz and 49.7 Hz	18.78	15.38	15.14	22.74	13.62
3.6	Between 49.70 Hz and 50.2 Hz	70.98	73.51	79.00	68.35	78.60
3.7	Between 50.20 Hz and 50.3 Hz	3.12	4.01	1.56	1.07	2.80
3.8	Between 50.30 Hz and 51.0 Hz	1.70	2.61	0.77	0.35	1.86
3.9	Between 51.0 Hz AND 51.5 Hz	0.00	0	0.00	0	0.00
3.1	Above 51.5 Hz	0.00	0	0.00	0	0.00
4.1	No. of times frquency touched 48.80 Hz	0	0	0	0	0
4.2	No. of times frquency touched 48.60 Hz	0	0	0	0	0
4.3	No. of times frquency touched 51.0 Hz	0	0	0	0	0

Voltage Profile During the Month of JANUARY- 2011

Date	Indore		Itarsi		Bina		Gwalior		Nagda	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	420	392	420	396	420	414	424	381	428	403
2	421	388	426	389	424	387	426	380	426	392
3	420	396	424	399	424	401	425	391	427	397
4	420	396	423	401	425	398	428	390	428	399
5	420	400	427	405	421	394	424	378	426	403
6	420	389	423	396	414	391	418	376	428	391
7	420	397	421	402	419	400	422	388	426	400
8	421	395	423	403	418	395	423	383	427	399
9	424	399	426	407	422	392	422	389	431	403
10	419	397	422	401	419	390	420	383	424	400
11	420	390	421	396	411	390	412	373	427	395
12	420	395	423	402	416	398	415	384	427	400
13	417	396	421	403	412	395	422	383	427	397
14	423	406	424	406	421	396	420	386	430	411
15	423	403	425	403	424	397	420	380	430	404
16	421	396	426	402	422	398	420	381	428	401
17	419	397	424	403	417	395	418	383	428	404
18	418	397	421	403	414	391	417	375	426	402
19	418	392	421	399	417	391	419	375	426	399
20	419	401	423	403	417	396	415	382	426	407
21	419	405	421	404	417	397	417	384	425	409
22	420	399	421	404	419	400	419	383	427	402
23	422	403	423	404	422	402	419	387	428	407
24	422	398	420	399	415	394	419	377	428	399
25	420	402	423	406	420	402	424	390	426	404
26	422	404	425	400	421	392	424	377	428	408
27	421	397	424	404	419	395	417	385	427	399
28	419	404	427	407	419	400	418	389	427	410
29	421	401	427	408	419	402	420	393	428	409
30	420	402	426	405	425	404	425	386	428	406
31	421	403	425	406	427	399	422	391	430	409
Max / Min	**424**	**388**	**427**	**389**	**427**	**387**	**428**	**373**	**431**	**391**

Voltage Profile During the Month of FEBRUARY- 2011

Date	Indore		Itarsi		Bina		Gwalior		Nagda	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	420	403	424	408	422	405	420	391	427	409
2	419	406	424	409	424	404	425	394	428	410
3	420	402	422	407	422	403	417	388	428	410
4	420	402	423	407	418	396	412	386	428	406
5	419	401	423	405	416	405	415	386	428	409
6	418	402	423	408	424	404	422	395	428	409
7	420	404	422	410	423	409	424	395	430	411
8	419	399	427	408	423	404	423	394	429	409
9	419	403	424	408	422	405	424	392	428	411
10	419	404	423	409	421	402	423	395	427	411
11	418	404	423	411	420	407	424	394	427	410
12	417	399	421	402	417	399	421	390	426	407
13	420	406	432	410	428	409	428	398	430	413
14	419	402	424	407	422	411	429	398	428	410
15	419	398	423	402	423	402	431	399	428	405
16	421	400	426	405	428	409	432	402	431	409
17	421	396	424	404	423	403	426	394	430	403
18	421	400	417	401	423	402	427	394	430	406
19	421	393	423	397	422	400	426	401	430	398
20	423	394	424	403	427	406	432	408	433	396
21	423	390	426	397	427	399	432	403	430	390
22	421	396	425	403	427	406	427	406	430	398
23	421	396	422	400	425	402	429	393	430	393
24	420	402	422	407	423	406	423	404	428	406
25	424	399	424	404	426	406	430	401	429	404
26	426	395	424	397	425	401	431	400	433	399
27	426	396	423	399	423	403	426	399	430	402
28	422	395	423	399	426	403	427	401	429	402
Max / Min	**426**	**390**	**432**	**397**	**428**	**396**	**432**	**386**	**433**	**390**

Voltage Profile During the Month of MARCH- 2011

Date	Indore		Itarsi		Bina		Gwalior		Nagda	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	422	392	419	396	421	395	425	403	429	397
2	419	394	422	399	420	400	421	388	429	401
3	421	396	423	400	422	405	425	402	429	402
4	419	396	421	399	425	405	430	423	430	400
5	421	392	423	397	422	394	425	398	430	397
6	423	400	424	404	425	407	426	398	432	405
7	423	400	424	402	424	401	425	396	434	404
8	423	400	423	397	422	396	424	397	429	404
9	423	402	424	403	419	397	421	387	428	407
10	424	400	426	400	416	394	419	385	431	406
11	423	405	422	401	416	401	417	377	430	409
12	424	402	421	403	416	397	418	389	431	407
13	422	403	421	404	417	399	418	388	431	409
14	426	409	423	405	420	402	420	392	431	407
15	424	409	427	411	425	408	419	395	430	413
16	427	408	425	407	424	408	417	394	434	411
17	422	399	421	400	419	399	415	393	429	407
18	424	403	424	403	423	405	420	392	430	407
19	424	409	425	407	428	405	428	400	432	414
20	426	410	424	409	419	407	425	402	431	412
21	426	407	426	406	427	406	426	401	431	411
22	426	406	423	406	417	400	420	393	432	410
23	421	403	421	406	419	403	419	396	431	408
24	423	406	422	409	420	405	419	387	431	411
25	425	412	423	408	418	397	418	391	431	408
26	425	404	423	407	422	400	419	385	431	406
27	426	403	424	408	425	410	421	394	431	407
28	424	407	421	409	422	402	422	392	428	410
29	427	407	423	409	422	406	420	398	429	409
30	424	404	421	403	426	400	429	396	428	402
31	424	406	422	407	421	410	426	404	429	409
Max / Min	**427**	**392**	**427**	**396**	**428**	**394**	**430**	**377**	**434**	**397**

Voltage Profile During the Month of April 2011

Date	Indore		Itarsi		Bina		Gwalior		Nagda	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	426	410	424	412	425	413	426	405	428	413
2	425	403	423	404	424	406	426	401	428	402
3	426	407	424	409	426	411	426	417	429	408
4	423	402	420	400	419	405	420	395	427	411
5	423	407	424	406	424	395	427	389	428	410
6	425	407	422	409	422	409	426	403	427	410
7	422	409	422	410	421	400	425	401	426	409
8	423	408	421	409	426	408	425	401	429	409
9	423	408	418	405	416	398	417	395	423	404
10	421	405	418	403	426	403	431	397	426	407
11	420	403	418	406	424	410	425	403	427	403
12	419	403	418	404	425	397	428	397	426	404
13	423	404	421	408	426	410	428	407	427	403
14	423	404	420	404	426	413	427	406	426	403
15	426	407	421	409	425	409	429	405	426	406
16	424	399	424	401	427	412	430	407	427	399
17	423	401	422	403	430	413	433	415	429	399
18	420	400	420	400	424	408	429	405	425	399
19	417	402	414	401	421	399	426	397	422	403
20	417	397	415	400	418	409	424	403	423	406
21	421	402	420	402	426	409	427	404	428	406
22	421	407	419	407	425	411	426	402	427	407
23	423	406	422	407	424	410	427	399	426	406
24	425	388	420	409	424	406	427	397	427	407
25	421	402	417	404	424	406	426	400	426	405
26	425	407	421	405	428	398	432	396	426	407
27	424	403	421	402	422	399	425	396	427	401
28	422	402	418	401	421	400	425	392	426	401
29	424	403	421	406	428	404	429	393	427	402
30	423	397	419	400	418	395	425	376	424	399
Max / Min	**426**	**388**	**424**	**400**	**430**	**395**	**433**	**376**	**429**	**399**

Voltage Profile During the Month of May 2011

Date	Indore		Itarsi		Bina		Gwalior		Nagda	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	422	407	421	407	421	394	428	397	426	408
2	423	404	421	403	420	403	422	396	426	407
3	424	409	425	407	422	404	427	395	428	410
4	421	399	420	402	419	405	422	395	426	403
5	422	402	420	404	422	397	424	392	426	406
6	420	403	420	406	421	404	427	392	426	406
7	420	399	419	402	419	399	427	393	426	401
8	424	409	421	409	424	404	429	395	429	411
9	426	409	424	409	424	403	424	395	428	409
10	427	412	424	411	428	405	428	397	429	413
11	427	410	426	410	426	408	427	397	428	407
12	424	410	423	410	425	403	428	392	428	403
13	424	405	421	408	421	402	426	391	429	406
14	424	407	423	407	421	404	427	393	427	410
15	426	406	421	406	423	400	426	392	427	405
16	426	404	424	406	421	402	421	390	427	403
17	424	406	420	405	419	399	419	391	426	405
18	423	407	427	406	420	399	425	386	427	411
19	422	405	423	407	427	406	428	392	426	407
20	424	404	424	407	422	395	423	379	428	404
21	424	401	424	405	430	404	429	399	428	399
22	427	400	425	400	434	409	437	401	430	402
23	421	397	421	401	425	408	430	398	424	397
24	420	403	423	403	430	402	431	395	428	410
25	424	407	422	405	421	398	427	395	429	414
26	422	401	422	402	426	401	431	394	430	408
27	421	404	423	404	426	399	432	391	429	411
28	423	401	421	404	425	399	429	385	429	409
29	424	407	421	404	424	397	432	397	430	412
30	420	396	419	400	424	394	428	390	427	400
31	420	395	420	395	427	393	434	381	427	397
Max / Min	**427**	**395**	**427**	**395**	**434**	**393**	**437**	**379**	**430**	**397**

EHV TRANSMISSION LINES UNDER PROGRESS DURING 2011-12 (AS ON 31.5.2011)						ANNEXURE - 2.4.1(i)		
					(Rs.in Lakhs)			
S. No.	**NAME OF THE TRANSMISSION LINE**	**TYPE OF CIRCUITS**	**ROUTE LENGTH**	**CKT.KMS.**	**COMPLETION PROGRAMME**	**FUNDING AGENCY**	**ESTIMATED COST**	**PROGRESS IN %**
A.	**400 KV TRANSMISSION LINES**							
1	400KV DCDS Indore (PGCIL) - Pithampur line (2x65)	DCDS	65	130	Jun-12	PFC	9551.00	1%
2	400KV DCDS Malwa TPS - Pithampur line (2x150)	DCDS	150	300	Jun-12	PFC	20464.00	1%
3	400KV DCDS Malwa TPS - Chhegaon line (2x65)	DCDS	65	130	Jun-12	PFC	9325.00	2%
4	400KV DCDS Chhegaon - Julwania line (2x115)	DCDS	115	230	Jun-12	PFC	16088.00	1%
	Sub Total (A)		**395**	**790**			**55428**	
B.	**220 KV TRANSMISSION LINES**							
1	Maheshwar - Pithampur line	DCDS	54	108	Dec-11	ADB - II (S)	2845.00	92%
2	Malwa TPS - Chhegaon DCDS line (2x65)	DCDS	65	130	Mar-12	PFC	3627.00	22%
	Sub Total (B)		**119**	**238**			**6472**	
C.	**132 KV TRANSMISSION LINES**							
1	Sironj - Maksoodangarh DCSS line	DCSS	60	60	Sep-11	PFC	1543.00	94%
2	Shahdol - Dindori DCSS line	DCSS	65	65	Aug-11	GoMP	2041.00	88%
3	Second Circuiting of 132 KV Sabalgarh - Sheopurkalan line	2nd ckt		93.25	Dec-11	ADB - II	600.00	99%
4	Sabalgarh (220 kv) - Vijaypur DCSS line	DCSS	33	33	Aug-11	ADB - II	813.00	87%
5	LILO of 2ND ckt of 132 kV Betul - Multai line through Betul 220 kv S/s (2x3.75)	DCDS	3.75	7.5	Dec-11	ADB - II	186.00	97%
6	132kv Sidhi - Deosar DCDS line (2x50)	DCSS	50	100	Dec-11	ADB - II (S)	2198.00	21%
7	Birsinghpur - Shahdol DCSS	DCSS	48	48	2012-13	PFC	994.00	1%
8	LILO of Gadarwada - Pipariya line for Bankhedi DCDS (2x3.08)	DCDS	3.08	6.16	Feb-12	PFC	292.00	3%
9	Satna - Nagod DCSS (DCSS - 4.12 + 2nd Ckt - 19.50)	DCSS	4.12	23.62	Dec-11	PFC	453.00	2%
	Sub Total (C)		**266.95**	**436.53**			**9120**	
	Grand Total (A+B+C)		**780.95**	**1464.53**			**71020.00**	

