



**MADHYA PRADESH POWER TRANSMISSION COMPANY LIMITED
STATE LOAD DESPATCH CENTRE, NAYAGAON, RAMPUR, JABALPUR**

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Jabalpur 482008, CIN-U40109MP2001SGC01

No.07-05/SG-9B-II/107

Jabalpur, dated : 07.04.2016

To

As per distribution list

Sub: Minutes of 50th meeting of Operation and Coordination Committee of MP.

The Minutes of 50th meeting of the Operation and Coordination Committee of MP held at **Omkareshwar Hydel Power Station, NHDC Ltd., Omkareshwar on 27th February 2016 at 10.00 AM** has been uploaded on the website of SLDC 'www.sldcmpindia.com' and can be downloaded.

(K.K.Parbhakar)
Membr Secretary OCC
SLDC, MPPTCL, Jabalpur

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**MINUTES FOR 50TH MEETING OF OPERATION & COORDINATION COMMITTEE OF MP HELD AT
OMKARESHWAR HYDEL POWER STATION, NHDC LTD., OMKARESHWAR ON 27TH FEBRUARY 2016
at 10.00 AM.**

The 50th meeting of Operation & Coordination Committee of MP was held on 27th February 2016 at Omkareshwar Hydel Power Station, NHDC Ltd., Omkareshwar under the Chairmanship of Shri. P.A.R.Bende C.E.(SLDC) & Chairman OCC. The list of participants is enclosed at Annexure -1.0

Omkareshwar HPS, NHDC officers, being the host, welcomed all the participants by offering bouquet of flowers. There after Shri. S.K.Jain, GM, OSP welcomed all the participants and expressed gratitude for conducting 50th OCCM of M.P at Omkareshwar HPS and also gave a brief description about Omkareshwar Power Station and informed that this is the only Hydel Power Station which has been commissioned well within time i.e. in 4yrs which is a bench mark. This is the only ISO Certified Hydel Power Station in India and in June 2015 it has been awarded by Govt. of India as Best Hydel Power Station in India. He also expressed gratitude to the Govt. for their continued patronage support. Further he requested all the participants to visit the Power station, Switchyard, Dam & the Omkareshwar Temple which is one of the 12 Jyotirlinga in India. Then he requested Shri P.A.R.Bende C.E.(SLDC) & Chairman OCC to conduct the meeting.

Shri P.A.R.Bende C.E.(SLDC) & Chairman OCC welcomed all the participants attending 50th meeting of Operation & Coordination Committee of MP at OSP. He stated that the first 14 OCCMs of MP were conducted by State Transmission Utility and from 15th onwards OCCM of MP is being organized by SLDC, MPPTCL, Jabalpur. After performing a successful long journey, now reached to half of the century i.e., the 50th OCCM is being conducted at OSP HPS. He also stated that OCCM has proved its usefulness in resolving day to day problems encountered by the state entities in grid operation. He expressed his hope that any issue raised at the plate-form of OCC in future will be resolved amicably by discussing by all the members of the committee.

Chairman OCC also informed that the appraisal committee constituted at national level for allocation of fund from PSDF has approved the fund of Rs. 3.60 Lacs to SLDC MP for replacement of ABT,OA & MIS System at SLDC, Jabalpur and matter is pending with MoP, GoI for final approval.

ITEM NO. 1 : CONFIRMATION OF MINUTES : Minutes of 49th meeting of Operation & Coordination Committee of MP held on 22nd December 2015 at SLDC, Jabalpur were forwarded to the committee members vide No. 07-05/SG-9B-II/4899 dated 27.01.2016. No comment has been received to SLDC. Committee confirmed the minutes.

ITEM NO. 2 : REVIEW OF SYSTEM OPERATION DURING THE MONTHS DEC 2015 TO JAN 2016.

2.1 Frequency Particulars: Chairman OCC stated that after enactment of the DSM, frequency is prevailing around 50Hz. which is a good indication for system healthiness. Further he informed the committee that during Jan 2016 the system frequency was below 49.9 Hz for 9.19% of time against 16.38% of time during Dec 2015. The system frequency was above 50.05 Hz for 22.84% of time during Jan 2016 against 17.55% of time during Dec 2015. The system frequency was within the IEGC range of 49.9-50.05 Hz for 67.97 % of the time during Jan 2016 against 66.07 % of time during Dec 2015. The average monthly frequency was 50.00 Hz during Jan 2016 whereas it was 49.98 Hz in the month of Dec 2015. The system frequency did not touch 49.20 Hz during the above period.

The detailed frequency particulars for the month of Dec 2015 and Jan 2016 are enclosed at **Annexure-2.1**. The brief detail of frequency profile is given here under:

Month	Average frequency	Minimum integrated frequency over an hour	Maximum integrated frequency over an hour	Instantaneous minimum frequency	Instantaneous maximum frequency
Dec 2015	49.98 Hz	49.78 Hz	50.14 Hz	49.59 Hz	50.32 Hz
Jan 2016	50.00 Hz	49.87 Hz	50.15 Hz	49.68 Hz	50.39 Hz

2.2 Operational Matters

2.2.1 Operational Discipline : Chairman OCC informed the committee that system operated in terms of frequency profile for the months Dec 2015 and Jan 2016 is as given below for discussion by the committee:

Month	% of time Frequency Below 49.9 Hz	% of time Frequency above 50.05 Hz	% of time frequency within the permissible range of 49.9-50.05 Hz	Average monthly frequency	No. of times frequency dipped below 49.2 Hz
Dec 2015	16.38 %	17.55 %	66.07 %	49.98 Hz	0
Jan 2016	9.19 %	22.84 %	67.97 %	50.00 Hz	0

Chairman OCC stated that frequency was hovering above 50.05 Hz for about 20% of time frequency during the last two months. This high frequency scenario in the country is not desirable for smooth operation of the grid. This also indicates that many states in the country are in surplus of power.

2.3.1 Voltage Profile : Chairman OCC informed the committee that date wise voltage profile at some of the important 400 KV and 220 KV substations during the months Dec 2015 and Jan 2016 is enclosed at **Annexure -2.3.1**.

During the months Dec 2015 and Jan 2016, the maximum and minimum voltage as recorded at following important 400 KV s/s in MP Grid.

Sr No	Name of 400 KV Substation	Dec 2015				Jan 2016			
		Max. Voltage observed		Min. Voltage observed		Max. Voltage observed		Min. Voltage observed	
		Voltage KV	Date	Voltage KV	Date	Voltage KV	Date	Voltage KV	Date
1	Indore	421	28.12.15	394	18.12.15	422	20.01.16	395	21.01.16
2	Itarsi	422	25.12.15	391	14.12.15	421	07.01.16	393	11.01.16
3	Bina	429	25.12.15	390	04.12.15	427	27.01.16	399	07.01.16
4	Gwalior	418	29.12.15	383	25.12.15	418	27.01.16	383	07.01.16
5	Nagda	425	26.12.15	395	17.12.15	426	20.01.16	384	20.01.16
6	Satpura	426	24.12.15	402	14.12.15	426	20.01.16	405	01.01.16
7	Birsinghpur	424	24.12.15	404	21.12.15	426	19.01.16	406	01.01.16
8	ISP	427	24.12.15	404	16.12.15	427	15.01.16	407	24.01.16

Chairman OCC deliberated that low voltage problem in the state is almost eliminated. Bus Voltages of the major sub-stations had been well within the operational range even during high load period of rabi season. Low voltage pockets, if any existed, at remote locations, it would have been due to inadequate reactive compensation provided by the Discoms.

2.3.2 Status of Capacitor Banks in sub-transmission system : Chairman OCC informed the committee that the updated information of the status of capacitor banks in sub-transmission system as on 31st Jan 2016 as submitted by DISCOMs is detailed below:

DISCOM	Capacitor bank installed in good condition (No)			Capacitor Banks healthy but not in service due to control ckt problem			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 KVA R	1200 KVA R	1500 KVA R	600 KVA R	1200 KVA R	1500 KVA R	600 KVA R	1200 KVA R	1500 KVA R	No of 100 KVAR Units required	600 KVA R	1200 KVA R	600 KVA R	1200 KVA R	600 KVA R	1500 KVA R
EZ	418	156	15	-	-	-	22	10	0	94	0	0	0	0	0	13
CZ	5	687	657	0	0	0	0	0	0	0	0	0	0	588	0	107
WZ	614	544	272	26	11	8	38	34	88	281	8	18	-	-	0	0

2.3.3 Status of Shunt Capacitor Banks installed at various EHV Transmission Substation:

Chairman OCC informed the committee that the updated information of the status of Installed capacitor banks (in MVAR) in EHV transmission system as on 31.01.2016 as submitted by MPPTCL is given below:

Voltage Class	Capacitor bank installed as on 30.11.15(MVAR)	Capacity Added after Last OCC Meeting (MVAR)	Capacitor banks already covered under ADB T-V	Capacitor Bank Installed but defective & are not repairable (No & MVAR)
220 KV	100.00 MVAR	0.00	100.00 MVAR	All in Service
132 KV	1122.00 MVAR	66.00	1188.00 MVAR	
33 KV	4351.00 MVAR	57.00	4408.00 MVAR	
Total	5573.00 MVAR	123.00	5696.00 MVAR	

2.3.4 Status of completion of ongoing Transmission Schemes being executed by MPPTCL:

Chairman OCC informed the committee that the various ongoing Transmission Schemes completed during the current financial year 2015-2016 (upto Jan 2016) and plan for completion of various ongoing Transmission Schemes for the Year 2015-2016 is enclosed as **Annexure 2.3.4(i) and 2.3.4(ii)**.

2.3.5 U/F and df/dt Relay Operation

(i) **U/F and df/dt Relay Operation:** Chairman OCC informed the committee that frequency did not touch 49.20 Hz or below during Dec 2015 and Jan 2016. There was no df/dt operation during the same period.

In the 48th OCC, SLDC requested MPPTCL to submit the revised list of AUFLS due to allocation of group to new feeders commissioned after implementation of AUFLS. The T&C wing of MPPTCL should positively submit the same by 30.11.2015. The matter was again discussed in 49th OCCM and MPPTCL was again requested to submit the same at the earliest. However the information is not received so far. MPPTCL is requested to submit the same by 1st March 2016.

(ii) **Defective u/f, df/dt relays:** Chairman OCC informed the committee that MPPTCL has informed that all the df/dt relays are in good/healthy working condition and where the U/F relays are not available, the numerical relays programmed for under frequency operation.

(iii) **Revised df/dt Plan :** Chairman OCC informed the committee that the revised df/dt plan has been prepared in consultation of MPPTCL and implemented by SLDC w.e.f. 20.08.2015.

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

(i) Chairman OCC informed the committee that the details of DISCOM wise Power supply given to various domestic categories during the period Dec 2015 and Jan 2016 is enclosed at **Annexure 2.4(i)**.

(ii) **Group Allocation to Newly Commissioned existing EHV substations :-** Chairman OCC informed the committee that the region wise list of 33 KV feeders emanating from various newly commissioned/existing EHV substations for which groups have not been allocated is given in **Annexure 2.4 (ii)**. The DISCOM wise details of pending group allocation to 33 KV feeders is given below :

SN	DISCOM	Region	No of 33 KV feeders for which groups to be allocated
01	EAST	Jabalpur	01
02		Sagar	00
03		Rewa	00
04		Total	01
05	WEST	Indore	07
06		Ujjain	18
07		Total	25
08	CENTRAL	Bhopal	15
09		Gwalior	16
10		Total	31
TOTAL		Grand Total	57

Discoms were requested to furnish the details as per list enclosed at **Annexure-2.4(ii)** in the meeting.

Representative from East Zone informed the committee that due to non-completion of line construction work, group has not been allocated under Jabalpur region.

Representative from West Zone informed the committee that groups have been allocated to 03 no. feeders under Indore region and 1 no feeder under Ujjain region, hence 04 no. feeders under Indore and 17 no. under Ujjain region are balance for group allocation.

Representative from Central Zone informed the committee that groups have been allocated to 06 no. feeders under Bhopal region and 15 no feeders under Gwalior region, hence 09 no. feeders under Bhopal and 01 no. feeders under Gwalior region are balance for group allocation.

ITEM NO. 3 : OPERATIONAL PLANNING:

3.1 Generating Units under planned outage and proposed maintenance programme : Chairman OCC informed the committee that the annual maintenance/outages of thermal generating units of MPPGCL during Feb'16 to March'16 is as under :-

POWER STATION	UNIT NO.	FROM	TO	REASON/REMARK
Amarkantak –II	4	30.04.14	Continue	MPPGCL has informed that letter has been sent to CEA for retirement of ATPS units 3 & 4.
Amarkantak –II	3	12.01.15	Continue	
Satpura-IV	11	25.07.15	Continue	The probable date of synchronization of unit will be by first week of March, 2016.
Satpura-III	8	30.11.2015	-	Synchronized on 23.01.2016.

3.2 Proposed shutdown programme of Transmission lines / Transformers : Chairman OCC informed the committee that the proposed shutdown of transmission elements for the period 01.03.2016 to 30.04.2016 submitted by MPPTCL is enclosed as **Annexure-3.2**

M/s Kalpataru Satpura Transco Pvt. Ltd & Indira Sagar HPS have proposed shut down of transmission elements as given below :

S.No.	Name of Feeder	Proposed date	From time	To Time	Reason
1	400 KV DCDS Satpura-Astha Ckt-I	16.03.16	09.00 hrs	17.00 hrs	Annual Maintenance
2	400 KV ISP-Nagda	04.04.16 & 05.04.16	08.00 hrs	18.00 hrs	Representative from ISP HPS informed that the shut-down shall be availed for PMM work.
3	400 KV ISP-Nagda	06.04.16 & 07.04.16	08.00 hrs	18.00 hrs	
4	400 KV ISP – Indore-I	08.04.16 & 09.04.16	08.00 hrs	18.00 hrs	
5	400 KV ISP- Indore-II	11.04.16 & 12.04.16	08.00 hrs	18.00 hrs	

3.3 Long Outages of transmission elements and protections : Chairman OCC informed the committee that the status submitted by MPPGCL / MPPTCL are given below :

SN	Line/Transformer/ Breaker/ Reactor etc under long outage	Outage date	Reason	Response from Utility
1	63MVAR Bus-I Reactor at Satpura TPS	24.05.2005	Damage of all three limbs along with reactor tank	Charged on 29.12.15 at 20:08Hrs.
2	220 KV Bus bar protection scheme at SGTPS Birsinghpur	Since commissioning of 220 KV switch yard	The scheme not available	Work is completed. Service Engineer from M/s GE is required for commissioning of bus bar protection panel. Also three days shutdown of 500 MW unit is required and will be done in next AOH. Chairman OCC enquired MPPGCL whether the above S/d of unit is required for commissioning of Bus Bar. MPPGCL may confirm the same from the SGTPS officials and intimate accordingly.
3	315 MVA , Generator Transformer of unit no. 11 of Satpura TPS	25.07.2015	GT Problem (GT caught fire, B Ph. Bushing burst)	The probable date of synchronization of unit will be by first week of March 2016.
4	100MVA(BHEL), 220/132 KV transformer at 220 KV s/s Sarni.	31.05.2015	Abnormal sound observed and Differential protection optd.	This transformer has been decommissioned wef 01.02.2016 by MPPTCL vide order no.04-02/P&D/446 dtd. 12.02.16. Chairman OCC informed the committee that the matter has been informed to MPERC.
5	Main Breaker of 400 KV Nagda-Rajgarh-II	23.07.15	Y-phase CT burst / BKR Problem	400 KV Rajgarh II is charged from 400 KV Main Bus-I, for ensuring connectivity with Main Bus-II. The work is in progress with work of providing Reactor on ISP Bay. 400 KV Rajgarh-I is shifted in diameter of 315 MVA ICT-IV, which has facility to connect on Main Bus-I and Main Bus-II. Chairman requested MPPTCL.
6	40 MVA 132/33 KV Transformer ECE make at 132 KV Lakhnadon	06.10.2015	Internal sparking in Y Ph. HV side winding.	The defect developed in transformer and matter under correspondence with M/s ECE for its repair at their works. The transformer has to be shifted shortly to ECE works for repairs.
7	20 MVA NGEF make X'mer at 132 kV S/s Pichhore	23.10.2015	X'mer failed	40 MVA X'mer commissioned in place of failed 20 MVA X'mer on 21.12.2015.
8	12.5 MVA 132/33 KV HEL make X'mer at 220 KV S/s Nimrani	30.10.2015	X'mer hand tripped due to high Tan-Delta of 2 No. 132 KV bushings	After obtaining bushing for replacement of high Tan-Delta bushings, X'mer will be charged. Being of old design bushing are not readily available. Efforts are being made to obtain bushing for replacement of high Tan-Delta bushings.