EHV SUB STATIONS UNDER PROGRESS DURING 2011-12 (AS ON 31.5.2011)								
S.No.	**NAME OF THE SUBSTATION**	**VOLTAGE RATIO (KV)**	**No.OF X-mer & Cap. (MVA)**	**EFFECTIVE CAPACITY MVA**	**COMPLETION PROGRAMME**	**FUNDING AGENCY**	**ESTIMATED COST (Rs.in Lakhs)**	**PROGRESS IN %**
A.	**400 KV SUBSTATIONS**							
		NIL						
	Sub Total (A) (400 kv)			**0**			**0.00**	
B.	**220 KV SUBSTATIONS**							
1	Daloda (New S/s) (Distt. Ratlam)	220/132	1x160	160	2011-12	PFC - II	1905.00	6%
1	Ashta (ADDL) (Distt. Sehore)	220/132	1x160	160	2011-12	PFC - II	1147.00	65%
2	Mehgaon (ADDL) (Distt. Bhind)	220/132	1x160	160	2011-12	ADB - II	1064.00	40%
3	Seoni (ADDL) (Distt. Seoni)	220/132	1x160	160	2012-13	ADB - II (S)	721.00	30%
	Sub Total (B) (220kv)			**640**			**4837**	
C.	**132 KV SUBSTATIONS**							
(a)	**NEW SUBSTATIONS**							
1	Vijaypur (Distt. Sheopur)	132/33	1x40	40	Aug-11	ADB - II	841.00	58%
2	Dindori (Distt. Dindori)	132/33	1x40	40	Aug-11	GoMP	1040.00	99%
3	Mohna (Distt. Shivpuri)	132/33	1x40	40	2012-13	GoMP	403.00	18%
4	Rajmilan (Distt. Singrauli)	132/33	1x40	40	Dec-11	GoMP	1180.00	3%
5	Moondi (Distt. Khandwa)	132/33	1x40	40	Jun-12	PFC - II	957.00	1%
6	Deosar (Distt. Sidhi)	132/33	1x40	40	Dec-11	PFC - II	984.00	1%
	Sub Total (a)			**240**			**5405**	
C.	**132 KV SUBSTATIONS**							
(b)	**Additional/ Augmentation of Transformers**							
1	Rewa (Addl 1x40MVA) (Distt. Rewa)	132/33		40	Jul-11	ADB - II (S)	578.00	90%
2	Bhopal (MACT) (Aug from 20 to 63 MVA) (Distt. Bhopal)	132/33		43	Jul-11	ADB - II (S)	499.00	90%
3	220 KV Damoh (Addl) (Distt. Damoh)	132/33		40	Sep-11	ADB - II (S)	524.00	30%
4	Multai (Aug 20 to 40.) (Distt. Betul)	132/33		20	Oct-11	ADB - II (S)	585.00	10%
5	Vinoba Bhave (Aug from 40 to 63 MVA) (Distt. Jabalpur)	132/33		23	Aug-11	GoMP	629.00	70%
6	400KV Katni (Addl.) (Distt. Katni)	132/33		40	Aug-11	GoMP	630.00	30%
7	Kymore (Aug from 20 to 40 MVA) (Distt. Katni)	132/33		20	Sep-11	GoMP	470.00	30%
8	Pithampur (Addl.) (Distt. Dhar)	132/33		40	Oct-11	GoMP	630.00	15%
9	Katra (Addl.) (Distt. Rewa)	132/33		20	Oct-11	GoMP	160.00	10%
10	Aron (Addl.) (Distt. Guna)	132/33		40	Nov-11	GoMP	630.00	10%
	Sub Total (b)			**326**			**5335**	
	Grand Total (a+b+c) (132 kv)			**566**			**10740**	
	Grand Total (A+B+C)			**1206**			**15577**	
Total Cost of EHV Lines and Substations under progress (A+B+C)							**86597.00**	**04.06.2011**

ANNEXURE - 2.4.1(ii)

M.P POWER TRANSMISSION COMPANY LIMITED

TRANSMISSION WORKS COMPLETED DURING 2011-12 (UP TO 31.05.2011)

S. No.	NAME OF THE TRANSMISSION LINE / (FINANCED BY)	TYPE OF CIRCUITS	ROUTE LENGTH	CIRCUIT KMS.	DATE OF COMPLETION	DATE OF COMMI-SSIONING	ESTIMATED COST (Rs. In lacs)
I.	**EHV TRANSMISSION LINES**						
A.	**400 KV TRANSMISSION LINES**			**NIL**			
	Sub-Total (A)						
B.	**220 KV TRANSMISSION LINES**						
1	LILO of one ckt of 220kv Bina - Shivpuri line at 765KV S/s Bina of PGCIL (2x0.83)	DCDS	0.83	1.66	APRIL'11	14.04.2011	143
	Sub-Total (B)		**0.83**	**1.66**			**143**
C.	**132 KV TRANSMISSION LINES**						
1	Modification / Shifting of 132 kv Vindhyachal - Waidhan line due to Stage - IV VSTPP extension project of NTPC, Singrauli (2x6.71)	DCDS	6.71	13.42	MAY'11	03.05.2011	432
2	Power supply to M/s Bhilai JP Cement, Satna from Kotar (220kv) S/s (17.49)	DCSS	17.49	17.49	MAY'11	26.05.2011	614
	Sub-Total (C)		**24.20**	**30.91**			**1046.00**
	Total (EHV LINES) (A + B + C)		**25.03**	**32.57**			**1189**
II.	**EHV SUB - STATIONS**						
S. No.	**NAME OF THE SUBSTATION / (DISTRICT) / (FINANCED BY)**	**VOLTAGE RATIO (KV)**	**No.OF X-mer & Cap.(MVA)**	**EFFECTIVE CAPACITY MVA**	**DATE OF COMPLETION**	**DATE OF COMMI-SSIONING**	**ESTIMATED COST (Rs. In lacs)**
A.	**400 KV SUBSTATIONS**			**NIL**			
	Sub Total (B) (220KV S/s)			**0**			**0**
B.	**220 KV SUBSTATIONS**			**NIL**			
a.	**NEW SUBSTATIONS**						
b.	**ADDITIONAL TRANSFORMERS**						
	Sub Total (B) (220KV S/s)			**0**			**0**
C.	**132 KV SUBSTATIONS**						
a.	**NEW SUBSTATIONS**						
1	Chicholi (Distt. Betul) (ADB - II)	132/33	1x40	40	APRIL'11	09.04.2011	851
2	Shamsabad (Distt. Vidisha) (GoMP)	132/33	1x40	40	MAY'11	27.05.2011	958
	Sub Total (C.a) (NEW S/s)			**80**			**1809**
b.	**ADDITIONAL TRANSFORMERS**						
	Sub Total (C.b) (ADDITIONAL TRANSFORMER)			**0**			**0**
c.	**AUGMENTATION OF CAPACITY**						
	Sub Total (C.c) (AUGMENTATION OF CAPACITY)			**0**			**0**
	Sub-Total (C) (132 kv Sub-stations)			**80**			**1809**
	Total (EHV SUB - STATIONS) (A+B+C)			**80**			**1809**
	Grand Total (TRANSMISSION)						**2998**
	(*) : Cost included in respective 220 kv New Sub-stations .					**DT 02.06.2011**	
III	**CAPACITOR BANKS**						
S.No.	**NAME OF THE SUBSTATION**	**District**		**EFFECTIVE CAPACITY MVAR**	**DATE OF COMPLETION**	**DATE OF COMMI-SSIONING**	**ESTIMATED COST (Rs. In lacs)**
A.	**33 KV SHUNT CAPACITORS (MVAR)**						
1	Badnagar 220 kv S/s. (2x12 MVAR)	Ujjain		20	MAY'11	22.04.2011	35
	Total (33 KV SHUNT CAPACITORS)			**20**	**MVAR**		**35**
	Total Cost of Trans. Works Completed in 2011-12						**3033.00**
	(*) : Cost included in respective 220 kv New Sub-stations .					**DT 02.06.2011**	

Annexure-2.5(i)

Discoms wise Average Supply Hours

PARTICULARS	East Zone					Central Zone				
	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jan-11	Feb-11	Mar-11	Apr-11	May-11
Commissinary HQ	22:06	22:03	22:26	22:18	22:59	21:49	21:44	22:54	22:54	22:48
District HQ	20:00	19:50	21:05	20:51	21:30	19:17	19:20	21:46	21:02	20:28
Tehsil HQ	13:15	15:37	17:15	16:01	16:34	14:32	15:35	18:40	17:43	16:36
Rural -3Phase	10:03	10:01	11:07	11:47	12:19	9:56	9:37	11:46	12:54	12:13
Rural -1Phase	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Total Rural	10:03	10:01	11:07	11:47	12:19	9:56	9:37	11:46	12:54	12:13
PARTICULARS	West Zone					MP				
	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jan-11	Feb-11	Mar-11	Apr-11	May-11
Commissinary HQ	23:01	23:00	23:47	23:11	23:28	22:10	22:07	22:55	22:43	23:00
District HQ	19:31	19:20	22:29	20:58	21:57	19:38	19:32	21:44	20:57	21:19
Tehsil HQ	13:29	15:59	17:39	16:36	16:35	13:44	15:42	17:49	16:44	16:34
Rural -3Phase	9:54	10:05	11:12	12:30	12:27	9:58	9:55	11:21	12:20	12:20
Rural -1Phase	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Total Rural	9:54	10:05	11:12	12:30	12:27	9:58	9:55	11:21	12:20	12:20

Annexure 2.5(ii).

LIST OF 33KV FEEDERS FOR WHICH GROUP TO BE ALLOCATED

1. JABALPUR REGION

Name of EHV Substation	Name of 33KV feeder
132KV	
132KV Mansakra	33KV Hargarh
132KV Lakhnadon	33KV Jhabua Power
132KV Marhotal	33KV Kathonda
220KV	
220KV Jabalpur	33KV Ramnagra-I 33KV Ramnagra-II
220KV Pipariya	33KV Panagar

2. SAGAR REGION

Name of EHV Substation	Name of 33KV feeder
132KV	
132KV Gaurjhamer	33KV Deori-II
132KV Garhakota	33KV Patharia-II
132KV Tikamgarh	33KV Tikamgarh
132KV Sagar	33KV Housing Board
220KV	
220KV Damoh	33KV PGCIL 33KV Narsinghgarh 33KV Industrial Estate

3. REWA REGION

Name of EHV Substation	Name of 33KV feeder
132KV	
132KV Umariya	33KV Pipariya (Coal Mines) 33KV Manpur
132KV Kotma	33KV Chachai (Anoop-pur)
132KV Shahdol	33KV DCL
132KV Waidhan	33KV Sasan Power 33KV Rajmilan
132KV Majhgawan	33KV Majhgawan 33KV Barondha 33KV Kothi 33KV Chitrakoot
132KV Beohari	33KV Bansagar 33KV Beohari 33KV Jaisingh nagar 33KV Papoundh
220KV	
220KV Kotar	33KV Kotar 33KV Sukwah 33KV Birsinghpur 33KV Dagdiha 33KV Tikuri
220KV Birsinghpur	33KV Ascent

4. INDORE REGION

Name of EHV Substation	Name of 33KV feeder
132KV	
132KV Bahadurpur	33KV Cosp.Mill
132KV Indore West	33KV Gandhi Nagar
132KV Betma	33KV Chiklonda

	33KV Industrial
220KV	
220KV South Zone	33KV Datoda 33KV Tillore
220KV Jetpura (Indore)	33KV Rama Phosphate

5. UJJAIN REGION

Name of EHV Substation	**Name of 33KV feeder**
132KV	
132KV Manasa	33KV Kukdewshawar
220KV	
220KV Ratlam	33KV Raj Solvent

6. <u>BHOPAL REGION</u>

Name of EHV Substation	**Name of 33KV feeder**
132KV	
132KV Ayodhyanagar Bhopal	33KV Istrac 33kV BMC 33kV Narmada
132KV Pachore	33kV Industrual
132KV Sehore	33KV Industrial
132KV Sarangpur	33KV Manglaj
132KV Chambal (Bhopal)	33KV Interconnector-I 33KV Interconnector-II 33KV Interconnector-III 33KV Interconnector-IV
220KV	
220KV Mandideep	33KV Industrial - IV 33KV Interconnector –I 33kV Interconnector - II
220KV Betul	33KV Sehra 33KV Athner
220KV Bairagarh	33KV Parwalia

Anticipated Average Availability at MP Periphery: 2011-12

WITHOUT BILATERAL

Figures in MW

Particulars	Jul-11					Aug-11					Sep-11				
	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU
Thermal (R-02)	1596	1596	1596	1596	1187	1543	1543	1543	1543	1148	1578	1578	1578	1578	1136
Hydel	180	10	10	445	120	250	110	150	680	221	470	170	160	690	268
CSS	1770	1770	1770	1770	1317	1790	1790	1790	1790	1332	1800	1800	1800	1800	1296
ISP	110	0	0	370	89	100	0	130	690	171	190	130	170	770	227
SSP	40	370	100	640	214	40	370	150	690	233	250	400	590	620	335
Omkareshwar	0	50	50	170	50	0	50	60	300	76	50	50	130	320	99
DVC	113	113	113	113	84	113	113	113	113	84	113	113	113	113	81
Rihand +Matatila	15	15	15	15	11	15	15	15	15	11	15	15	15	15	11
Sugen	96	96	96	96	69	96	96	96	96	69	96	96	96	96	69
Total	**3920**	**4020**	**3750**	**5215**	**3142**	**3947**	**4087**	**4047**	**5917**	**3345**	**4562**	**4352**	**4652**	**6002**	**3523**

Particulars	Oct-11					Nov-11					Dec-11				
	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU
Thermal (R-02)	1913	1913	1913	1913	1423	2133	2133	2133	2133	1536	2165	2165	2165	2165	1611
Hydel	570	260	320	770	357	480	320	280	770	333	480	250	260	700	314
CSS	1960	1960	1960	1960	1458	1970	1970	1970	1970	1418	1930	1930	1930	1930	1436
ISP	120	60	190	810	219	500	130	290	890	326	490	80	230	800	298
SSP	190	200	140	430	179	190	80	130	430	149	160	80	130	430	149
Omkareshwar	80	50	90	310	99	210	100	70	340	130	180	50	80	330	119
DVC	176	176	176	176	131	113	113	113	113	81	176	176	176	176	131
Rihand +Matatila	15	15	15	15	11	15	15	15	15	11	15	15	15	15	11
Sugen	96	96	96	96	69	96	96	96	96	69	96	96	96	96	69
Total	**5120**	**4730**	**4900**	**6480**	**3947**	**5707**	**4957**	**5097**	**6757**	**4054**	**5692**	**4842**	**5082**	**6642**	**4138**

Particulars	Jan-12					Feb-12					Mar-12				
	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU	0 to 06	06 to 12	12 to 18	18 to 24	Energy in MU
Thermal (R-02)	2165	2165	2165	2165	1611	2165	2165	2165	2165	1455	2165	2165	2165	2165	1611
Hydel	380	100	130	680	240	220	90	90	600	168	90	40	60	480	125
CSS	2040	2040	2040	2040	1518	2040	2040	2040	2040	1371	2060	2060	2060	2060	1533
ISP	420	180	100	660	253	370	60	110	640	198	330	60	110	580	201
SSP	190	70	0	430	128	80	40	0	340	77	80	40	0	340	86
Omkareshwar	130	50	60	310	102	100	60	60	280	84	130	60	60	210	86
DVC	176	176	176	176	131	176	176	176	176	118	176	176	176	176	131
Rihand +Matatila	15	15	15	15	11	15	15	15	15	10	15	15	15	15	11
Sugen	96	96	96	96	69	96	96	96	96	69	96	96	96	96	69
Total	**5612**	**4892**	**4782**	**6572**	**4063**	**5262**	**4742**	**4752**	**6352**	**3551**	**5142**	**4712**	**4742**	**6122**	**3851**

Basis of Anticipated Availability for 2011-2012

1 Central Sector :- Availability from Central Sector as per Maintenance Programme furnished by WRPC(LGBR), Mumbai & including 200 MW for drought prone area of Bundelkhand. Availability of Sipat Stage -I Considered as per information furnished by Tredco

2 Thermal :- As furnished by O&M : Generation , MPPGCL (R-02) & excluding Aux. Cons.

3 Hydel :- As furnished by O & M Hydel.

(a) Schedule of generation from Bansagar-III HPS shall depend upon requirement of water from Bansagar reservoir by Bihar Sate as pe share.

(b) Schedule of Generation from Pench HPS shall depend upon reservoir level of Kheri dam of Govt. of MS Situated in down stream of Pench

(C) Schedule of generation for other HPS is also dependent on release of water allocated by WRD

(d) Hydel Generation considering Normal Rains in 2011-12 and may change during real time as per system requirement.

4 ISP,OSP and SSP : As furnished by NHDC/NCA

5 Maheshwar : Not Considered

6 DVC & Sujen : Considering Avaialability as furnished by MP Tradeco.

Annexure 3.3

TENTATIVE MAINTENANCE PROGRAMME OF MPPGCL THERMAL UNITS FOR THE YEAR 2011-2012 R-2

20-Jun-2011

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	1-Apr-11	30-Sep													183	C.O.H.	
AM -II	4	1-Jun-11	31-Aug													92	C.O.H.	IP ROTOR DAMAGE
AMK EXT	5	Deferred														0		
STP-I	1	Deferred														0		
STP-I	2	Deferred														0		
STP-I	3	1-May-11	31-May													31	A.O.H.	
STP-I	4	25-Jul-11	14-Aug													21	A.O.H.	
STP-I	5	30-May-11	22-Jun													24	A.O.H.	
STP-II	6	20-Jul-11	07-Sep													50	C.O.H.	Pent house repair,Eco., LTSH
STP-II	7	1-Jul-11	20-Jul													20	A.O.H.	
STP-III	8	Deferred														0		
STP-III	9	1-Sep-11	20-Oct													50	C.O.H.	Eco, Reheater, LTSH
SGTPS - I	1	10-Aug-11	03-Sep													25	A.O.H.	SS Header Rep.
SGTPS - I	2	5-Sep-11	19-Oct													45	C.O.H.	Re-Heater APH & Wind Box Rep.
SGTPS - II	3	16-Jul-11	05-Aug													21	A.O.H.	Econ.Repl
SGTPS - II	4	5-May-11	31-May													27	A.O.H.	
SGTPS - III	5	Deferred														0	A.O.H.	

Capacity under Planned Maintenance	120	120	323	393	303	282	450	674	643	650	673	540	420	140	0	0	0	0	0	0	0	0	0	0					
PLANNED MAINTENANCE %	4	4	11	13	10	10	15	23	22	22	23	18	14	5	0	0	0	0	0	0	0	0	0	0					
THERMAL AVAILABLITYAFTER CONSIDERING FORCED & PARTIAL OUTAGES IN MW INCLUDING AUX. CONSUMPTION	1913		1723		1840		1754		1695		1735		2105		2347		2382		2382		2382		2382						
Generation In MU	1378		1282		1325		1305		1261		1249		1566		1690		1772		1772		1658		1772						
PUF In %	65		59		63		60		58		59		72		80		81		81		81		81						

A.O.H C.O.H *Force outage*

Unitwise / Stationwise Genration in MU

Annexure 4.1

A. Thermal

Stn. Name	UNIT No.	Capacity MW	Jan-11	Feb-11	Mar-11	Apr-11	May-11
AMARKANTAK	3	120	0	0.00	0	0.00	0.00
	4	120	75.936	53.41	45.85	48.06	67.49
	PH II	**240**	**75.936**	**53.41**	**45.85**	**48.06**	**67.49**
	PH III	**210**	**156.969**	**133.24**	**125.427**	**129.68**	**156.88**
	TOT	**450**	**232.905**	**186.65**	**171.277**	**177.74**	**224.37**
SATPURA	1	62.5	30.18	30.59	33.46	29.87	31.91
	2	62.5	33.472	30.66	31.671	29.95	35.89
	3	62.5	32.073	29.47	28.335	30.95	0.05
	4	62.5	27.878	28.26	31.347	32.71	29.11
	5	62.5	29.326	26.77	26.459	26.28	29.80
	PH I	**312.5**	**152.929**	**145.75**	**151.272**	**149.76**	**126.77**
	6	200	92.2	91.45	96.88	74.36	71.68
	7	210	116.405	101.08	100.875	71.40	77.66
	PH II	**410**	**208.605**	**192.53**	**197.755**	**145.75**	**149.33**
	8	210	106.39	102.83	96.39	61.17	72.81
	9	210	114.225	83.15	87.945	90.40	92.77
	PH III	**420**	**220.615**	**185.98**	**184.335**	**151.57**	**165.58**
	TOT	**1142.5**	**582.149**	**524.25**	**533.362**	**447.07**	**441.67**
SANJAY GANDHI	1	210	117.873	93.94	115.028	90.40	98.13
	2	210	112.122	93.74	114.812	97.39	93.88
	PH I	**420**	**229.995**	**187.68**	**229.84**	**187.79**	**192.02**
	3	210	121.511	103.62	125.087	101.17	104.19
	4	210	134.865	123.81	104.284	122.59	20.30
	PH II	**420**	**256.376**	**227.43**	**229.371**	**223.75**	**124.49**
	PH III	**500**	367.66	328.43	363.192	341.23	299.09
	TOT	**1340**	**854.03**	**743.54**	**822.40**	**752.78**	**615.60**
MPPGCL THERMAL		**2932.5**	**1669.09**	**1454.44**	**1527.04**	**1377.59**	**1281.63**

AMARKANTAK POWER HOUSE-I RETIRED FROM SERVICE WEF 01.04.2009

B. Hydel

Station Name	Capacity MW	Jan-11	Feb-11	Mar-11	Apr-11	May-11
GANDHISAGAR	**115.0**	12.58	3.79	0.25	0.64	2.20
R.P.SAGAR	**172.0**	75.53	10.37	0.00	0.01	1.33
J.SAGAR	**99.0**	52.38	7.98	0.34	0.78	1.13
CHAMBAL	**386.0**	**140.49**	**22.15**	**0.59**	**1.43**	**4.66**
M.P.CHAMBAL	**193.0**	**70.25**	**11.07**	**0.30**	**0.71**	**2.33**
PENCH	**160.0**	37.64	22.40	24.85	18.15	14.36
M.P.PENCH	**107.0**	**25.09**	**14.93**	**16.57**	**12.10**	**9.57**
BARGI	**90.0**	39.73	49.67	30.46	35.66	26.74
TONS	**315.0**	56.90	30.10	44.64	64.27	79.42
BIRSINGHPUR	**20.0**	0.01	0.00	0.00	0.00	0.00
B.SGR(DEOLONDH)	**60.0**	13.76	11.00	0.00	0.00	0.00
B.SGR(SILPARA)	**30.0**	5.63	3.90	5.60	6.30	6.88
RAJGHAT	**45.0**	20.36	8.52	0.00	0.00	0.00
M.P.RAJGHAT	**22.5**	**10.18**	**4.26**	**0.00**	**0.00**	**0.00**
B.SGR(JINHA)	**20.0**	3.50	1.23	0.00	0.00	0.00
MADIKHEDA	**60.0**	0.00	3.13	2.86	0.19	0.00
TOTAL HYDEL	**1186.0**	**318.01**	**152.09**	**109.01**	**126.00**	**132.05**
MPPGCL Hydel	**915.0**	**190.10**	**133.74**	**108.67**	**125.22**	**129.59**
MPSEB HYDEL Share	**917.5**	**225.04**	**129.30**	**100.43**	**119.24**	**124.94**

C. NHDC

		Jan-11	Feb-11	Mar-11	Apr-11	May-11
Indira Sagar Hydel Project	1000	245.577	184.783	189.943	132.074	151.491
Omkareshwar Hydel Project	520	103.319	80.631	85.399	60.584	71.830

Annexure 4.2

MP SUPPLY EXCLUDING AUXILIARY CONS.
in Million Units

S.No.	Particulars	Jan-11	Feb-11	Mar-11	Apr-11	May-11
1	MPSEB Thermal Availability	1450.47	1263.93	1326.69	1180.46	1101.36
2	MPSEB Hydel Availability	226.28	126.86	98.70	117.26	122.66
3	Indira Sagar	245.51	184.69	189.68	131.91	152.52
4	Omkareshwar	103.32	80.63	85.40	60.58	71.83
5	Schedule / Drawal From Central Sector	1539.53	1391.76	1538.68	1406.53	1354.62
6	Schedule of DVC	88.63	66.27	78.22	73.92	81.13
7	Schedule of Sujen	0.00	0.00	64.22	72.00	73.82
8	Sardar Sarovar	178.62	105.25	125.37	120.75	140.34
9	Additional Power Purchase	0.00	16.41	37.27	48.93	83.08
10	Sale of Power	0.00	-4.80	-26.37	-2.10	0.00
11	Banking of Power	306.31	255.59	39.72	-53.32	-49.43
12	Energy Exchange	0.00	0.00	0.00	0.00	0.00
13	Unschedule Interchange	34.60	32.99	-24.46	21.37	-2.66
14	Other Imp / Exp	60.43	93.37	92.81	76.59	76.90
15	***Total MPSEB Supply excl. Aux. Cons.***	***4233.70***	***3612.96***	***3625.93***	***3254.89***	***3206.18***
16	Average Supply per Day	136.57	129.03	116.97	108.50	103.43
17	Maximum Daily M.P. Supply	137.36	131.82	121.73	121.65	107.93
18	Minimum Daily M.P. Supply	129.10	118.29	103.79	101.91	93.26
19	Registered Demand : MW	7298	8331	8180	7339	6155
24	Unrestricted Demand : MW	8744	8758	8449	7488	7168

Annexure 4.3(i)

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- January 2011

FIGURES IN MW

Hrs.	FREQ.	Own Generation							Schedule from											Tot Avl.	Act. Drl	UI	Other Imp/ Exp	DEMAND MET	Load Shedding			REST. DEMAND	UNREST. DEMAND
		THER. Incl Aux	THER. Excl Aux	HYD.	ISP	OSP	Injection from STOA	Total	CSS	DVC ER	SSP	SEZ	Banking	Sale	Pur	Exchange	STOA	Kriand+ Matatila	Total						SCH	UNSCH	TOTAL		
1:00	49.93	2217	2018	140	8	40	-2	2203	1988	116	46	11	961	0	0	0	2	12	3136	5339	3662	527	0	5866	967	34	1000	5908	6875
2:00	50.03	2220	2020	120	4	5	-6	2143	1982	116	46	11	961	0	0	0	6	12	3133	5277	3608	474	0	5751	912	4	917	5751	6663
3:00	50.05	2217	2017	117	8	5	-7	2140	1977	116	46	11	983	0	0	0	7	12	3152	5292	3374	222	0	5514	786	0	786	5508	6294
4:00	50.04	2218	2018	109	27	12	-7	2160	1973	116	46	11	983	0	0	0	7	12	3149	5309	3108	-41	0	5268	874	0	874	5263	6137
5:00	49.94	2212	2013	109	32	13	-3	2164	1971	116	46	11	983	0	0	0	3	12	3142	5306	3057	-85	0	5221	880	0	880	5230	6110
6:00	49.82	2227	2026	129	286	121	1	2564	1943	116	46	11	983	0	0	0	-1	12	3111	5675	2894	-216	0	5458	747	8	754	5492	6239
7:00	49.71	2241	2039	184	347	153	8	2731	2002	116	46	11	219	0	0	0	-8	12	2398	5129	2513	115	0	5244	1091	107	1198	5392	6483
8:00	49.70	2248	2046	237	350	148	11	2792	2004	116	46	11	219	0	0	0	-11	12	2397	5188	2481	85	0	5273	1536	26	1563	5341	6878
9:00	49.66	2247	2045	258	355	149	16	2823	2003	116	46	11	103	0	0	0	-16	12	2276	5099	2425	149	0	5248	1923	41	1964	5337	7259
10:00	49.77	2253	2050	268	352	146	16	2832	2000	116	416	11	98	0	0	0	-16	12	2636	5468	2544	-92	0	5376	2117	30	2148	5438	7556
11:00	49.76	2241	2039	260	359	149	16	2823	1997	116	492	11	98	0	0	0	-16	12	2710	5533	2672	-38	0	5495	1911	57	1967	5586	7497
12:00	49.74	2220	2020	288	358	152	17	2834	1995	116	495	11	98	0	0	0	-17	12	2709	5544	2809	100	0	5644	1837	34	1871	5715	7552
13:00	49.79	2225	2025	307	357	149	14	2852	1998	114	495	11	97	0	0	0	-14	12	2712	5565	2729	17	0	5582	2210	6	2216	5618	7828
14:00	49.88	2236	2035	254	294	128	11	2722	1998	114	488	11	118	0	0	0	-11	12	2729	5451	2580	-149	0	5302	2048	0	2048	5319	7368
15:00	49.71	2239	2037	216	191	82	12	2538	1999	114	164	11	118	0	0	0	-12	12	2406	4944	2498	92	0	5036	1963	27	1990	5104	7067
16:00	49.75	2237	2036	225	187	83	12	2543	2005	114	60	11	118	0	0	0	-12	12	2308	4851	2470	162	0	5013	1902	17	1919	5065	6967
17:00	49.77	2251	2049	186	201	84	12	2532	2003	114	60	11	118	0	0	0	-12	12	2306	4838	2211	-95	0	4743	1945	12	1957	4787	6732
18:00	49.82	2270	2066	178	387	161	12	2803	2002	114	60	11	164	0	0	0	-12	12	2351	5155	2292	-60	0	5095	1784	14	1798	5134	6919
19:00	49.81	2273	2068	394	763	290	21	3536	1987	114	494	11	143	0	0	0	-21	12	2740	6276	2651	-88	0	6187	1558	21	1579	6235	7794
20:00	49.79	2271	2067	479	907	351	22	3826	1989	114	569	11	143	0	0	0	-22	12	2816	6642	2920	105	0	6746	1333	8	1341	6784	8117
21:00	49.85	2264	2061	514	913	365	21	3873	1990	114	569	11	143	0	0	0	-21	12	2817	6690	2864	47	0	6738	1384	40	1424	6799	8184
22:00	49.99	2247	2044	429	799	317	21	3611	1998	112	569	11	143	0	0	0	-21	12	2824	6435	2982	158	0	6593	1456	30	1486	6625	8081
23:00	49.90	2236	2035	334	528	231	7	3135	2021	112	173	11	349	0	0	0	-7	12	2672	5807	2908	236	0	6043	1509	0	1509	6058	7567
24:00	50.03	2236	2034	202	88	109	5	2438	2027	112	63	11	671	0	0	0	-5	12	2892	5330	3090	198	0	5528	1573	7	1581	5531	7105
Avg.	**49.84**	**2239**	**2038**	**247**	**338**	**143**	**10**	**2776**	**1994**	**115**	**233**	**11**	**376**	**0**	**0**	**0**	**-10**	**12**	**2718**	**5506**	**2806**	**76**	**0**	**5582**	**1510**	**22**	**1532**	**5626**	**7136**
00 TO 06 HRS.	49.97	2218	2019	121	61	33	-4	2229	1972	116	46	11	976	0	0	0	4	12	3137	5366	3284	147	0	5513	861	8	869	5525	6386
06 TO 12 HRS.	49.72	2242	2040	249	353	149	14	2806	2000	116	257	11	139	0	0	0	-14	12	2521	5327	2574	53	0	5380	1736	49	1785	5468	7204
12 TO 18 HRS.	49.79	2243	2041	228	270	114	12	2665	2001	114	221	11	122	0	0	0	-12	12	2469	5134	2463	-5	0	5128	1975	13	1988	5171	7147
06TO 18 HRS.	49.76	2242	2041	239	311	132	13	2735	2000	115	239	11	131	0	0	0	-13	12	2495	5230	2519	24	0	5254	1856	31	1887	5320	7175