9	3x105 MVA , 400/220 KV ICT-I at 400 KV Indore	02.08.15	Differential protection optd. and 33 KV tertiary PT burst	Two No. 105 MVA Units of these bank have failed. The complete bank has to be replaced with 1X315 MVA 3 Ph. Transformer. Tender for procurement of new transformer has been initiated, on receipt of 315 MVA X'mer, the failed 3x105 MVA Bank will be replaced by new 400/220 KV, 315 MVA ICT.
10	20 MVA Transformer – II at 132 KV S/s Jaora	14.11.15	Not available	20 MVA X'mer –II is charged on 07.01.2016.
11	315 MVA 400/220 kV ICT-III at 400 kV S/s, Bina	29.09.15	Due to Buchholtz relay alarm and PRV indication.	315 MVA CGL make X'mer shifted from 400 KV S/s Julwaniya has been commissioned on 05.01.2016 at 16:49 Hrs. at 400 KV S/s, Bina.
12	315 MVA, 400/220 kV ICT-I at 400 kV S/s Bina	15.10.15	Due to Buchholtz relay alarm.	This transformer is out of circuit from 15.10.2015, site repairs were in process but M/s BHEL has shown inability to repair the X'mer at site. The transformer is in process of shifting from Bina to M/s BHEL works for repairs. After repairs this X'mer will be recommissioned at 400 KV S/s, Bina.
13	3X40 MVA, 220/132 KV X'mer at 220 KV S/s, Bhopal	20.01.2016	R Phase Unit Sr. No. 6004364 of X'mer failed.	For replacing this unit, spare unit available at 220 KV S/s Jabalpur which is in process of shifting.
14	315 MVA, 400/220 KV ICT at 400 KV S/s, Julwaniya	05.01.2016		The ICT has been removed for installation at Bina 400 KV S/s and commissioned there at 16:49 Hrs. on dtd. 05.01.2016. Chairman OCC informed that this 315 MVA ICT has been taken in outage from 400 KV S/s Julwaniya from 05.01.2016 and is availability is taken at 400 KV S/s Bina from 05.01.2016.

ITEM NO. 4 : OPERATIONAL STATISTICS FOR THE MONTH OF Dec 2015 and Jan 2016: Chairman OCC informed the committee that the details of actual generation, Schedule from Central Sector demand etc. are given in the following Annexures:

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

Annex. 4.2 Power Supply Position.

Annex. 4.3 Hourly Average of Availability and Demand.

Annex. 4.4 Hourly average schedule Vs Drawal of DISCOMs.

ITEM NO. 5.0 : SYSTEM DISTURBANCE IN MP DURING DEC 2015 AND JAN 2016 : Chairman OCC informed the committee that there was no major grid disturbance in MP during Dec 2015 and Jan 2016. However the Grid Disturbances and Grid Incidents in MP during these months are given in **Annexure 5.0**.

He stated that the DR/EL files of the grid disturbances are not being submitted to SLDC by most of the state grid entities alongwith tripping report which is other-wise essential for determining the root cause of the grid disturbances. Also the flash report shall be submitted within one hour of incidence and the detailed report along with DR/EL files should reach SLDC within 24 hrs. of tripping.

He further informed the committee that there are number of disturbances and incidences happened in Gwalior Region in the recent past which had not been reported to SLDC timely and restoration / normalization by the sub-station staff without obtaining code from SLDC/Sub-LDC. This is a Violation of IEGC Sub-Regulation (b) of Regulation 5.6.2. He once again requested MPPTCL and other state grid entities to obtain code from SLDC/Sub-LDC positively prior to performing switching operation of any transmission element.

ITEM NO. 6.0 : IMPORTANT OPERATIONAL ISSUES

6.1 STATUS OF COMPLETION OF ONGOING SCHEMES FOR COMMISSIONING OF REACTORS / TRANSMISSION ELEMENTS:-

Chairman OCC informed the committee that the present status regarding schedule and commissioning of reactors / transmission elements is as below:

Sr. No.	400 KV S/S	Size MVAR	Implementing Agency	Expected Date of Commissioning as intimated in last OCC
1	Bus Reactor : Nagda	125 MVAR	MPPTCL	DI has been issued & bus reactor commissioning is expected by March-2016
2	Bus Reactor : ISP	125 MVAR	NHDC	June 2016
3	Line reactor at Nagda-ISP line at Nagda end	50 MVAR	MPPTCL	March 2016
4	Line Reactor on 400 kV Satpura –ISP line	50 MVAR	MPPGCL	MPPGCL representative that procurement of line reactor is under tendering stage & will be made available by December-2016
5	Bus Reactor at SSTPS	125 MVAR	MPPGCL	Work will be carried out under PSDF by March-2017 as intimated by MPPGCL.
6	Bus Reactor – I at 400 KV S/s Bhopal	80 MVAR	MPPTCL	80 MVAR Bus Reactor-II has been commissioned on 27.08.15. Bus Reactor –I is under commissioning and is expected to be commissioned by March-2016

6.2 Commissioning of new Generating units in Madhya Pradesh and the capacity expected to be commissioned during the current year 2015-16 :- Chairman OCC informed the committee that the status regarding Generating units, commissioned /expected to be commissioned during the current year 2015-16 according the available information is as below :

S.No	Name of the Power Projects	Unit no.	Capacity MW	Date of Commissioning /Schedule Date
1	M/s Jhabua Power, Seoni	1	600	March – 2016
2	Moser Bear (Hindustan power)	2	600	March – 2016
3	Essar Power MP Ltd (Mahan)	2	600	-

The matter was discussed in last OCCM in which SLDC has requested MPPMCL to submit the latest status of above power plants, but MPPMCL has not submitted the same. MPPMCL is requested to submit the present status of commissioning of above power plants.

6.3 Provision of synchronization facility at EHV sub-stations of MPPTCL :- Chairman OCC informed the committee that as per Grid Code, the synchronization facility should be available at all the Power Stations, 400 KV Sub-stations and 220 KV Sub-stations. In past OCC meetings MPPTCL time and again requested to provide synchronization facility at all 400 KV S/s and for 220 KV and 132 KV sub - station in the path of black start at the earliest. It was pointed out by SLDC that synchronization trolley at 400 KV S/s Indore is not in order and requires immediate repair / replacement for its proper functioning.

The MPPTCL representative informed the committee that the procurement is under tendering stage. Further Chairman OCC requested MPPTCL that the synchronization trolley at 400 KV S/s Indore shall be repair/ replaced at the earliest.

6.4 COMMISSIONING OF 315MVA, 400/220KV ICT #3 AT SATNA (PGCIL) S/S :- Chairman OCC informed the committee that two nos. 400/220kV 315 MVA ICTs are provided at 765KV sub-station Satna (PGCIL). The loading on these ICTs quite often crossing overload capacity during Rabi Season, thereafter to avoid over loading and tripping of the ICT's at Satna S/s following temporary arrangements have been made:-

1. 220 KV S/s Sidhi & 220 KV S/s Rewa is being fed radially from SGTPS Birsinghpur and ATPS and has been isolated from Tons HPS and Satna S/s.
2. 220 KV Satna(PGCIL) – Maihar Ckt, 132 KV Maihar–Satna, 132KV Maihar-Amrpatan, 132 KV Satna-Kymore and 132 KV Chattarpur-Bijawar kept open. Now the load of 220KV Satna, 220 KV Chattarpur, 220 KV Kotar is radially fed by the ICTs at 765 KV sub-station Satna (PGCIL) and 220 KV Maihar has been radial of 400 KV sub-station Katni.
3. Generation at Tons HPS is being utilized to meet the load of Satna & Tons area during the peak hours as the M/c's of Tons HPS could not be run longer period due to restriction on discharge of water for power generation by WRD.