Annexure 4.3(ii)

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- February 2011

FIGURES IN MW

Hrs.	FREQ.		Own Generation						Schedule from											Tot Avl.	Act. Drl	UI	Other Imp/ Exp	DEMAND MET	Load Shedding			REST. DEMAND	UNREST. DEMAND
		THER. Incl Aux	THER. Excl Aux	HYD.	ISP	OSP	Injection from STOA	Total	CSS	DVC ER	SSP	SEZ	Banking	Sale	Pur	Exchange	STOA	Rihand+ Matatila	Total					SCH	UNSCH	TOTAL		
1:00	50.00	2153	1959	134	24	31	-6	2143	1934	94	18	12	827	0	20	0	6	12	2921	5064	3384	463	1	5528	981	37	1018	5566	6547
2:00	50.12	2160	1965	106	17	11	-5	2094	1943	94	18	12	827	0	20	0	5	12	2931	5025	3238	307	1	5333	1016	32	1048	5348	6364
3:00	50.09	2161	1967	104	17	9	-5	2092	1916	94	18	12	872	0	0	0	5	12	2929	5020	3077	149	1	5170	984	31	1015	5189	6173
4:00	50.09	2125	1934	99	17	9	-5	2054	1911	94	18	12	872	0	0	0	5	12	2924	4978	2917	-7	1	4972	1033	5	1038	4964	5997
5:00	49.99	2112	1922	100	17	9	-5	2043	1910	94	18	12	872	0	0	0	5	12	2923	4966	2935	13	1	4979	1066	18	1084	4998	6064
6:00	49.85	2137	1945	104	152	61	0	2261	1906	94	18	12	856	-2	0	0	0	12	2897	5158	2749	-148	1	5011	1207	24	1231	5056	6263
7:00	49.74	2161	1966	123	186	78	11	2364	1938	94	18	12	266	0	0	0	-11	12	2329	4692	2258	-70	1	4623	1874	43	1918	4702	6577
8:00	49.92	2166	1971	130	253	102	17	2474	1953	94	18	12	202	-3	0	0	-17	12	2270	4744	2246	-25	1	4720	2055	51	2105	4782	6837
9:00	49.81	2177	1981	155	330	138	21	2625	2016	92	18	12	136	-15	0	0	-21	12	2249	4875	2282	32	1	4908	1968	41	2009	4977	6945
10:00	49.99	2175	1979	147	343	148	21	2638	2022	92	228	12	125	-19	0	0	-21	12	2451	5089	2322	-129	1	4961	1984	34	2018	4997	6981
11:00	49.97	2150	1956	141	301	135	22	2555	2020	92	264	12	125	-30	0	0	-22	12	2473	5028	2503	30	1	5059	1861	35	1896	5099	6960
12:00	49.91	2155	1961	145	273	125	23	2527	2021	92	264	11	125	-30	0	0	-23	12	2472	5000	2273	-199	1	4802	1996	54	2051	4869	6865
13:00	50.04	2157	1963	129	198	90	22	2402	2018	92	264	11	125	-30	0	0	-22	12	2472	4873	2381	-90	1	4784	2037	42	2079	4820	6857
14:00	49.94	2140	1948	112	108	61	20	2248	2016	92	257	11	162	-15	0	0	-20	12	2516	4764	2223	-293	1	4472	1925	35	1960	4516	6441
15:00	49.94	2148	1955	106	82	42	18	2204	2012	92	83	11	169	-11	0	0	-18	12	2350	4554	2158	-192	1	4363	2110	16	2126	4388	6498
16:00	49.96	2154	1960	113	73	33	19	2199	2010	92	26	11	170	-11	0	0	-19	12	2290	4490	2351	61	1	4552	2053	43	2096	4600	6653
17:00	50.02	2164	1970	112	98	38	18	2235	2010	92	26	11	170	-7	0	0	-18	12	2296	4532	2183	-113	1	4420	2044	29	2073	4446	6490
18:00	50.11	2180	1983	137	271	112	13	2517	2021	92	26	12	208	0	0	0	-13	12	2358	4875	2237	-120	1	4755	1771	20	1791	4759	6531
19:00	49.83	2198	2000	364	642	254	12	3271	2050	92	396	12	131	0	0	0	-12	12	2680	5952	2803	122	1	6075	1404	50	1454	6149	7554
20:00	49.92	2214	2015	517	892	351	12	3786	2056	92	468	12	131	0	3	0	-12	12	2763	6549	2902	139	1	6689	1273	46	1318	6746	8019
21:00	49.88	2207	2008	545	916	364	9	3843	2060	92	468	12	131	0	238	0	-9	12	3003	6846	3541	537	1	7385	435	145	579	7547	7981
22:00	50.06	2177	1981	492	890	353	7	3723	2062	92	468	12	131	0	267	0	-7	12	3036	6759	3558	522	1	7282	459	71	531	7344	7803
23:00	50.06	2138	1946	290	594	277	4	3111	2081	92	137	12	224	0	0	0	-4	12	2554	5665	2843	289	1	5955	1400	22	1422	5969	7369
24:00	50.11	2149	1956	175	106	134	2	2373	2083	92	34	12	524	0	17	0	-2	12	2771	5144	3070	299	1	5444	1390	0	1390	5428	6819
Avg.	**49.97**	**2161**	**1966**	**191**	**283**	**124**	**10**	**2574**	**1999**	**93**	**149**	**12**	**349**	**-7**	**24**	**0**	**-10**	**12**	**2607**	**5193**	**2685**	**66**	**1**	**5260**	**1514**	**38**	**1552**	**5302**	**6816**
00 TO 06 HRS.	50.02	2141	1949	108	41	22	-4	2115	1920	94	18	12	854	0	7	0	4	12	2921	5035	3050	129	1	5166	1048	24	1072	5187	6235
06 TO 12 HRS.	49.89	2164	1969	140	281	121	19	2531	1995	93	135	12	163	-16	0	0	-19	12	2374	4905	2314	-60	1	4846	1956	43	1999	4904	6861
12 TO 18 HRS.	50.00	2157	1963	118	138	63	18	2301	2015	92	114	11	167	-12	0	0	-18	12	2380	4681	2256	-125	1	4557	1990	31	2021	4588	6578
06TO 18 HRS.	49.94	2161	1966	129	210	92	19	2416	2005	92	124	11	165	-14	0	0	-19	12	2377	4793	2285	-92	1	4702	1973	37	2010	4746	6719
18 TO 24 HRS.	49.98	2181	1984	397	673	289	8	3351	2065	92	328	12	212	0	88	0	-8	12	2801	6152	3119	318	1	6472	1060	56	1116	6531	7591

Annexure 4.3(iii)

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- March 2011

FIGURES IN MW

Hrs.	FREQ.	Own Generation							Schedule from											Tot Avl.	Act. Drl	UI	Other Imp/ Exp	DEMAND MET	Load Shedding			REST. DEMAND	UNREST. DEMAND
		THER. Incl Aux	THER. Excl Aux	HYD.	ISP	OSP	Injection from STOA	Total	CSS	DVC ER	SSP	SEZ	Banking	Sale	Pur	Exchange	STOA	Kinand+ Matatila	Total					SCH	UNSCH	TOTAL		
1:00	49.90	2037	1854	83	190	104	-6	2224	1979	101	104	4	57	0	83	0	6	153	2487	4712	2496	8	1	4721	1213	0	1213	4735	5947
2:00	49.99	2038	1854	50	151	78	-6	2127	1979	101	104	4	94	0	83	0	6	153	2525	4652	2419	-105	1	4548	1282	0	1282	4550	5832
3:00	49.96	2034	1851	50	145	67	-6	2106	1979	101	104	4	134	0	83	0	6	153	2565	4671	2515	-50	1	4623	1063	0	1063	4628	5690
4:00	50.03	2039	1855	39	134	62	-6	2084	1972	101	104	4	165	0	85	0	6	153	2591	4675	2414	-178	1	4498	1006	0	1006	4495	5501
5:00	49.94	2035	1852	41	138	63	-7	2088	1964	101	104	4	165	0	85	0	7	152	2583	4671	2474	-109	1	4563	996	0	996	4572	5568
6:00	49.89	2030	1847	49	111	57	-5	2060	1956	101	104	4	165	0	85	0	5	154	2574	4633	2471	-103	1	4532	1219	0	1219	4548	5766
7:00	49.94	2048	1864	36	101	54	-4	2051	1943	101	104	4	124	-33	85	0	4	154	2485	4536	2000	-485	1	4052	1932	0	1932	4061	5993
8:00	50.01	2048	1863	54	103	60	-4	2077	1965	101	104	4	79	-62	85	0	4	155	2435	4512	2150	-286	1	4227	1952	0	1952	4226	6178
9:00	49.87	2058	1873	123	130	65	-1	2189	1988	101	118	4	24	-16	84	0	1	159	2463	4652	2334	-129	1	4524	1747	5	1751	4547	6293
10:00	50.01	2063	1877	170	138	67	2	2254	1993	100	118	4	15	-21	84	0	-2	162	2453	4707	2304	-149	1	4558	1539	5	1544	4562	6101
11:00	49.92	2044	1860	160	146	69	2	2237	1988	100	118	4	15	-40	84	0	-2	162	2429	4666	2169	-260	1	4407	1576	4	1580	4421	5997
12:00	49.95	2044	1860	109	142	66	2	2179	1988	98	118	4	15	-87	84	0	-2	162	2380	4559	1954	-426	1	4134	1661	2	1662	4143	5803
13:00	49.99	2065	1879	68	138	67	1	2153	1975	98	118	4	15	-142	84	0	-1	160	2310	4463	1998	-312	1	4152	1619	0	1619	4154	5772
14:00	49.89	2056	1871	39	141	65	-1	2115	1974	98	118	4	18	-86	84	0	1	157	2368	4483	1962	-406	1	4078	1475	0	1475	4093	5569
15:00	49.87	2038	1855	27	143	61	0	2086	1944	98	118	4	25	-105	84	0	0	156	2324	4410	1873	-451	1	3960	1672	0	1672	3979	5651
16:00	49.89	2039	1856	27	140	67	0	2090	1930	98	118	4	25	-101	84	0	0	155	2315	4405	1927	-388	1	4019	1532	0	1532	4034	5566
17:00	49.98	2030	1848	27	143	66	-1	2083	1933	98	122	4	25	-82	84	0	1	156	2341	4424	2002	-339	1	4086	1437	0	1437	4089	5527
18:00	50.07	2042	1858	40	218	92	-1	2206	1933	96	122	4	26	-75	82	0	1	156	2345	4552	2188	-157	1	4395	1258	25	1283	4411	5669
19:00	49.80	2048	1863	243	501	192	-2	2798	1997	96	383	4	10	0	109	0	2	169	2771	5569	2956	185	1	5755	1256	20	1276	5803	7059
20:00	49.98	2080	1893	417	749	309	0	3368	2007	96	395	4	10	0	125	0	0	173	2811	6179	2910	99	1	6279	1219	26	1245	6308	7528
21:00	49.82	2074	1888	455	783	324	0	3450	2005	96	395	4	10	0	634	0	0	192	3337	6787	3838	501	1	7288	242	148	390	7462	7704
22:00	49.88	2073	1886	453	777	325	0	3441	2004	96	395	4	10	0	581	0	0	190	3281	6723	3564	283	1	7006	238	173	411	7197	7434
23:00	49.89	2063	1877	328	626	273	0	3104	2020	96	134	4	0	0	106	0	0	161	2523	5627	2555	32	1	5660	1296	3	1299	5678	6974
24:00	49.90	2060	1875	155	249	158	-2	2434	2017	96	125	4	0	0	87	0	2	157	2488	4923	2535	47	1	4971	1482	3	1485	4987	6469
Avg.	**49.93**	**2049**	**1865**	**135**	**260**	**117**	**-2**	**2375**	**1976**	**99**	**160**	**4**	**51**	**-35**	**132**	**0**	**2**	**160**	**2389**	**4925**	**2417**	**-132**	**1**	**4793**	**1330**	**17**	**1347**	**4820**	**6150**
00 TO 06 HRS.	49.95	2035	1852	52	145	72	-6	2115	1972	101	104	4	130	0	84	0	6	153	2554	4669	2465	-89	1	4581	1130	0	1130	4588	5717
06 TO 12 HRS.	49.95	2051	1866	108	127	64	-1	2164	1977	100	113	4	45	-43	85	0	1	159	2441	4605	2152	-289	1	4317	1734	3	1737	4327	6061
12 TO 18 HRS.	49.95	2045	1861	38	154	70	0	2122	1948	98	119	4	22	-98	84	0	0	157	2334	4456	1992	-342	1	4115	1499	4	1503	4127	5625
06TO 18 HRS.	49.95	2048	1864	73	140	67	0	2143	1963	99	116	4	34	-71	84	0	0	158	2387	4531	2072	-316	1	4216	1617	3	1620	4227	5843
18 TO 24 HRS.	49.88	2066	1880	342	614	263	-1	3099	2008	96	305	4	7	0	274	0	1	174	2868	5968	3060	191	1	6160	955	62	1017	6239	7195

Annexure 4.3(iv)