He informed the committee that Dy.GM, WRTS-II, PGCIL, Vadodara has informed that procurement of additional 500MVA ICT is under process as approved in 38th Standing committee Meeting of WR. He further informed that it will take about two years to install and commission new 500 MVA transformer in place of existing one of the 315 MVA ICT as there is space constraints for installation of additional ICT. Meanwhile, POWERGRID is arranging to install spare one no. 315MVA ICT in parallel with existing 315MVA ICT # 2 by utilizing the existing bay at Satna SS so that the increased demand of MPPTCL may be met without overloading of ICTs. MPPTCL is also making LILO of 220 KV Katni-Satna(PG) line at 220 KV Satna so that third interconnection is available. With this arrangement the overloading problem will be relived and it would be possible to normalise restore temporary arrangement made for radial feed to Rewa & Sidhi area.

6.5 SYSTEM PROTECTION SCHEMES (SPS) in MADHYA PRADESH :- Chairman OCC informed the committee that it is gathered that there are some System Protection Schemes have been installed by MPPTCL at 400 KV and 220 KV sub-station. He requested that the complete details of all SPS commissioned in MP by MPPTCL along with load shed quantum, if any may be submitted to SLDC so that the copy of the made available in Control room of SLDC and Sub-LDC.

6.6 OUTAGE PROGRAMME OF TRANSMISSION LINES/ELEMENTS for OCCM of Western Region :-

Chairman OCC informed the committee that in 480th OCCM of WRPC, SE(Opn), WRPC informed that following procedures for transmission elements outages planning from next OCCM onwards:

- 1 The OCC held in the current month (M) shall discuss the line outages for the period from 20th of current Month to 19th of next month.
2. The data for the above line outages shall be positively sent by 3rd working day of current month for outages of said period.OCC will not entertain the request after due date.
- 3 The compiled data shall be-mailed to SLDCs /utilities for any comments by 5th working day.
4. All utilities shall confirmed on D-3 through following link about readiness to avail outages(where D is date of outage)

<https://docs.google.com/spreadsheets/d/1MJJeQbm6Cer8dB0uHStyPcGIMs95Us7TqqFrqx77mGY/edit#gid=2078002005>

5. WRLDC shall issue code in real time within reasonable time with best effort either the code to avail or cancel depending on real time conditions.
6. All utilities that do not confirm by D-3, those outages shall be deemed cancelled.

SE(Opn), WRPC in 480th OCC meeting of WR has instructed that outage time and date should be adhere by the outage availing entities and the proposals not approved in OCCM shall not be approved by either WRPC or WRLDC and only emergency nature outages may be given during real time operation.

In view of the above it is requested that all the entities should submit their outage plan for OCC of WR by 1st of every month for onward transmission to WRPC and give their readiness on D-3 for availing the approved shut-down to SLDC.

6.7 Proposal of Shut Down of Intra-state Transmission Elements :- It was observed that the most of the shut downs have been proposed by the entities in real time are not of emergency nature. The reasons for such proposed shut downs are generally painting work, oil filtration, routine maintenance etc. He further mentioned that such a large number of outage proposals of routine nature may engage shift engineer in these works and diverts attention from other important work of grid operation and ABT scheduling during real time of operation. It is therefore requested that all entities should submit their outage plan which are not in emergency nature prior to 3 days of proposed shut down date. In real time operation only emergency shut down shall be considered by SLDC.

Chairman OCC requested MPPTCL to issue guidelines regarding the above matter for availing S/D so that it can be complied with.

6.8 SCHEDULING ACTIVITY BY MPPMCL ON BEHALF OF DISCOM :- Chairman OCC informed the committee that SLDC has taken up the issue of round the clock functioning of Control Room with MPPMCL so that revision to schedule requisitions are made on behalf of DISCOMs by the MPPMCL during real time operation.

The MPPMCL has deputed one engineer in Shift at SLDC Jabalpur in August 2015 to understand the scheduling procedure and preparation of requisition as per availability and demand pattern. MPPMCL engineers have acquired sufficient knowledge of requisition/scheduling over this period and doing the scheduling activities under the Balancing & Settlement Code. Now SLDC proposed that after 15 days from the date of Installation / commissioning of NEW SCADA (Alstom), the MPPMCL staff should start functioning from MPPMCL Control Room. It is to mention that MP SLDC perform the scheduling activities as per the requisition of MPPMCL and DISCOMS for ISGS/SSGS/Other LTA&MTA/Bilateral agreement.

It was requested to MPPMCL for immediately take action on switchover to new system proposed by SLDC from 23rd February 2016.

Chairman OCC intimated that SLDC will be switching over to new SCADA (Alstom) system within a week time and will be running in parallel with existing system. Hence it is requested to MPPMCL to start scheduling activities/functioning from MPPMCL Control Room after the switching over to new SCADA system. He further stated that at any point of time the revision of schedule is needed to ensure safe, secure and reliable operation of grid and in the absence of MPPMCL shift engineer, revision of schedule initiated Suo-Motu by SLDC which may not follow the merit order dispatch.

6.9 Huge Fluctuations in scheduled & actual drawal by the Discoms at hour boundaries–

Chairman OCC informed the committee that MPPMCL and Discoms have not taken any action to plan their demand management so that large fluctuations in drawal/demand (more than 100 MW) at hour boundary and other timings could be avoided. The large fluctuations have been observed at hour boundary at 2 Hrs, 6 Hrs, 12 Hrs and 18 Hrs. This is violation of IEGC Clause 5.2 (j).

In this regard WRLDC Control Room issues violation notice to SLDC on almost every occasion for avoiding such large fluctuations. Sometimes WRLDC Control Room Suo Motu curtails the schedule of MP in ISGS in case of huge under drawal of MP at hour boundary. The matter of large fluctuations at hour boundary was also raised by WRLDC in Operation & Coordination Committee meeting of WRPC. The Member Secretary, WRPC had asked representative of SLDC to submit the action taken by the MPPMCL/Discoms in this regard in the OCCM of WRPC in December 2015. SLDC has already intimated to take suitable action in the matter vide this office letter No. 3874 dated 09.11.2015 and no. 4130 dated 28.11.2015, however the MPPMCL, DISCOMS have not submitted the action plan so far.

He requested MPPMCL to plan segregation of changeover of large block of load at hour boundary and also power purchase / sell under Short Term Open Access should be planned in such a way that a large change in quantum at hour boundary / time block boundaries could be avoided in the interest of grid security.

ITEM NO. 7 : REGULATORY ISSUES

7.1 Compliance of the Central Electricity Authority (Technical Standards for Grid Connectivity) (Amendment) Regulations, 2013 by new generating units being commissioned and getting connected to the grid :- Chairman OCC informed the committee that the Southern Regional Load Despatch filed the petition no 420/MP/2014 through CERC made the following prayers :

- (a) Direct the SLDC to ensure that LVRT setting of the available wind turbines as prescribed in CEA (Technical Standards for Grid Connectivity) Regulations, 2007 amendment dated 15.10.2013.
- (a) Direct proper forecasting and scheduling by Renewable Energy generators and demand estimation by SLDC in compliance with IEGC.

- (c) Direct CTU/STU/SLDC to ensure that the new units being commissioned and getting connected to the grid are fully complying with CEA (Technical Standards for Grid Connectivity) Amendment Regulations, 2013

The CERC vide order dated 05.01.2016 in petition no. 420/MP/2014 has issued the following directions :-

Quote

“ As the Central Electricity Authority (Technical Standards for Grid Connectivity) (Amendment) Regulations, 2013 is applicable for wind generating stations and generating stations using inverters and are connecting at voltage level 66 kV and above to the grid after 15.4.2014. Therefore, all the wind generating stations are directed to comply with the provisions of CEA Technical Standards for Connectivity Regulations. We further direct CTU and STUs to make provisions in this regard in their Connection Agreements to ensure that wind energy generators comply with the provisions of CEA Technical Standards for Connectivity Regulations for grid connectivity before granting connectivity to the grid.”

Unquote

The copy of the Central Electricity Authority (Technical Standards for Grid Connectivity) (Amendment) Regulations, 2013 is enclosed as **Annexure 7.1**.

7.2 ROADMAP TO OPERATIONALISE RESERVES IN THE COUNTRY :- Chairman OCC informed the committee that The CERC in its order dated 18.10.2015 in Suo Motu petition no. 11/SM/2015 made following observation in the matter of Roadmap to Operationalise Reserves in the Country.

The National Electricity Policy (NEP) mandates that adequate reserves may be maintained to ensure secure grid operation:

“5.2.3 In order to fully meet both energy and peak demand by 2012, there is a need to create adequate reserve capacity margin. In addition to enhancing the overall availability of installed capacity to 85%, a spinning reserve of at least 5%, at national level, would need to be created to ensure grid security and quality and reliability of power supply.”

However, creation of adequate system reserve margin and spinning reserves at national level has not yet materialised. In furtherance to the provisions relating to the requirement of Spinning Reserves in the Electricity Act, 2003, National Electricity Policy and Tariff Policy, and to facilitate large scale integration of renewable energy sources, balancing, deviation settlement mechanism and associated issues, CERC constituted a Committee vide letter No, 25/1/2015/Reg. Aff. (SR)/CT.RC dated 29th May 2015, under the chairmanship of Shri A.S. Bakshi, Member CERC, to examine the technical and commercial issues in connection with Spinning Reserves and evolve suggested regulatory interventions in this context.

The Commission also directed as under:-

- a. For reliable and secure grid operation, to maintain continuous load-generation balance, to counter generation outages as well as unexpected load surges or crashes, and for large scale integration of variable renewable power, it is essential for the grid operators to have access to distributed Spinning Reserves which are dispatched taking due care of transmission constraints whenever required.
- b. The Commission reiterates the need for mandating Primary Reserves as well as Automatic Generation Control (AGC) for enabling Secondary Reserves.

- (i) All generating stations that are regional entities must plan to operationalise AGC along with reliable telemetry and communication by 1st April, 2017. This would entail a one-time expense for the generators to install requisite software and firmware, which could be compensated for. Communication infrastructure must be planned by the CTU and developed in parallel, in a cost-effective manner.
 - (ii) On the other hand, National/Regional/State Load Dispatch Centres (NLDC/RLDCs/SLDCs) would need technical upgrades as well as operational procedures to be able to send automated signals to these generators. NLDC /RLDCs and SLDCs should plan to be ready with requisite software and procedures by the same date
- c. To start with, a regulated framework in line with the Ancillary Services Regulations would need be evolved for identification and utilising of spinning reserves and implemented with effect from 1st April, 2016. This framework may continue till 31st March, 2017. This may only include generating stations regulated by CERC, which could be started off with a manual process for secondary reserves. The NLDC/POSOCO is directed to submit a detailed procedure in this regard for approval by the Commission within one month from the issue of this Order. The amendments required in various Regulations issued by the Commission would also need to be indicated. As the Renewable Energy (RE) penetration levels increase in the coming years, the impact on the quantum of reserves would need to be separately studied and provided for through further amendments
- d. In the long term, however, a market based framework is required for efficient provision of secondary reserves from all generators across the country. For this, NLDC/POSOCO is directed to commission a detailed study through a consultant and suggest a proposal to the Commission for implementation by 1st April, 2017, giving due consideration to the experience gained in the implementation of Spinning Reserves w.e.f. 1st April, 2016
- e. The States must undertake separate scheduling and energy accounting of all generating and load entities. Deployment of DSM framework shall greatly prepare the State to differentiate between and attribute deviations caused due to various entities involved. Recording of this data shall also give the State grid operator much needed clarity on which entities are responsible for schedule deviations, and to what extent
- f. Load forecasting must be undertaken by all DISCOMs. Combined with DSM, it is the foundation on which strong and reliable grid management can be built.
- g. In order to ensure reliable and secure operation of the grid, in addition to compliance to standards and regulations, adequate defense mechanisms such as Under Frequency Relays (UFRs), df/dt (rate of change of frequency), System Protection Schemes (SPS), etc. must be put in place and which also need to be periodically reviewed and checked for healthiness

The committee noted the same.

7.3 PETITION NO 54/2015 FILE BY JAYPRAKASH POWER VENTURES IN MPERC FOR ADJUDICATION OF DISPUTE BETWEEN THE PETITIONER GENERATING COMPANY AND THE STATE TRANSMISSION UTILITY I.E. MPPTCL :- Chairman OCC informed the committee that M/s. Jaiprakash Power Ventures Limited filed the subject petition under Regulation 1.10.1 of Madhya Pradesh Electricity Grid Code (Revision-I), 2005 read with Section 86(1)(f), (h) and (k) of the Electricity Act, 2003 for

adjudication of dispute between the petitioner Generating Company and the State Transmission Utility inter-alia challenging the legality, validity and propriety of the letter dated 01.06.2015 issued by SLDC on certain grounds mentioned in its petition.

The Hon'ble MPERC has in its order dated 07.01.2016 resolved that :-:

Quote

“In view of the above, it is observed by the Commission that the use of expression like Technical Minimum by the respondents in the impugned communication has no relevance since the provisions under the PPA executed between the procurer and the petitioner are explicitly clear for commercial and technical obligation to be met by each of them. It is further observed that the respondent (MPPMCL) is responsible only up to the contracted capacity of the generating unit as per PPA. Any unscheduled available capacity within the contracted capacity is compensated by way of fixed cost/capacity charges paid by the Respondent No.2 in terms of PPA. Besides, the petitioner is responsible at its own expenses for maintaining the technical requirement during operation of the plant while making its obligations under the power purchase agreement. Therefore, no merit is found in the prayer of the petitioner for recovery of any additional cost incurred by the petitioner in operating in accordance with the directions issued by the Respondent No.1 in the impugned communication.

In view of the above observations and discussions, the subject petition is dismissed and disposed-of.”

Unquote

The committee noted the same

7.4 REVISED NATIONAL TARIFF POLICY NOTIFIED BY MINISTRY OF POWER :-

Chairman OCC informed the committee that the Central Government revised Tariff Policy to be effective from the date of publication in the Gazette of India i.e from 28.01.2016.

Notwithstanding anything done or any action taken or purported to have been done or taken under the provisions of the Tariff Policy notified on 6th January, 2006 and amendments made thereunder, shall, in so far as it is not inconsistent with this Policy, be deemed to have been done or taken under provisions of this revised policy

The objectives of this tariff policy are :

- (a) Ensure availability of electricity to consumers at reasonable and competitive rates;
- (b) Ensure financial viability of the sector and attract investments;
- (c) Promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimise perceptions of regulatory risks;
- (d) Promote competition, efficiency in operations and improvement in quality of supply;
- (e) Promote generation of electricity from Renewable sources;
- (f) Promote Hydroelectric Power generation including Pumped Storage Projects (PSP) to provide adequate peaking reserves, reliable grid operation and integration of variable renewable energy sources;
- (g) Evolve a dynamic and robust electricity infrastructure for better consumer services;
- (h) Facilitate supply of adequate and uninterrupted power to all categories of consumers;

- (i) Ensure creation of adequate capacity including reserves in generation, transmission and distribution in advance, for reliability of supply of electricity to consumers

Chairman OCC informed the committee that the revised National Tariff Policy is available in the web site of Ministry of Power, Govt. Of India and requested to download and go through the policy.

ITEM NO. 8: AGENDA POINTS SUBMITTED BY NHDC:

8.1 (a) DISCREPANCY IN THE VERIFIED PAF OF ISPS FOR THE MONTH OF JANUARY 2016 :-

Chairman OCC informed the committee that the Chief Engineer (O&M), ISP vide letter no. NHDC/2/J/O&M/2015/104/16 dtd 15.02.2016 has raised the issue of discrepancy in the verified PAF of ISP for the month of January 2016 and requested to include in agenda point of 50th OCCM of MP. The copy of the above letter is enclosed as **Annexure – 8.1(a) (i)**

The Chief Engineer(O&M), ISP in its letter has mentioned that MPSLDC vide no. 07-05/PM-68A/SEA-1.0/5031 dated 08.02.2016 issued the provisional State Energy Accounting for the month of January 2016 wherein the Monthly PAF in respect of ISPS has been verified as 91.09 %. ISPS vide letter no. NHDC/2/J/O&M/53/16/18 dated 11-02.2016 requested MPSLDC to issue the necessary amendment / revision in the Provisional SEA by verifying the actual PAFM in respect of ISPS for the month of January 2016 as 99.95% based on the capacity declaration made by the project.