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- April 2011

FIGURES IN MW

Hrs.	FREQ.	Own Generation							Schedule from											Tot Avl.	Act. Drl	UI	Other Imp/ Exp	DEMAND MET	Load Shedding			REST. DEMAND	UNREST. DEMAND
		THER. Incl Aux	THER. Excl Aux	HYD.	ISP	OSP	Injection from STOA	Total	CSS	DVC ER	SSP	SEZ	Banking	Sale	Pur	Exchange	STOA	Rihand+ Matatila	Total						SCH	UNSCH	TOTAL		
1:00	49.81	1896	1725	259	242	68	4	2298	1836	96	14	3	-35	0	102	0	-4	146	2158	4456	2243	85	5	4546	843	0	843	4574	5417
2:00	49.84	1907	1736	190	218	43	2	2189	1837	96	14	3	-35	0	102	0	-2	144	2159	4349	2245	85	5	4439	847	0	847	4461	5308
3:00	49.84	1913	1741	151	200	41	3	2137	1838	96	14	3	3	0	117	0	-3	146	2214	4351	2370	155	5	4511	799	0	799	4533	5332
4:00	49.88	1908	1736	120	156	35	4	2051	1837	96	14	3	52	0	123	0	-4	147	2269	4320	2382	113	5	4438	722	0	722	4455	5177
5:00	49.76	1903	1732	116	142	31	5	2026	1835	96	11	3	52	0	124	0	-5	147	2264	4290	2327	64	5	4359	704	2	706	4395	5098
6:00	49.86	1894	1724	105	131	50	5	2014	1835	96	11	3	52	0	89	0	-5	145	2228	4242	2168	-60	5	4187	960	20	980	4227	5187
7:00	49.88	1893	1723	73	103	54	4	1956	1834	96	11	3	87	0	66	0	-4	144	2238	4194	2149	-89	5	4110	1103	0	1103	4126	5229
8:00	50.01	1897	1726	71	97	57	3	1955	1835	96	11	3	87	0	68	0	-3	144	2242	4196	2150	-92	5	4110	1016	0	1016	4109	5125
9:00	49.90	1900	1729	61	84	57	4	1935	1836	96	19	3	53	0	67	0	-4	145	2216	4151	2136	-80	5	4076	1223	3	1226	4093	5316
10:00	49.95	1895	1725	98	63	57	4	1946	1838	96	310	3	-207	0	67	0	-4	157	2261	4207	2235	-26	5	4186	984	12	997	4205	5189
11:00	49.91	1895	1724	98	59	59	4	1944	1838	96	375	3	-238	-7	74	0	-4	160	2297	4241	2244	-53	5	4193	933	6	939	4212	5145
12:00	49.88	1889	1719	94	56	59	5	1933	1835	96	372	3	-238	-7	74	0	-5	160	2290	4223	2177	-114	5	4115	867	2	870	4133	5001
13:00	50.00	1898	1728	64	33	52	5	1882	1822	96	375	3	-238	-7	70	0	-5	160	2277	4159	2172	-105	5	4059	1008	0	1008	4060	5067
14:00	49.90	1902	1730	50	39	57	6	1882	1815	96	375	3	-238	-1	65	0	-6	159	2270	4152	2010	-260	5	3897	941	0	941	3911	4852
15:00	49.83	1895	1725	52	48	58	4	1887	1819	96	106	3	-238	-24	63	0	-4	148	1971	3858	1923	-47	5	3815	1294	0	1294	3839	5133
16:00	49.86	1900	1729	49	48	59	4	1890	1818	96	32	3	-238	-17	63	0	-4	145	1898	3788	1869	-29	5	3764	1286	0	1286	3783	5069
17:00	49.93	1893	1723	64	47	59	4	1898	1820	96	32	3	-238	-7	63	0	-4	145	1911	3810	1942	31	5	3846	1166	0	1166	3856	5022
18:00	50.03	1921	1749	93	184	86	4	2115	1817	96	32	3	-238	0	63	0	-4	144	1914	4029	1926	12	5	4046	1151	0	1151	4042	5192
19:00	49.82	1939	1765	242	328	138	5	2478	1808	96	389	3	0	0	69	0	-5	159	2520	4997	2515	-5	5	4997	1075	0	1075	5022	6097
20:00	49.83	1959	1783	386	486	196	11	2862	1817	96	489	3	0	0	194	0	-11	175	2764	5626	2592	-172	5	5459	1194	7	1201	5490	6684
21:00	49.76	1961	1784	428	510	218	12	2952	1823	96	486	3	0	0	293	0	-12	180	2869	5821	2856	-13	5	5814	969	55	1023	5903	6871
22:00	49.82	1943	1768	423	509	231	11	2943	1827	96	483	3	0	0	300	0	-11	179	2876	5819	2911	36	5	5859	805	94	899	5978	6783
23:00	49.69	1906	1734	379	436	201	9	2759	1847	96	113	3	0	0	212	0	-9	159	2420	5179	2443	22	5	5206	1054	21	1075	5271	6325
24:00	49.72	1901	1730	327	298	127	5	2487	1846	96	22	3	-35	0	180	0	-5	151	2258	4745	2303	45	5	4794	1075	22	1097	4855	5930
Avg.	**49.86**	**1909**	**1737**	**166**	**188**	**87**	**5**	**2184**	**1830**	**96**	**171**	**3**	**-76**	**-3**	**113**	**0**	**-5**	**154**	**2129**	**4467**	**2262**	**-21**	**5**	**4451**	**1001**	**10**	**1011**	**4481**	**5481**
00 TO 06 HRS.	49.83	1903	1732	157	182	45	4	2119	1836	96	13	3	15	0	110	0	-4	146	2215	4335	2289	74	5	4413	812	4	816	4441	5253
06 TO 12 HRS.	49.92	1895	1724	83	77	57	4	1945	1836	96	183	3	-76	-2	69	0	-4	152	2257	4202	2182	-76	5	4132	1021	4	1025	4146	5167
12 TO 18 HRS.	49.93	1902	1731	62	67	62	5	1926	1819	96	159	3	-238	-9	65	0	-5	150	2040	3966	1974	-66	5	3905	1141	0	1141	3915	5056
06TO 18 HRS.	49.92	1898	1727	72	72	60	4	1935	1827	96	171	3	-157	-6	67	0	-4	151	2149	4084	2078	-71	5	4018	1081	2	1083	4031	5112
18 TO 24 HRS.	49.77	1935	1761	364	428	185	9	2747	1828	96	330	3	-6	0	208	0	-9	167	2618	5365	2603	-15	5	5355	1028	33	1062	5420	6448

Annexure 4.3(v)

Hourly Average Own Generation, Schedule Drawal , Actual Drawal & Demand
Month :- May 2011

FIGURES IN MW

Hrs.	FREQ.		Own Generation						Schedule from											Tot Avl.	Act. Drl	UI	Other Imp/ Exp	DEMAND MET	Load Shedding			REST. DEMAND	UNREST. DEMAND
		THER. Incl Aux	THER. Excl Aux	HYD.	ISP	OSP	Injection from STOA	Total	CSS	DVC ER	SSP	SEZ	Banking	Sale	Pur	Exchange	STOA	Kinand+ Matatila	Total					SCH	UNSCH	TOTAL		
1:00	49.89	1681	1530	259	416	112	-6	2310	1844	104	37	4	-35	0	173	0	6	131	2264	4574	2345	81	1	4656	736	12	748	4684	5419
2:00	50.00	1684	1533	246	362	101	-7	2234	1854	104	37	4	-35	0	173	0	7	130	2274	4509	2355	81	1	4590	817	8	824	4598	5415
3:00	50.01	1677	1526	226	336	98	-9	2178	1858	104	31	4	-35	0	171	0	9	128	2270	4447	2436	166	1	4614	677	0	677	4613	5290
4:00	50.07	1675	1524	216	265	87	-10	2082	1856	104	3	4	-35	0	171	0	10	126	2239	4321	2375	136	1	4458	563	0	563	4448	5011
5:00	49.93	1682	1530	198	231	79	-10	2028	1855	104	3	4	-35	0	169	0	10	126	2236	4263	2225	-11	1	4253	522	0	522	4263	4785
6:00	50.11	1686	1534	156	136	67	-11	1883	1852	104	3	4	-35	0	169	0	11	125	2233	4116	2091	-142	1	3975	811	0	811	3960	4771
7:00	50.07	1690	1538	44	50	55	-11	1677	1844	100	3	4	0	0	85	0	11	121	2167	3844	2004	-164	1	3682	957	0	957	3673	4630
8:00	50.12	1691	1539	36	13	52	-11	1629	1850	101	3	4	0	0	85	0	11	121	2175	3804	1983	-192	1	3613	1008	0	1008	3596	4604
9:00	50.05	1687	1535	37	7	52	-9	1622	1849	101	16	4	-16	0	85	0	9	124	2171	3793	2103	-68	1	3726	1075	0	1075	3719	4794
10:00	49.96	1691	1539	67	14	54	-5	1668	1836	101	349	4	-148	0	85	0	5	140	2372	4040	2334	-38	1	4003	899	8	907	4016	4916
11:00	49.87	1702	1548	85	20	54	-4	1704	1822	101	406	4	-148	0	85	0	4	143	2416	4120	2487	71	1	4192	820	23	843	4234	5054
12:00	49.90	1710	1556	122	23	54	-2	1753	1838	101	427	4	-148	0	85	0	2	146	2456	4209	2450	-5	1	4204	746	30	776	4249	4995
13:00	49.99	1712	1558	133	30	55	-1	1775	1844	101	409	4	-148	0	89	0	1	147	2447	4222	2539	93	1	4316	895	20	915	4338	5232
14:00	49.83	1698	1545	133	40	57	-1	1774	1846	101	400	4	-148	0	89	0	1	146	2439	4213	2343	-96	1	4118	909	16	926	4158	5067
15:00	49.80	1681	1530	133	40	57	-1	1759	1844	101	196	4	-148	0	89	0	1	139	2225	3984	2259	33	1	4018	1050	7	1057	4054	5104
16:00	49.98	1679	1528	134	50	55	-1	1767	1844	101	109	4	-148	0	89	0	1	135	2135	3901	2100	-35	1	3867	1123	23	1146	3894	5017
17:00	50.02	1688	1537	109	43	55	-2	1742	1848	101	58	4	-148	0	89	0	2	132	2085	3827	1956	-129	1	3699	1147	4	1151	3700	4847
18:00	50.20	1750	1593	96	64	55	-3	1804	1854	103	15	4	-148	0	89	0	3	130	2050	3854	1855	-195	1	3660	1071	0	1071	3631	4702
19:00	49.98	1822	1658	121	206	74	-5	2054	1839	107	283	4	0	0	88	0	5	138	2465	4518	2429	-36	1	4483	851	0	851	4486	5337
20:00	49.92	1857	1690	257	507	188	1	2642	1844	115	424	4	0	0	160	0	-1	153	2700	5342	2537	-163	1	5180	933	0	933	5191	6124
21:00	49.89	1859	1692	325	609	266	1	2893	1841	115	442	4	0	0	160	0	-1	154	2716	5609	2709	-7	1	5603	892	4	895	5622	6514
22:00	49.94	1827	1663	324	605	283	1	2875	1843	115	442	4	0	0	160	0	-1	154	2718	5593	2817	99	1	5693	790	23	813	5725	6515
23:00	49.79	1702	1549	304	494	216	0	2563	1860	115	280	4	0	0	160	0	0	146	2567	5129	2505	-62	1	5068	923	0	923	5099	6022
24:00	49.85	1697	1544	281	444	156	-2	2424	1856	115	106	4	-35	0	160	0	2	138	2346	4770	2374	28	1	4799	907	7	914	4827	5734
Avg.	**49.96**	**1718**	**1563**	**168**	**209**	**99**	**-5**	**2035**	**1847**	**105**	**187**	**4**	**-66**	**0**	**123**	**0**	**5**	**136**	**2204**	**4375**	**2317**	**-23**	**1**	**4353**	**880**	**8**	**888**	**4366**	**5246**
00 TO 06 HRS.	50.00	1681	1530	217	291	91	-9	2119	1853	104	19	4	-35	0	171	0	9	128	2253	4372	2304	52	1	4424	688	3	691	4428	5115
06 TO 12 HRS.	49.99	1695	1543	65	21	53	-7	1675	1840	101	201	4	-77	0	85	0	7	133	2293	3968	2227	-66	1	3903	918	10	928	3914	4832
12 TO 18 HRS.	49.97	1702	1548	123	45	56	-2	1770	1847	101	198	4	-148	0	89	0	2	138	2230	4000	2175	-55	1	3946	1033	12	1044	3962	4995
06TO 18 HRS.	49.98	1698	1545	94	33	55	-4	1723	1843	101	199	4	-112	0	87	0	4	135	2262	3984	2201	-61	1	3925	975	11	986	3938	4914
18 TO 24 HRS.	49.89	1794	1633	269	478	197	-1	2575	1847	114	330	4	-6	0	148	0	1	147	2585	5160	2562	-24	1	5138	883	6	888	5158	6041

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month :- January 2011

FIGURES IN MW

Hrs.	FREQ.	CZONE			EZONE			WZONE		
		SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL
1:00	49.93	1718	1951	233	1750	1601	-150	1902	2314	412
2:00	50.03	1700	1932	232	1724	1486	-238	1856	2333	477
3:00	50.05	1704	1924	220	1737	1241	-496	1857	2350	493
4:00	50.04	1707	1878	170	1739	1067	-672	1868	2324	456
5:00	49.94	1707	1831	124	1736	995	-741	1867	2395	528
6:00	49.82	1761	1824	63	1772	1099	-673	1978	2536	558
7:00	49.71	1611	1800	189	1618	1166	-451	1858	2278	420
8:00	49.70	1634	1816	182	1632	1293	-339	1887	2164	277
9:00	49.66	1608	1640	31	1604	1316	-289	1862	2293	431
10:00	49.77	1680	1637	-43	1738	1458	-280	2001	2282	281
11:00	49.76	1696	1550	-146	1780	1696	-84	2039	2249	210
12:00	49.74	1699	1708	9	1782	1694	-89	2054	2242	188
13:00	49.79	1710	1667	-43	1787	1596	-191	2058	2319	261
14:00	49.88	1690	1642	-47	1776	1452	-323	2015	2211	196
15:00	49.71	1572	1731	159	1628	1381	-247	1802	1924	122
16:00	49.75	1542	1597	55	1562	1303	-259	1734	2112	378
17:00	49.77	1539	1497	-43	1560	1116	-445	1725	2130	405
18:00	49.82	1586	1579	-8	1605	1036	-569	1822	2480	659
19:00	49.81	1837	1900	64	1838	1543	-295	2279	2744	465
20:00	49.79	1979	2049	70	2010	2093	83	2543	2604	62
21:00	49.85	2026	2031	5	2042	2377	335	2625	2329	-296
22:00	49.99	1976	1960	-16	2003	2367	364	2543	2266	-277
23:00	49.90	1847	1900	53	1858	2045	187	2280	2098	-182
24:00	50.03	1722	1803	82	1748	1752	3	1986	1973	-13
Avg.	**49.84**	**1719**	**1785**	**66**	**1751**	**1507**	**-244**	**2018**	**2289**	**271**
00 TO 06 HRS.	49.97	1716	1890	174	1743	1248	-495	1888	2375	487
06 TO 12 HRS.	49.72	1655	1692	37	1692	1437	-255	1950	2251	301
12 TO 18 HRS.	49.79	1607	1619	12	1653	1314	-339	1859	2196	337
06TO 18 HRS.	49.76	1631	1655	25	1673	1376	-297	1905	2224	319
18 TO 24 HRS.	49.89	1898	1941	43	1917	2029	113	2376	2336	-40