In reply to NHDC letter dtd 11.02.2016 MP SLDC vide letter no. 07-05/NCA-94/5108 dtd 17.02.2016, has clarified that the Plant Availability Factor of ISP has been computed considering the restriction of WRD for maximum six machines. The copy of MPSLDC letter is enclosed as **Annexure- 8.1(a) (ii)**.

Chairman OCC further stated that the MP SLDC has intimated all the concerned in the matter and clarified how the PAF of ISP has been arrived at, considering the restriction of WRD for maximum 6 M/C's and followed the regulatory provisions in this regard and hence there is no need to make any amendment/ revision.

8.1(b) DISCREPANCY IN THE PAF OF OSP FROM 20TH JANUARY TO 31ST JANUARY 2016 :-

Chairman OCC informed the committee that the Sr. Manager (O&M), Omkareshwar vide letter No. NHDC/OSD/O&M/33 /521 dated 13.02.2016 has submitted the agenda point as below:-

Letter vide No. 195/Works/2016 dated 19.01.16 was issued from the Executive Engineer, WRD Khandwa to The Member, NVDA Bhopal regarding release of water from Omkareshwar Power Station in connection to construction of ghats for Singhasth 2016. MPSLDC while forwarding the said WRD letter dated 19/01/2016 to OSPS had made specific remark to limit DC to 6 machines, based on WRD's request for operation of maximum 6 turbines from 8:00 PM to 12 noon from OSPS. Further, Member (Engg.), NVDA, Bhopal vide letter No. 236/419/Memb(Engg)/NVDA/2016 dated 21/01/2016 addressed to CGM, MPPMCL endorsed the copy of WRD letter no. 199/work/2016 dated 20/01/2016, revising the requirement of water releases as per power demand from 8:00 PM to 12 noon, with no limitation, along with a copy to the office of SLDC for necessary action in the matter.

In this context, OSPS vide letters no. NHDC/3/J/O&M/032/176 dated 19/01/2016 have already addressed the issue of limiting DC up to 6 machine as against available all 8 machines with no machine under outage resulting into adverse commercial impact and thus requested to consider DC as per Capacity Declaration by the Power Station. During the period on 20/01/2016 to 31/01/2016 all the machines of OSPS

were available and the water was also available to generate daily Declared Capacity (In Ex-Bus MW), the station could have delivered for at least 3 Hours (As per CERC Tariff Regulation 2014-19). However in SEA for the month of January 2016, MPSLDC had restricted the PAF of these even dates by verifying monthly PAF of OSPS as 91.13% against the actual monthly PAF of 100% considering only 3 machines as available against the availability of all 8 units at OSPS, which is not justify.

The matter was discussed in the meeting and Chairman OCC stated that MP SLDC has computed PAFM of OSP as per clause 10 of Regulation CERC(IEGC), Regulation 2010 which clearly mandates that availability from hydel power station shall be declared taking into account their respective levels any other restriction on account of use of irrigation, drinking water, industrial, environmental condition etc. . This has already been intimated to the OSP by the SLDC as well as to the Govt. of MP. Similar practice has been adopted by the SLDC for computing the PAFM of hydel power stations of MPPGCL. Since WRD of MP has instructed NHDC to run Maximum 6 machines from OSP to facilitate construction of ghat downstream of Omkareshwar, generation could be done with 6 number of machines of ISP and OSP. The Plant Availability Factor computed by SLDC for OSP and ISP for the month of January 2016 is correct and needs no revision.

8.1(C) FREQUENT OVERLOADING OF LINE #2 (220 KV OSP – BARWAHA) :- Chairman OCC informed the committee that the Sr. Manager (O&M), Omkareshwar vide letter No. NHDC/OSD/O&M/33 /521 dated 13.02.2016 has submitted the agenda point as below :-

It has been observed that Line #2 (OSP – BARWAHA) is tripped several times due to over loading. To support the facts followings are some sample dates of tripping

Sr.No.	Date	Time	Indications
1	14.09.2015	20:07	TOC
2	14.09.2015	06:06	TOC
3	12.12.2015	21:05	TOC
4	02.11.2015	10:50	TOC
5	02.11.2015	18:15	TOC

NHDC mentioned that most of the time the current loading of the said line is more than 400Amps. Due to this the operators of OSP has to be vigilant always and required to communicate with LD frequently to reduce the load. The line is having 500/1 CT for over current protection and it has also been observed that other lines remains light loaded. The OSP is requested to submit the MW, MVAR and current on the line before the tripping of the line so that the issue could be analyzed.

The matter was discussed in detail in the meeting and Chairman OCC stated that tripping of this important 220 KV lines frequently on overcurrent is not desirable for safe and secure grid operation. NHDC proposed that CT of 220 KV OSP – Barwaha Ckt which is having CT ratio of 500-300/1 Amp with 220 KV OSP – Barwaha (Tap Nimrani) Ckt having CT ratio of 800-400/1 Amps to overcome the problem of frequent tripping as loading of 220 KV OSP- Barwaha (Tap Nimrani) generally remains below 300 Amp. The Chairman, OCC requested MPPTCL to examine the matter and report to SLDC at the earliest. The MPPTCL on dtd. 08.03.2016 submitted its report that the CTs should be replaced with 800-400/1 Amps.

8.1(d) ADVERSE EFFECT IN THE HEALTHINESS OF THE STATOR WINDING OF THE GENERATING UNITS AND THEIR AUXILLIARIES DUE TO FREQUENT START UP AND STOPPING OF THE MACHINES - Chairman OCC informed the committee that the Sr. Manager (O&M), Omkareshwar vide letter No. NHDC/OSD/O&M/33 /521 dated 13.02.2016 has submitted the agenda point as below :-

Existing Problem: The machine synchronizing schedule of Omkareshwar power station is revised several times in a day and consequently the generating Units are frequently started and stopped. The copy of the various revisions of the Dispatch schedule for dated 21/01/2016 may be referred please.

Adverse Effect: Recently, the Partial Discharge data analysis of all the Generating Units of Omkareshwar Power station have been carried out by M/s Doble Engg. Company to assess the healthiness of the stator winding of the generating Units. On the basis of the analysis of the data taken by the experts of the M/s Doble Engg., the Partial Discharge pattern of some of the units have been found prominent which are generally developed in hydro generators due to frequent starting and stopping of the machines. Also, the frequent opening and closing of the Main Circuit Breaker at Switchyard may cause wear and tear of the mechanical parts of the breaker which could affect its service life .Hence, it is humbly submitted that the frequent machine synchronization schedule may please be minimized keeping in view the healthiness of the generating units and their auxiliaries.

Chairman OCC stated SLDC requested NHDC to submit report of analysis of all the generating units of OSP carried by M/s Doble Engg Company to SLDC for taking appropriate decision in the matter. It was also mentioned by him that SLDC generally avoid frequent operation of the machines under normal system condition. As per details available in SLDC for the month of February 2016, only on 20.02.2016 machine no. 3 of OSP was taken on bar 3 times or else no machines had been synchronised in a day more than twice.

8.1 (e) FREQUENT REVISION OF SCHEDULE IN THE INTEREST OF BETTER SYSTEM OPERATION :- Chairman OCC informed the committee that the Sr. Manager (O&M), Omkareshwar vide letter No. NHDC/OSD/O&M/33 /521 dated 13.02.2016 has submitted the agenda point as below :-

As per the IEGC at of any point of time, the RLDC observes that there is need for revision of the schedules in the interest of better system operations, it may do so on its own, and in such cases, the revised schedules be shall become effective form the 4th time block, counting the time block in which the revised schedule in issued by the RLDC to be the first one.

But it has been observed that the SLDC gives the code for desynchronisation even if the revised Schedule is for Synchronization of Units. Further many times it has been observed that the time gap between Synchronization & Desynchronisation of two consecutive operations is less then 30 Minutes (two blocks)

In support to this fact here are some operations in recent past.

10/02/2016

Unit # 8 – Synchronization Time - 19:00 Hrs. (G2/611)
Unit # 6 – Desynchronisation Time – 19:04 Hrs. (G2/612)

Time difference -04 Minutes

09/02/2016

Unit # 1 – Synchronisation Time - 22:45 Hrs. (G2/551)
Unit # 1 – Desynchronisation Time – 23:10 Hrs. (G2/554)

Time difference -25 Minutes

Unit # 6 – Desynchronisation Time – 18:05 Hrs. (G2/535)

Unit # 8 – Synchronisation Time - 18:29 Hrs. (G2/537)

Time difference -24 Minutes

Unit # 8 – Desynchronisation Time - 12:05 Hrs. (G2/524)

Unit # 6 – Synchronisation Time - 12:30 Hrs. (G2/525)

Time difference -25 Minutes

This type of frequent start / stop of the units has adverse effects on the healthiness of the Machines.

Chairman OCC informed that the start-up and stop-off of the same M/C's at ISP & OSP have not been done more than twice a day as per the records of SLDC. Further Chairman OCC requested NHDC that if they are having any records for frequent start/stop of same M/C's at ISP & OSP shall be intimated / submitted to SLDC. He also requested to Generating Station that generators shall absorb reactive power within their Capability Curve to arrest high voltages during low load period. Further the possibility of running the M/C's of ISP & OSP at low load shall be explored and intimated to SLDC.

ITEM NO. 9 : BLACK-START MOCK DRILL OF HYDEL POWER STATIONS :

9.1 Black Start mock drill of Hydel stations of MPPGCL and NHDC : Chairman OCC informed that the black start mock drill of Tons HPS, Bargi, Pench and Gandhisagar HPS have been completed successfully on 08.10.15, 12.10.15, 06.11.15 and 06.01.2016 respectively. The proposed dates for black start mock drill of remaining hydel power stations is given below :-

Sl. No.	Name of Power Station	Date of Mock Drill
1	Indira Sagar Project	30 th May 2016
2	Omkareshwar HPS	1 st June 2016

In the last OCC meeting, MPPGCL has informed that the Black Start Mock Drill of Birsinghpur, Rajghat and Madikheda HPS could not be possible due to non-auto operation of governor. MPPGCL is requested to submit the plan for readiness of these units for black start mock drill.

Chairman OCC Informed the committee that mock drill at OSP shall be conducted with 220 KV S/s Barwaha through 220 KV OSP – Barwaha Ckt and draft procedure for black start mock drill of OSP shall be prepared by SLDC and provided to all concerned well before the date of mock drill.

MPPGCL representative informed that new battery set for Birsinghpur HPS has been purchased and shall shortly be commissioned. Chairman OCC requested MPPGCL to intimate suitable date to SLDC for conducting black start mock drill of Birsinghpur HPS.

ITEM NO 10: SOME IMPORTANT MATTERS REQUIRED IMMEDIATE ATTENTION:

10.1 Quarterly Review of Crisis Management Plan: Chairman OCC informed that NHDC & SLDC is submitting the quarterly crisis management report to Chief Engineer (GM), CEA New Delhi under intimation to SLDC Jabalpur and WRPC Mumbai.

However despite continuous persuasion by SLDC other state utilities i.e MPPTCL, MPPGCL and IPPs are not submitting the report to CEA. It is requested to submit the CMP report in prescribed format for the third quarter of 2015-16 (Oct to Dec 2015) to CEA under intimation SLDC.

10.2 Status of Physical & Cyber Security in Power Sector regarding: Chairman OCC informed that the Status of physical & cyber security in Power Sector for the third quarter (Oct to Sep 15) is not received from any of the state utilities. In the past also this report is not being furnished by any of the state utilities despite constantly pursuing the same by SLDC in OCC meetings and also through correspondence.

Chairman OCC requested the state entities including MPPTCL SCADA to furnish the Status of physical & cyber security in Power Sector for third quarter (Oct to Dec 2015) directly to the Chief Engineer (GM), CEA New Delhi under intimation to SLDC Jabalpur and WRPC Mumbai.

ITEM NO.11: AVAILABILITY BASED TARIFF (ABT) RELATED ISSUES:

11.1 Non receipt of complete ABT meter data through AMR system installed at SLDC:

SLDC representative informed that complete data of ABT meters installed at interface points are not being downloaded through AMR system mainly due to connectivity / alignment problem of optical cable, network problem or modem not installed or due to some other problem. He also apprised the Committee about the status of data received through AMR in the month of Jan'16 as under –

Status of missing data	Missing Data Reported	Data Received	Data not received / Assessed
Monthly missing data	86	52	100
List of newly commissioned substations / HT Consumers where modem not installed	66		
Partial missing data	30	14	16
Total	182	66	116

He further informed that SLDC do not receive missing load survey data from SE(T&C) Ujjain and SE(T&C) Gwalior whereas partial data is received from SE(T&C) Bhopal, Jabalpur, Indore, Sagar, Bina & Satna. The complete and timely data is received only from SE(T&C) 400KV Bhopal. He requested the MPPTCL to advise the field offices for furnishing the complete missing load survey data alongwith JMR data by 8th of every month.. Further following points are discussed and resolved as under –

- i. SLDC representative informed that M/s Secure Meters Ltd has furnished a list of 37 Nos interface points / meters whose data is not being read through AMR system due to different issues such as modem removed, meter defective / replaced etc. and requested MPPTCL to address the above issues immediately. MPPTCL informed that instructions have been issued to field offices for resolving the above issues.
- ii. SLDC representative informed that for providing AMR access to the concerned SE(T&C) offices for ensuring the communication status and data downloading of the meters, M/s Secure Meters Ltd. have informed that modems have been issued, but SIMs are not provided to SE(T&C) offices. MPPTCL informed that SIMs are arranged and are being issued to SE(T&C) offices.
- iii. SLDC representative informed that AMR facility is required at newly commissioned substation / Xmers / HT consumers / OACs / REGs around. 66 Nos. MPPTCL informed that modems have already been issued to field offices and SIMs are being issued for providing AMR facility on newly commissioned substation / Xmers / HT consumers / OACs / REGs.

11.2 Non reporting of details of newly installed meters, replaced meter & CT and change in polarity of ABT meter installed at interface points to SLDC:

SLDC representative informed that site officials are not reporting timely the details of the newly installed meters, replaced meters, change in CT ratio of meter and polarity change in meters installed at interface points to SLDC. He further informed that this may lead to incorrect data computation of the ABT meter installed at the interface points and may affect the accuracy of MP transmission loss computation and energy accounts of Discoms. MPPTCL assured that the instructions shall be issued to concerned site officials for furnishing the timely details of newly installed meters, replaced meters, change in CT ratio of meter and polarity change in meters installed at interface points to SLDC.

SLDC informed that the CE(T&C) office informs about the commissioning of new substation / transformer to SLDC but do not furnish the details of ABT meters installed, Xmers and SLDC has to collect the required details from substations / field offices which is a time consuming process. He requested the CE(T&C) office to furnish the details of Xmers (Sr. No.) and ABT Meter details such as Mtr Sr. No., Meter CT & PT Ratio, Equipment CT & PT ratio, MF while intimating the commissioning details and handed over the meter master format. CE(T&C) office assured to submit the same.

11.3 Scheduling of 200MW power from Ratnagiri Gas and Power Private Ltd (RGPPL) to Railway Traction Substations -

SLDC representative informed that scheduling of 200MW power from Ratnagiri Gas and Power Private Ltd (RGPPL) to Railway Traction Substations (TSS) in Madhya Pradesh has been commenced w.e.f 12 Hrs of 22nd January 2016. He further informed that scheduling of power is for the 29 Nos TSS points which are directly connected to TRANSCO substations except 132KV Mungawali Rly Traction which has been recently tapped on 30-12-2015 and scheduling for balance 7 Nos tapped feeders shall be commence only after installation of ABT meters at TSS. SLDC also informed that energy accounting & DSM charges have been computed for the Railways for the month of Jan 2016 and DSM Bills have been issued.