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month:- February-2011

FIGURES IN MW

Hrs.	FREQ.	CZONE			EZONE			WZONE		
		SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL
1:00	50.00	1639	1750	112	1663	1674	11	1795	2104	308
2:00	50.12	1626	1733	107	1655	1484	-170	1773	2116	343
3:00	50.09	1624	1737	112	1652	1290	-361	1764	2143	379
4:00	50.09	1609	1731	122	1639	1149	-490	1750	2092	343
5:00	49.99	1604	1750	146	1635	1101	-534	1742	2129	387
6:00	49.85	1647	1649	2	1663	1167	-496	1822	2195	373
7:00	49.74	1501	1599	97	1520	1280	-239	1670	1744	74
8:00	49.92	1508	1613	105	1522	1323	-199	1695	1785	90
9:00	49.81	1536	1532	-5	1549	1330	-219	1748	2047	299
10:00	49.99	1594	1487	-107	1639	1464	-175	1850	2010	160
11:00	49.97	1568	1479	-88	1630	1654	25	1828	1925	98
12:00	49.91	1558	1485	-73	1623	1581	-42	1798	1736	-62
13:00	50.04	1520	1409	-112	1595	1518	-78	1733	1857	124
14:00	49.94	1496	1358	-138	1581	1360	-221	1682	1782	99
15:00	49.94	1448	1420	-28	1519	1357	-162	1594	1586	-8
16:00	49.96	1436	1380	-56	1481	1256	-224	1582	1916	334
17:00	50.02	1441	1362	-79	1485	1128	-357	1589	1929	340
18:00	50.11	1531	1622	91	1560	1091	-469	1742	2042	300
19:00	49.83	1800	1918	117	1843	1716	-127	2241	2441	200
20:00	49.92	1970	2036	66	1990	2214	224	2519	2439	-79
21:00	49.88	2072	2242	169	2083	2359	277	2683	2784	100
22:00	50.06	1994	2241	247	2071	2349	278	2648	2691	44
23:00	50.06	1769	1840	70	1770	2063	293	2171	2052	-119
24:00	50.11	1635	1747	112	1659	1791	132	1861	1906	45
Avg.	**49.97**	**1630**	**1672**	**41**	**1668**	**1529**	**-139**	**1887**	**2061**	**174**
LU		**408**	**418**	**10**	**417**	**382**	**-35**	**472**	**515**	**43**
00 TO 06 HRS.	50.02	1625	1725	100	1651	1311	-340	1774	2130	355
06 TO 12 HRS.	49.89	1544	1532	-12	1580	1439	-142	1765	1875	110
12 TO 18 HRS.	50.00	1479	1425	-54	1537	1285	-252	1654	1852	198
06TO 18 HRS.	49.94	1512	1479	-33	1558	1362	-197	1709	1863	154
18 TO 24 HRS.	49.98	1874	2004	130	1903	2082	179	2354	2386	32

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month:- March-2011

FIGURES IN MW

Hrs.	FREQ.	CZONE			EZONE			WZONE		
		SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL
1:00	49.90	1552	1600	48	1568	1423	-144	1528	1698	170
2:00	49.99	1534	1515	-19	1557	1327	-230	1487	1706	219
3:00	49.96	1541	1470	-70	1576	1372	-205	1505	1780	275
4:00	50.03	1542	1460	-82	1566	1331	-235	1491	1707	216
5:00	49.94	1539	1479	-61	1562	1334	-227	1495	1750	254
6:00	49.89	1529	1458	-71	1553	1346	-207	1476	1728	252
7:00	49.94	1499	1436	-63	1525	1286	-239	1392	1329	-63
8:00	50.01	1488	1498	11	1516	1263	-253	1399	1466	67
9:00	49.87	1529	1402	-128	1551	1361	-190	1482	1761	280
10:00	50.01	1546	1331	-215	1560	1451	-109	1502	1777	275
11:00	49.92	1533	1269	-264	1548	1461	-87	1477	1676	198
12:00	49.95	1505	1260	-244	1525	1392	-133	1424	1481	57
13:00	49.99	1472	1267	-205	1499	1328	-170	1373	1557	184
14:00	49.89	1481	1259	-222	1509	1187	-321	1386	1632	246
15:00	49.87	1455	1313	-141	1485	1134	-351	1361	1513	151
16:00	49.89	1452	1273	-179	1481	1248	-233	1365	1498	133
17:00	49.98	1457	1359	-98	1487	1189	-299	1389	1538	150
18:00	50.07	1464	1603	140	1482	1168	-314	1408	1624	216
19:00	49.80	1764	1854	91	1785	1716	-69	1855	2185	330
20:00	49.98	1930	1938	8	1916	2141	225	2155	2200	45
21:00	49.82	2132	2194	62	2097	2382	286	2423	2712	289
22:00	49.88	2111	2130	19	2079	2310	231	2396	2567	171
23:00	49.89	1803	1780	-22	1756	1948	192	1939	1931	-7
24:00	49.90	1611	1671	60	1548	1610	63	1600	1689	90
Avg.	**49.93**	**1603**	**1534**	**-69**	**1614**	**1488**	**-126**	**1596**	**1771**	**175**
LU		**401**	**384**	**-17**	**403**	**372**	**-31**	**399**	**443**	**44**
00 TO 06 HRS.	49.95	1540	1497	-43	1563	1355	-208	1497	1728	231
06 TO 12 HRS.	49.95	1517	1366	-151	1538	1369	-169	1446	1582	136
12 TO 18 HRS.	49.95	1463	1346	-117	1491	1209	-281	1380	1560	180
06TO 18 HRS.	49.95	1490	1356	-134	1514	1289	-225	1413	1571	158
18 TO 24 HRS.	49.88	1892	1928	36	1863	2018	154	2061	2214	153

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month:- April-2011

FIGURES IN MW

Hrs.	FREQ.	CZONE			EZONE			WZONE		
		SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL
1:00	49.81	1538	1487	-51	1492	1584	92	1399	1475	76
2:00	49.84	1507	1430	-77	1471	1508	37	1338	1501	163
3:00	49.84	1512	1391	-121	1478	1526	48	1333	1594	261
4:00	49.88	1503	1357	-146	1474	1446	-27	1310	1635	325
5:00	49.76	1496	1350	-146	1468	1367	-101	1300	1642	343
6:00	49.86	1480	1306	-174	1452	1282	-171	1273	1600	327
7:00	49.88	1470	1277	-194	1446	1257	-189	1260	1576	316
8:00	50.01	1468	1321	-147	1446	1246	-199	1253	1542	289
9:00	49.90	1452	1174	-278	1436	1220	-216	1242	1683	440
10:00	49.95	1432	1047	-385	1482	1360	-122	1273	1779	506
11:00	49.91	1435	949	-486	1494	1371	-123	1270	1874	603
12:00	49.88	1430	1001	-428	1490	1361	-129	1264	1752	488
13:00	50.00	1413	1048	-365	1478	1245	-233	1232	1766	534
14:00	49.90	1406	1092	-314	1473	1100	-373	1228	1705	477
15:00	49.83	1343	1086	-257	1361	1224	-137	1118	1505	387
16:00	49.86	1333	1039	-295	1333	1298	-35	1091	1427	336
17:00	49.93	1337	1178	-159	1338	1199	-139	1102	1469	367
18:00	50.03	1390	1320	-70	1380	1167	-213	1196	1559	364
19:00	49.82	1648	1582	-66	1672	1562	-110	1623	1854	231
20:00	49.83	1818	1577	-240	1823	1995	172	1886	1887	1
21:00	49.76	1882	1673	-209	1878	2193	315	1980	1948	-33
22:00	49.82	1884	1662	-222	1944	2110	166	1987	2088	101
23:00	49.69	1732	1549	-183	1686	1830	143	1722	1827	105
24:00	49.72	1615	1525	-90	1560	1602	43	1532	1667	135
Avg.	**49.86**	**1522**	**1309**	**-213**	**1523**	**1461**	**-63**	**1384**	**1681**	**298**
LU		**380**	**327**	**-53**	**381**	**365**	**-16**	**346**	**420**	**74**
00 TO 06 HRS.	49.83	1506	1387	-119	1473	1452	-20	1325	1575	249
06 TO 12 HRS.	49.92	1448	1128	-320	1466	1303	-163	1260	1701	441
12 TO 18 HRS.	49.93	1370	1127	-243	1394	1206	-188	1161	1572	411
06TO 18 HRS.	49.92	1409	1128	-281	1430	1254	-176	1211	1636	426
18 TO 24 HRS.	49.77	1763	1595	-168	1760	1882	121	1788	1879	90

Hourly Average Schedule Drawal , Actual Drawal &Over(+)/Under(-) Drawal
Month:- May-2011

FIGURES IN MW

Hrs.	FREQ.	CZONE			EZONE			WZONE		
		SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL	SCH	ACTUAL	O/U DRL
1:00	49.89	1554	1574	20	1515	1636	121	1502	1446	-56
2:00	50.00	1532	1508	-24	1501	1612	111	1464	1470	6
3:00	50.01	1513	1469	-45	1490	1621	130	1438	1525	87
4:00	50.07	1479	1454	-25	1460	1514	55	1383	1490	107
5:00	49.93	1465	1413	-52	1449	1360	-89	1355	1480	125
6:00	50.11	1422	1307	-115	1417	1178	-239	1269	1490	221
7:00	50.07	1345	1171	-174	1354	1065	-289	1142	1445	303
8:00	50.12	1335	1174	-161	1349	1041	-308	1119	1398	280
9:00	50.05	1329	1124	-205	1347	1047	-300	1117	1555	439
10:00	49.96	1380	1066	-314	1462	1199	-263	1224	1738	514
11:00	49.87	1388	1094	-294	1478	1291	-187	1254	1806	553
12:00	49.90	1408	1170	-238	1497	1331	-166	1285	1703	418
13:00	49.99	1416	1291	-125	1499	1331	-169	1310	1694	383
14:00	49.83	1414	1321	-93	1495	1196	-299	1307	1601	294
15:00	49.80	1356	1315	-42	1402	1270	-132	1212	1433	221
16:00	49.98	1340	1226	-115	1370	1311	-59	1175	1331	156
17:00	50.02	1322	1174	-148	1343	1162	-180	1136	1363	226
18:00	50.20	1342	1229	-113	1351	1030	-322	1145	1401	256
19:00	49.98	1531	1486	-45	1571	1260	-311	1412	1737	325
20:00	49.92	1744	1584	-160	1759	1757	-2	1785	1839	54
21:00	49.89	1819	1715	-104	1813	2021	208	1923	1867	-56
22:00	49.94	1812	1728	-83	1807	2027	220	1925	1938	13
23:00	49.79	1686	1631	-56	1672	1774	101	1727	1664	-63
24:00	49.85	1601	1597	-4	1566	1622	57	1577	1580	3
Avg.	**49.96**	**1481**	**1368**	**-113**	**1499**	**1402**	**-96**	**1383**	**1583**	**200**
LU		**370**	**342**	**-28**	**375**	**351**	**-24**	**346**	**396**	**50**
00 TO 06 HRS.	50.00	1494	1454	-40	1472	1487	15	1402	1484	82
06 TO 12 HRS.	49.99	1364	1133	-231	1414	1162	-252	1190	1608	418
12 TO 18 HRS.	49.97	1365	1259	-106	1410	1217	-193	1214	1470	256
06TO 18 HRS.	49.98	1365	1196	-168	1412	1189	-223	1202	1539	337
18 TO 24 HRS.	49.89	1699	1623	-75	1698	1743	45	1725	1771	46

Annexure- 7.2(i)

TELEMETRY DISCRIPIENCY LIST FOR MPPTCL S/s

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
NAGDA 400 KV S/S				
1	400KV NAGDA –SUJALPUR 1 & 2	CB & SOE	NOT AVAILABLE	**RTU CONFIGURATION ALREADY ARRANGED BY SLDC.PROCESS CONNECTIONS NOT EXTENDED DESPITE OF CONSTANT PERSUATION**
3	400KV NAGDA –DEHGAON 1 & 2	CB & SOE		
5	400/220 KV XMER 3	CB & SOE		
6	400KV NAGDA –RAJGRAH 1 & 2	CB & SOE		
8	400Kv DEH2-SUJALPUR 1 & 2 TIE BREAKER	CB &SOE		
10	RAJGARH1-RAJGARH2 TIE BREAKER	CB & SOE		
11	220 KV NAGDA –RATLAM-1 & 2	CB & SOE		
13	220KV NAGDA-RATLAM 1 & 2	MW & MVAR		
14	400KV NAGDA-INDORE	CB	OPEN	CLOSE
15	400/220 TR-3 220 SIDE	CB	FAULTY	OPEN
16	400/220 TR-2 220 SIDE	CB	FAULTY	CLOSE
17	220 NAGDA-NEEMUCH-1	CB	FAULTY	CLOSE
18	220 NAGDA UJJAIN-1	CB	FAULTY	CLOSE
19	400/220 KV ICT I	OLTC	17	9
20	400/220 KV ICT II & III	OLTC	N/C	7
NAGDA 220 KV S/S				
1	220 KV BUS COUPLER	CB	FAULTY	OPEN
2	220/132 XMER NEW	CB	NOT AVAILABLE	CLOSE
3	220/132 XMER NEW	MW	NOT AVAILABLE	40
4	220/132 XMER NEW	MVAR	NOT AVAILABLE	15
5	220/132 XMER (132 SIDE) –I	CB	FAULTY	CLOSE
6	220/132 XMER(132 SIDE)-II	CB	FAULTY	CLOSE
8	NAGDA 132 KACHROD	CB	FAULTY	CLOSE
9	NAGDA132 RATDIYA	CB	FAULTY	CLOSE
10	125 MVA TRANSFORMER	OLTC	9	8
11	160 MVA TRANSFORMER	OLTC	9	12
12	40 MVA TRANSFORMER –II	OLTC	17	5
DEWAS 220 KV S/S				
1	220KV BUS COUPLER	CB	OPEN	CLOSE
2	220/132 XMER -2	CB	FAULTY	CLOSE
3	132 /33 KV TRANSFORMER 1	OLTC	N/C	8
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	DEWAS 220 KV –INDORE EAST	CB	FAULTY	CLOSE
8	DEWAS 220 KV –INDORE 400KV S/S	CB	FAULTY	CLOSE
9	220 DEWAS ASTHA-2	CB	FAULTY	OPEN
10	DEWAS IC II	CB	FAULTY	CLOSE
11	132 DEWAS IC-I	CB	FAULTY	OPEN
NOTE:-SOE DATA NOT RECEIVED.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
UJJAIN 220 KV S/S				
1	220/132 KV TRANSFORMER 4	OLTC	N/C	6
2	UJJAIN132-SYNTHETIC I&II	CB	FAULTY	OPEN
3	UJJAIN132 INDORE-I	CB	FAULTY	CLOSE
4	UJJAIN132 AGAR	CB	FAULTY	CLOSE
5	UJJAIN220/132 XMER-4	CB	FAULTY	CLOSE
6	UJJAIN 132 KV –GHOSLA	CB	FAULTY	CLOSE
7	UJJAIN 132 BUS SECTION	CB	FAULTY	OPEN
NOTE:-SOE'S OF BADOD 1 & 2,INDORE-1 220/132 XMER-4 FEEDERS ARE NOT COMING.				
SHUJALPUR 220 KV S/S				
1	160 MVA TRANSFORMER –I	OLTC	2	10
2	160MVA TRANSFORMER-II	OLTC	10	5
3	220/132 160MVA XMER 3	OLTC	NOT CONNECTED	
4	220/132 160MVA XMER 3	MW	**TO BE PROVIDED BY ALREADY AVAILABLE FUTURE FEEDER IN RTU**	
5	220/132 160MVA XMER 3	MVAR		
6	220/132 160MVA XMER 3	CB		
7	160 MVA TRANSFORMER I (132 KV SIDE)	CB	FAULTY	CLOSE
8	20 MVA TRANSFORMER II	CB	FAULTY	CLOSE
9	132 SHUJALPUR ARNIKALAN-I	CB	FAULTY	OPEN
10	132 SHUJALPUR –SARANGPUR-2	CB	FAULTY	OPEN
11	132 SHUJALPUR IC-I & IC-II	CB,MW,MVAR	NOT CONNECTED	
RATLAM 220 KV S/S				
5	220/132 XMER-2	CB	FALTY	CLOSE
2	RATLAM-NAGDA-I	CB	FAULTY	CLOSE
3	220 KV TRB	CB	FAULTY	OPEN
4	RATLAM - NAGDA 2 NEW	CB	NOT AVAILABLE	CLOSE
5	RATLAM - NAGDA 2 NEW	MW	NOT AVAILABLE	10
6	RATLAM - NAGDA 2 NEW	MVAR	NOT AVAILABLE	5
7	RATLAM 132 KV-TRACTION 2	CB	FAULTY	CLOSE
8	RATLAM132 –IC-I	CB	FAULTY	CLOSE
1	132/33 KV TRANSFORMER 2	OLTC	N/C	7
NEEMUCH 220 KV S/S				
1	220/132 KV TRANSFORMER 2	CB,SOE	**TELEMETRY NEED TO BE ARRANGED BY UPGRADATION OF RTU**	
2	220/132 KV TRANSFORMER 2	MW		
3	220/132 KV TRANSFORMER 2	MVAR		
4	NEEMUCH 132 KV INTER CONNECTOR II	CB	FAULTY	CLOSE
5	220 NEEMUCH-NAGDA 2	CB	FAULTY	OPEN
6	NEEMUCH 132 KV UDEYPUR	CB	FAULTY	CLOSE
7	132 KV BUS COUPLER 2	CB	FAULTY	CLOSE
9	132 NEEMUCH UDEPUR	CB	FAULTY	OPEN
11	132 NEEMUCH MALHARGARH	CB	FAULTY	OPEN
12	132 NEEMUCH RATANGARH	CB	FAULTY	OPEN
13	220/132 KV TRANSFORMER 1	OLTC	N/C	7
NOTE:-SOE DATA NOT RECEIVED.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
BHOPAL 400 KV S/S				
1	400/220 KV TRANSFORMER 3	OLTC	N/C	5
2	400 KV TIE BREKAR 3	CB	FAULTY	CLOSE
3	400 KV BHOPAL-DAMOH I	CB & SOE	.PROCESS CONNECTIONS NOT EXTENDED DESPITE OF CONSTANT PERSUATION	
4	BHOPAL-DAMOH TIE BREAKER	CB & SOE		
5	400 KV BHOPAL –DAMOH –II	CB & SOE		
6	220KV BHOPAL-BINA1 & 2	CB & SOE		
7	220 BHOPAL 400/220 TR-2	CB	FAULTY	CLOSE
BHOPAL 220 KV S/S				
1	BHOPAL132 KV-CHAMBLE I	CB	FAULTY	CLOSE
2	BHOPAL132 KV- CHAMBLE II	CB	FAULTY	CLOSE
3	100MVA XMER-IV	CB	The telemetry need to be provided by arranging RTU configuration with the help of Sub-LDC and installation and commissioning of transducers.	
4	100MVA XMER-IV	MW		
5	100MVA XMER-IV	MVAR		
6	100MVA XMER-IV	OLTC		
7	132 SIDE 220/132 160MVA XMER-II & III	CB	FAULTY	CLOSE
8	132KV BHEL	CB	OPEN	CLOSE
PIPARIA 132 KV S/S				
1	132/33 KV TRANSFORMER 1	OLTC	N/C	4
2	132KV BARELI	CB	FAULTY	OPEN
3	132/33KV 20MVA XMER	OLTC	N/C	
4	132/33KV 40MVA XMER	OLTC	N/C	
5	132 ITARSI	CB	N/C	
6	132/33 TR-II	MW,MVAR	N/C	
SARNI 220 KV S/S				
1	SARNI 220 KV TRB	CB	FAULTY	CLOSE
2	SARNI 220/132KV 100 MVA XMER 2	CB	FAULTY	CLOSE
3	SARNI 220 POWER HOUSE	CB	FAULTY	OPEN
4	SARNI 220 BUS TRANSFER	CB	FAULTY	OPEN
5	132KV BUS VOLTAGE	VOLTAGE	1	133
BAIRAGARH 220 KV S/S				
1	220 KV BUS 1	VOLTAGE	143	225
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		
6	220/132 XMER (160MVA) NEW II	MVAR		
7	132/33 XMER (20 MVA) NEW IV	CB		
8	132/33 XMER (20 MVA) NEW IV	MW		
9	132/33 XMER (20 MVA) NEW IV	MVAR		
10	BAIRAGRAH 132 KV BHOPAL II	CB	OPEN	CLOSE
11	BAIRAGRAH 132KV-LALGHATI II	CB	FAULTY	OPEN
13	132 SHYAMPUR	CB,MW,MVAR	N/C	

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 –BURWAHA	CB	FAULTY	CLOSE
3	220 KV TRB	CB	FAULTY	CLOSE
4	220KV HANDIA –ITARSI -2	MW	**TELEMETRY NOT AVAILABLE AND NEED TO BE PROVIDED BY UPGRADATION OF RTU**	
5	220KV HANDIA –ITARSI -2	MVAR		
6	220KV HANDIA –ITARSI -2	CB		
7	220KV HANDIA-SATPURA	MW		
8	220KV HANDIA-SATPURA-	MVAR		
9	220KV HANDIA-SATPURA-	CB		
10	220/132 XMER-2	CB	FAULTY	CLOSE
11	132 KANNOD	CB	FAULTY	OPEN
12	132/33 XMER-2	CB	FAULTY	CLOSE
NOTE:-SOE DATA NOT RECEIVED EXCEPT BARWAHA FEEDER.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				
	MALANPUR 220 KV S/S			
1	220 KV BUS COUPLER I	CB	FAULTY	CLOSE
2	220 KV BUS COUPLER II	CB	FAULTY	CLOSE
3	132 SIDE 220/132 TR-1	CB	FAULTY	CLOSE
4	132/33 TR-3	CB	OPEN	CLOSE
NOTE:-SOE DATA NOT RECEIVED EXCEPT 132 AMBAHA FEEDER.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				
	MEHGAON 220 KV S/S			
1	220 KV BUS TRANSFER	CB	FAULTY	**None of the status process connections from the rtu is extended so far. All cb and soe need to be extended**
2	220/132 KV TRANSFERMER	CB	FAULTY	
3	MEHGAON 22KV- MALANPUR	CB	FAULTY	
4	MEHGAON 22KV- AURIYA	CB	FAULTY	
5	220/132 KV TRANSFERMER (132 KVSIDE)	CB	FAULTY	
6	MEHGAON 132 KV RON	CB	FAULTY	
7	132 KV BUS TRANSFER	CB	FAULTY	
8	132 KV BHIND	CB	FAULTY	
9	132 KV SEONDHA	CB	FAULTY	
10	132KV PORSA	CB	FAULTY	
11	132 KANNOD	CB	FAULTY	
12	132/33 XMER-2	CB	FAULTY	

	GWALIOR 220 KV S/S			
1	GWALIOR 132 KV-BANMORE	CB	FAULTY	OPEN
2	132 KV TRB	CB	FAULTY	OPEN
3	GWALIOR 132 KV-TRACTION I	CB	FAULTY	OPEN
4	220/132 XMER I(132KV SIDE)	CB	FAULTY	CLOSE
NOTE:-SOE DATA NOT RECEIVED EXCEPT 132 DABRA FEEDER.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
GUNA 220 KV S/S				
1	220 KV Guna-BIna-2 feeder	MW,MVAR	NOT AVAILABLE	Telemetry need to be provided by upgradation of RTU
2	220 KV Guna-BIna-2 feeder	CB,SOE	NOT AVAILABLE	
2	220/132 XMER NEW	CB,SOE	NOT AVAILABLE	
3	220/132 XMER NEW	MW	NOT AVAILABLE	
4	220/132 XMER NEW	MVAR	NOT AVAILABLE	
6	132KV ASHOK NAGAR	CB	FAULTY	CLOSE
10	220/132 XMER-2	CB	FAULTY	CLOSE
11	132 KANNOD	CB	FAULTY	OPEN
12	132/33 XMER-2	CB	FAULTY	CLOSE
NOTE:-SOE DATA NOT RECEIVED CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				
Pandurna 220 KV S/S				
1	220 BUS TRANSFER	CB	OPEN	CLOSE
2	132 PANDURNA IC-I	CB	FAULTY	OPEN
3	132 PANDURNA IC-II`	CB	FAULTY	CLOSE
4	132 BUS COUPLER	CB	FAULTY	CLOSE
NOTE:-SOE DATA NOT RECEIVED.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				
Narsingpur 220 KV S/S				
1	220/132 KV TRANSFORMER 1	OLTC	N/C	7
2	220/132 KV TRANSFORMER 2	OLTC	N/C	5
3	132/33 KV TRANSFORMER 1	OLTC	N/C	6
4	NARSINGPUR220 KV-PIPARIYA	CB	FAULTY	CLOSE
5	220/132 KV TRANSFORMER 2	MW	456	23
6	220/132 KV TRANSFORMER 2	MVAR	456	32
7	220/132 KV TRANSFORMER 2	CB	OPEN	CLOSE
8	220 KV TRB	CB	OPEN	CLOSE
9	132/33 KV TRANSFORMER 2	MW	NOT AVAILABLE	
10	132/33 KV TRANSFORMER 2	MVAR	NOT AVAILABLE	
11	132/33 KV TRANSFORMER 2	CB	NOT AVAILABLE	
12	132 BUS TRANSFER	CB	FAULTY	CLOSE
NOTE:- SOE DATA NOT RECEIVED.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				
Jabalpur 220 KV S/S				
1	220/132 KV TRANSFORMER 1	CB	FAULTY	CLOSE
2	220/132 KV TRANSFORMER 2	CB	FAULTY	CLOSE
3	220 KV TRB	CB	FAULTY	OPEN
4	JABALPUR 132 KV- MADHOTAL	CB	FAULTY	CLOSE
5	220/132 KV TRANSFORMER 2	MW	206	45
6	220KV JABALPUR-BIRSINGHPUR 1	CB & SOE	NOT AVAILABLE	CONNECTION TO BE EXTENDED
7	220KV JABALPUR-BIRSINGHPUR 2	CB & SOE	NOT AVAILABLE	
8	132/33 KV TRANSFORMER 1 & 2	CB	FAULTY	CLOSE
9	132 KV DAMOH	CB	FAULTY	OPEN
10	132 KV SRINAGAR	CB	FAULTY	OPEN
NOTE:- SOE DATA NOT RECEIVED EXCEPT 220 NTPC-1 & 132 DAMOH FEEDERS.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
	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	NOT AVAILABLE	
4	220/132 KV TRANSFORMER 2	MVAR	NOT AVAILABLE	
5	220/132 KV TRANSFORMER 2	CB	NOT AVAILABLE	
6	220/132 KV TRANSFORMER 1 & 2	OLTC	NOT AVAILABLE	
7	132 SIDE 220/132 TR-1 & 2	CB	FAULTY	OPEN
8	132/33 TR-1	CB	FAULTY	OPEN
	Satna 220 KV S/S			
1	220/132 KV TRANSFORMER 2	OLTC	N/C	7
2	132/33 KV TRANSFORMER 1	OLTC	N/C	7
3	132/33 KV TRANSFORMER 2	OLTC	N/C	7
4	SATNA 220KV-SATNA PGCIL 2	CB	OPEN	CLOSE
8	SATNA 220 KV TONS 1 & 2	CB	NOT AVAILABLE	To be provided by utilizing transducer of 132kv interconnectors
9	SATNA 220 KV TONS 1 & 2	MW	NOT AVAILABLE	
10	SATNA 220 KV TONS 1 & 2	MVAR	NOT AVAILABLE	
11	SATNA 220 PGCIL 1	CB	OPEN	CLOSE
12	SATNA 220 PGCIL II	CB	OPEN	CLOSE
13	132KV SIDE XMER-I	CB	FAULTY	CLOSE
	Morwa 132 KV S/S			
1	132/33 KV TRANSFORMER 1	OLTC	N/C	7
2	132/33 KV TRANSFORMER 2	OLTC	N/C	7
3	132/33 KV TRANSFORMER 3	CB	NOT AVAILABLE	
4	132/33 KV TRANSFORMER 3	MW	NOT AVAILABLE	
5	132/33 KV TRANSFORMER 3	MVAR	NOT AVAILABLE	
6	132 BINA	CB	FAULTY	OPEN
7	132/33 XMER-I	CB	FAULTY	OPEN
NOTE:-SOE DATA NOT RECEIVED.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				
	PITHAMPUR 220 KV S/S			
1	220 KV TRB	CB	FAULTY	OPEN
2	PITAMPUR 220 KV-BADNAGAR	CB	FAULTY	OPEN
3	132/33 KV TRANSFORMER 2	OLTC	N/C	8
4	132/33 KV TRANSFORMER 3	OLTC	N/C	11
5	PITAMPUR 132 KV-HML	CB	FAULTY	OPEN
6	132 KV TRB	CB	FAULTY	OPEN
7	132 KV BUS COUPLE	CB	FAULTY	OPEN
8	132/33 KV TRANSFORMER 1	CB	CLOSE	CLOSE
9	132/33 KV TRANSFORMER 2	CB	OPEN	CLOSE
10	132/33 KV TRANSFORMER 3	CB	OPEN	CLOSE
11	132 KV BAGRI	CB	FAULTY	OPEN
12	220KV RAJGARH I& II	CB	FAULTY	CLOSE
13	132KV BUS COUPLER	CB	FAULTY	CLOSE
14	220KV BUS COUPLER	CB	FAULTY	CLOSE
15	132 KV IC-2	CB	OPEN	CLOSE

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
Burwaha 220 KV S/S				
1	160 MVA XMER	OLTC	17	3
2	3X40 MVA XMER	OLTC	17	3
3	63 MVA XMER	OLTC	17	4
4	220 KV BUS COUPLER	CB	FAULTY	OPEN
5	220 /132 KV TRANSFORMER 1	CB	FAULTY	CLOSE
6	BURWAHA 132KV-CHEGAON	CB	FAULTY	CLOSE
7	BURWAHA 220 KV NIMRANI	CB	FAULTY	CLOSE
SOE DATA NOT RECEIVED.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				
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	NEPA –CHEGAON 132 KV	CB	FAULTY	CLOSE
5	132/33 XMER (20 MVA) NEW	CB	NOT AVAILABLE	CLOSE
6	132/33 XMER (20 MVA) NEW	MW	NOT AVAILABLE	15
7	132/33 XMER (20 MVA) NEW	MVAR	NOT AVAILABLE	5
8	3*40 MVA TXMER	CB	FAULTY	CLOSE
SOE DATA NOT RECEIVED.CONNECTIONS FOR ALL FEEDERS HAVE TO BE VERIFIED				
DAMOH 220 KV S/S				
1	DAMOH 220 KV SAGAR	MW	181	125
2	220/132 XMER NO-1	MW	0	0
3	220/132 XMER NO-1	MVAR	0	0
4	220/132 XMER 2	CB	FAULTY	CLOSE

Bina 400 KV S/S				
1	400/220 KV XMER III	CB	FAULTY	CLOSE
2	220KV BINA-BINA-1	MW	83	83
3	220KV BINA-BINA-2	MW	83	83
4	220KV TRB	CB	CLOSE	CLOSE
5	BINA 220 KV-GWALIOR 1&2	CB	FAULTY	CLOSE
6	40KB TIE BKR 2	CB	CLOSE	CLOSE
7	400/220 XMER-3	CB	FAULTY	CLOSE
8	220KV SAGAR	CB	FAULTY	OPEN
9	220KV GUNA	CB	FAULTY	OPEN
SOE .CONNECTIONS FOR ALL FEEDERS NEED TO BE VERIFIED EXCEPT 220 BHOPAL-1 FEEDER.				
Bina 220 KV S/S				
1	BINA 132 KV-CAPACITOR BANK	CB	FAULTY	CLOSE
2	BINA 132 KV-GANGBASODA	CB	FAULTY	CLOSE
3	BINA 132 KV- BORL 1 &2	CB	NOT AVAILABLE	
4	BINA 132 KV- BORL 1 &2	MW	NOT AVAILABLE	
5	BINA 132 KV- BORL 1 &2	MVAR	NOT AVAILABLE	
SOE DATA NOT RECEIVED.CONNECTIONS FOR GWALIOR-2,GUNA-1 FEEDERS HAVE TO BE VERIFIED				

Annexure- 7.2(ii)

Telemetry Discripiency at power stations

Sr.No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
AMARKANTAK THERMAL POWER STATION				
1	220KV BUS COUPLER	CB	Faulty	close
2	ATPS220KV-SIDHI	MW	80 MW	95 MW
3	ATPS220KV-SIDHI	MVAR	6 MVAR	31 MVAR
4	ATPS220KV-BRS220 III	MW	21MW	40MW
5	GENERATOR 5	CB	N/C	CLOSE
6	ATPS220KV-BRS220 III	CB	N/C	CLOSE
7	ATPS 220/6.6 KV Stn Xmer A	CB	N/C	CLOSE
8	ATPS 220/6.6 KV Stn Xmer B	CB	N/C	CLOSE
9	ATPS SIDHI	CB	N/C	CLOSE
10	132/33 KV TRANSFORMER 4	OLTC	N/C	6
11	132/33 KV TRANSFORMER 4	CB	FAULTY	CLOSE
12	132/33 KV TRANSFORMER 5	CB	FAULTY	CLOSE
13	132/33 KV TRANSFORMER 5	OLTC	N/C	6
14	132KV BUS COUPLER	CB	N/C	CLOSE
15	132KV MORWA	CB	FAULTY	CLOSE
16	132KV WADHAN	CB	FAULTY	CLOSE
Note:- **SOE CONNECTION FOR ALL FEEDERS NEED TO BE DONE**				
BARGI HPS				
1	BARGI 132 KV GENERATOR-2	CB	Faulty	OPEN
2	132/33 20MVA STN. XMER	CB	Faulty	open
Note:- SOE CONNECTION FOR ALL FEEDERS NEED TO BE DONE				
MADHIKHEDA HPS				
5	Madhikheda 132 Kv- Karera I	MW	0	10
6	Madhikheda 132 Kv- Karera I	MVAR	0	5
7	Madhikheda 132 Kv- Karera II	MW	0	10
8	Madhikheda 132 Kv- Karera II	MVAR	0	5
PENCH HPS				
ALL CB ARE COMING AS FAULTY SINCE WORK IN CONTROL PANELS. SHALL BE VERIFIED AFTER COMPLETION OF WORK OF CONTROL PANELS AT PENCH.				
Sr No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
RTU name –TONS HPS				
1	220/33 20 MVA Xmer	CB	Faulty	OPEN
2	GENERATOR-2	CB	FAULTY	OPEN
3	GENERATOR-3	CB	FAULTY	OPEN
4	Bus Coupler	CB	Faulty	Open

Note:- SOE CONNECTION FOR ALL FEEDERS NEED TO BE DONE.

Sr No	DESCRIPTION	status	telemetry value at SLDC	actual value at site
RTU name –BANSAGAR-II HPS				
1	132/33KV STN XMER	CB	Faulty	Close
2	BUSCOUPLER	CB	Faulty	Open
3	220/132KV 160MVA XMER	CB	Faulty	Close
4	132/33 40 MVA XMER	CB	FAULTY	CLOSE
5	220KV MANGAWAN	CB,MW,MVAR	N/C	
6	220KV SIDHI	CB,MW,MVAR	N/C	
7	220/132 160 MVA XMER	CB,MW,MVAR	N/C	
Note:- SOE CONNECTION FOR ALL FEEDERS NEED TO BE DONE				
RTU name –GANDHISAGAR HPS				
1	GENERATOR 4 & 5	CB	Faulty	OPEN
2	132/33 KV XMER-1	CB	Faulty	CLOSE
3	132/33 KV XMER	OLTC	6	9
Note:- SOE of all feeders are coming				
RTU name –OMKARESHWAR HPS				
Note:- SOE CONNECTION FOR ALL FEEDERS NEED TO BE VERIFEID				
RTU name –RAJGHAT HPS				
1	RAJGHAT132 KV-LALITPUR	CB	FAULTY	OPEN
2	RAJGHAT132 KV-GEN-1	CB	FAULTY	OPEN
3	RAJGHAT132 KV-GEN2,GEN3	CB	FAULTY	OPEN
Note:- SOE CONNECTION FOR ALL FEEDERS NEED TO BE DONE				
RTU name –SATPURA TPS				
1	GENERATOR-7	CB	Faulty	close
2	STPS PH II BUS TIE	CB	Faulty	close
3	STPS PH II	CB	OPEN	close
Note:- SOE ‘S of Sarni, Handia, Itarsi –II, Itarsi-III, Itarsi-IV STP PH-I FEEDERS are not coming. SOE’S of Seoni,Koradi,Itarsi of STP 400 KV S/S are not coming.				

Annexure 7.3

PRESENTATION ON UPGRADATION OF RTUs AND SOME MAJOR PROBLEM AREAS

By : Rajesh Gupta
Executive Engineer (LD:E&T)

UPGRADATION OF RTU'S

- RTUs UNDER ULDC PROJECT ARE INSTALLED AND COMMISSIONED IN 2006.
- RTU'S NEED TO BE UPGRADED TO ACCOMMODATE TELEMETRY OF VARIOUS FEEDERS / TRANSFORMERS / GENERATORS ADDED IN THE GRID AFTER 2006.
- SLDC HAS COMPILED THE UPGRADATION REQUIREMENT FOR MPPTCL S/S CLEARLY INDICATING QUANTITY OF MATERIAL REQUIRED AND WORK INVOLVED - SUBMITTED TO T&C IN FEBRUARY 2011.
- HOWEVER ACTION FOR UPGRADATION OF RTU'S HAS NOT BEEN INITIATED SO FAR.
- IN VIEW OF THE URGENT REQUIREMENT OF TELEMETRY OF SOME IMPORTANT FEEDERS / TRANSFORMER / GENERATORS SOME OF THE RTUs (e.g. INDORE 400 , BHOPAL 400, INDORE SOUTH ZONE, INDORE NZ, SHUJALPUR, ASTHA 220, NARSINGPUR, SGTPS,ATPS,ETC.) WERE UPGRADED WITH IN HOUSE EFFORTS.

UPGRADATION OF RTU'S

THE APPROACH FOLOWED DURING THE UPGRADATION OF RTUs WITH IN HOUSE EFFORTS IS :

- ❖ CONFIGURATION OF RTU'S BY SLDC/SUB-LDC'S ON SPARE CPU.
- ❖UTILISATION OF SPARE TRANSDUCERS PROCURED UNDER ULDC PROJECT.
- ❖INSTALLATION AND COMMISSIONING OF TRANSDUCERS & PROCESS CONNECTIONS BY FIELD UNITS WITH THE TECHNICAL SUPPORT FROM SLDC/SUB-LDCs.
- ❖ SAME APPROACH MAY BE FOOLLOWED BY MPPTCL AT OTHER LOCATIONS WHERE UPGRADATION IS REQUIRED IF TRANSDUCDERS, CMRs AND CABLES ARE PROCURRED.

SOME MAJOR PROBLEM AREAS

➢ **AMARKANTK THERMAL POWER STATION**

- ❖ STATUS TELEMETRY OF 210MW GENERATOR ALONG WITH ATPS-SIDHI, ATPS-BRS-3 FEEDER NOT AVAILABLE.
- ❖ THE WORK IS PENDING SINCE LAST TWO YEARS BECAUSE OF NON AVAILABILITY OF CABLES AND SPARE CONTACTS IN LOCAL SCADA SYSTEM, RTU CONFIGURATION.
- ❖ **FURTEHR NONE OF THE SOE INDICATION IS BEING RECEIVED FROM ATPS.**
- ❖ REGARDING RTU CONFIGURATION, IT HAS ALREADY BEEN INFORMED TO ATPS THAT ALREADY CONFIGURED POINTS IN RTU FOR 30 MW GEN-1,GEN2, ALONG WITH STATION TRANSFORMER MAY BE UTILISED FOR 210 MW GENERATOR, AND IMPORTANT FEEDERS OR SPARE CPU MAY BE BROUGHT TO SLDC, SO THAT ADDITIONAL CONFIGURATION MAY BE PROVIDED. ATPS IS NOT TAKING ANY ACTION IN THIS REGARD.

SOME MAJOR PROBLEM AREAS

➢ NAGDA 400KV S/S

- ❖ THE TELEMETRY OF STATUS POINTS OF IMPORTANT 400 KV FEEDERS AND TRANSFORMERAS (400/220 KV NAGDA-ICT-3, 400KV NAGDA-RAJGAR, NAGDA-BINA, NAGDA-DEHGAON FEEDERS) IS NOT AVAILABLE AND IS PENDING SINCE MORE THEN A YEAR.
- ❖ INITIALY THE MATTER WAS PENDING DUE TO NON AVAILABILITY OF DI MODULE IN THE RTU. FIELD OFFICER ARE OF THE VIEW THAT THE TELEMETRY SHALL BE ARRANGED BY UPGRADATION OF RTU FOR WHICH PROPOSAL HAS ALREADY BEEN SUBMITTED TO T&C.
- ❖ IN VIEW OF THE CRITICALITY OF 400KV TELEMETRY, SLDC HAS PROPOSED TO INTEGRATE TELEMETRY OF THESE IMPORTANT FEEDERS IN PLACE OF UNUTILISED ISOLATOR POINTS IN RTU, WITHOUT REQUIREMENT OF ADDITIONAL DI MODULE.
- ❖ THE REQUIRED CONFIGURATION IN THE RTU FOR MODIFICATION OF ISOLATOR POINTS TO CB/SOE POINTS HAS ALREADY BEEN ARRANGED BY SLDC. HOWEVER EXTENTION OF PROCESS CONECTIONS IS STILL PENDING.

SOME MAJOR PROBLEM AREAS

➢ BHOPAL 400KV S/S

- ❖ THE TELEMETRY OF STATUS POINTS OF IMPORTANT 400 KV FEEDERS i.e. BHOAPL-DAMOH 1&2, 220 KV BHOPAL-BINA, BHOPAL-VIDISHA IS PENDING AS EXTENTION OF PROCESS CONNECTIONS IS NOT DONE.

➢ OLTC TRANSFORMER TAP POSITIONS

- ❖ OLTC TAP POSITIONS IS NOT RECEIVED CORRECTLY FROM MOST OF THE LOCATIONS.
- ❖ THIS NEED TO BE INVESTIGATED THOUROUGHLY. IF REQUIRED VENDOR SUPPORT MAY BE OBTAINED AT FEW OF THE LOCATION FOR IDENTIFYING THE EXACT PROBLEM AND THE SAME MAY BE REPLICATED AT OTHER LOCATIONS.

➢ NON AVAILABILITY OF CMRs

- ❖ AT SEVERAL PLACES EXTENSION OF PROCESS CONNECTION / NORMALISATION OF STATUS TELEMETRY IS PENDING DUE TO NON AVAILABILITY OF CMRs WITH FIELD OFFICES. CMRs NEED TO BE ARRANGED BY T&C.