The Chairman OCC stated that scheduling of power to Railways has been commenced as per the directives issued by Hon'able CERC vide order dated 05-11-2015 in petition no. 197/MP/2015 treating Railway as a deemed licensee. He further requested MPPTCL to install ABT meters on priority basis on the tapped feeders and sign Bulk Power Transmission Agreement (BPTA) with Railways.

11.4 Providing AMR facility for the ABT meters installed at MPPGCL :

SLDC representative informed that ISP & OSP has already provided the AMR facility and data is being successfully downloaded through AMR system. He further informed about the status of data received from MPPGCL stations – i) SGTPS – Full data is being received. ii) Madikheda HPS – 4 Meters read out of 5 Nos. iii) AMK TPS – 10 Meters read out of 50. iv) Other Stations are not being read through AMR. He also informed that SLDC is not receiving the replaced meter details from the power stations therefore it is difficult to check the status of AMR of MPPGCL stations. MPPGCL representative informed that AMR facility has been provided on all the meters installed at the power stations.

Chairman OCC advise the MPPGCL & SLDC representative to jointly verify the status of AMR of MPPGCL stations at SLDC.

11.5 Suspension of energy accounting of RE generators due to non- compliance of regulatory requirement:

The Chairman OCC stated that Renewable Energy Generating Stations shall have to comply the regulatory requirements before getting commissioned and injecting power into the grid. The regulatory requirements to be complied by the RE generators are available at SLDC website. He further stated that SLDC was pursuing the matter with RE generators for providing telemetry since 2013, however, no action for compliance of regulatory requirements, has been taken by some of the RE generators / Developers and accordingly notices were served to RE Generators / Developers by SLDC for providing telemetry facility and cut-off date "31st Jan 2016" was given to provide the telemetry facility and it was also made clear that energy accounting of RE Generators / Developers who would not comply regulatory requirement within the cut-off date, shall be suspended. After issuance of notices, some of the RE generators / Developers have provided the telemetry facility and data is being received successfully at SLDC for grid operation. However, some RE generators / Developers have not provided the telemetry facility even after lapse of cut-off date i.e. 31st Jan 2016. As such, SLDC has suspended the energy accounting of 37 RE Pooling Stations of 12 No.

Developers who had not provided telemetry facility upto Jan 2016. The suspension of energy accounting of the defaulting RE generators/ Developers was done in the monthly State Energy Account issued by SLDC for the month of Jan 2016.

The Chairman OCC quoted the reference of 20 MW M/s Globus Power & Steel Pvt Ltd connected at 33KV level and commissioned by the West Discoms without the permission of SLDC. He further requested the Discoms to not allow the commissioning of RE generators connected at 33KV level without the permission of SLDC in future.

11.6 Energy Accounting of Renewable Energy Generators (REGs) connected at 33KV as per the data recorded in ABT meter installed at the pooling station:

SLDC representative informed that it was discussed and decided in the 45th OCC meeting, that energy accounting of Renewable Energy Generators (REGs) shall be done as per the actual data recorded in ABT meters installed at the pooling station. He further informed that SLDC has started the accounting of REGs connected at 132KV level and above as per the actual data recorded in ABT meters installed at the pooling stations w.e.f. April 2015 and for REGs connected at 33KV level, SLDC has requested the commercial sections of Discoms to furnish the meter, modem & SIM details and % of energy purchased by MPPMCL and % of energy wheeled to Discoms for configuration at SLDC, however, Central & West Discom has furnished the generator wise meter, modem & SIM details whereas SLDC has requested to furnish the pooling station wise meter, modem & SIM details and also % of energy purchased by MPPMCL and % of energy wheeled to Discoms for the purpose of energy accounting at pooling station. He further clarified that in the absence of desired information from Discoms, the energy accounting of the REGs connected at 33KV pooling station could not be started and again requested the West & Central Discoms to furnish the following information on priority basis and handed over the missing information details to Discoms representatives.

- i. The details of ABT meters installed at the pooling station alongwith modem and SIM details for integrating with AMR system of SLDC.
- ii. The pooling station and meter wise details of the % of energy purchased by MPPMCL and % of energy wheeled to Discoms.

ITEM NO 12: SCADA/EMS RELATED ISSUES:

12.1 DECISION OF HONORABLE CERC IN PETITION NO. 007/SM/2014 REGARDING ESTABLISHMENT AND MAINTENANCE OF TELEMETRY

It was informed by SLDC that the CERC in petition No. 007/SM/2014 regarding establishment & maintenance of telemetry has issued an order dated 29.1.2016 . The gist of the order is as given here-under:-

(i) It is the responsibility of all users, STUs and CTU to provide systems to telemeter power system parameters in line with interface requirements and other guideline made available by RLDC and associated communication system to facilitate data flow up to appropriate data collection point on CTUs system. Telemetry of on-line operational data is not only essential for effective monitoring of grid but also forms key input for effective running of State estimation and other EMS tools at RLDC and SLDCs, which are essential for reliable and secure operation of the grid. In view of the critical importance of telemetry and associated communication system for ensuring reliability in operation of the grid and optimum utilization of the transmission system, there is an imperative need for all users to establish the telemetry and associated communication system in time bound manner so that the power system operation may be most reliable and optimum. Moreover, in view of the requirement of communication system for a generating station and sub-station, the planning should be done in advance by the generating company and transmission licensee to ensure that necessary system are in place before commissioning of generating station or sub-station to take care of the communication requirements even at the time of injection of power in firm by a generating station and sub-station during testing.

(ii) We further direct all the utilities/generating companies which have to still establish telemeter power system parameters as per details given in para 11 above to provide data to RLDCs / SLDCs as per the provisions of the Grid Code and CEA Grid Standards Regulations by 31.7.2016. If the utilities/generating companies do not comply with our directions, it will be construed as non-compliance of the order of the Commission and appropriate proceedings under Section 142 of the Electricity Act, 2003 shall be initiated against such utilities/generating companies. NLDC is directed to submit user- wise latest status of telemetry, by 31.8.2016.

It was categorically informed by SLDC that In view of the CERC decision, the telemetry of every new grid elements (all elements upto 220KV S/s and 132KV s/s having inter Discom/inter regional feeders/injection from renewable generating stations is required to be ensured before issue of charging code by SLDC. All members noted and agreed for the same.

12.2 NON AVAILABILITY OF TELEMETRY OF IMPORTANT 132KV S/s HAVING INJECTION FROM RENEWABLES/CAPTIVE POWER PLANTS OR HAVING INTERDISCOM FEEDERS -

It was informed by SLDC that the telemetry of new 220KV S/s, important 132KV S/s having injection from renewable generating Stations, and Captive Power Plant, is to be provided through Dongfeng RTUS installed and commissioned under MPPTCL SCADA project. Total 50 Nos. Sub Stations as mentioned in enclosed annecure-1 has already been identified and forwarded to MPPTCL for arranging integration of telemetry. Two number special meetings of MPPTCL filed officers/T&C officers has already been held at SLDC Jabalpur regarding integration issues.

The telemetry of these identified 50 Nos S/s is urgently required for monitoring of grid. However, the progress is very slow. Accordingly, it was decided that separate meetings at Indore, Bhopal and Jabalpur shall be held in this regard so that commissioning activity may be expedited.

12.3 ARRANGEMENT OF TELEMETRY REQUIRED FOR KUMBH MELA AT UJJAIN: -

It was informed by SLDC that for ensuing Kumbh Mela scheduled to be held at Ujjain in April 2016, WRLDC has prepared a Contingency plan and essential telemetry requirement for grid monitoring during the Kumbh Mela. As per contingency plan prepared by WRLDC telemetry of nine number S/s is required at SLDC for grid monitoring during Kumbh Mela. It was informed by T&C representative that telemetry of eight Sub Stations namely 132KV Depalpur, 132KV Dewas BNP, 132KV Ghosla ,132KV Bherugarh, 132KV Ratadia, 132KV Sanwer, 132KV Makshi is completed & telemetry of 132KV Ingoria and 132KV Agar is under progress. SLDC requested to complete the commissioning of telemetry of balance sub stations.

Further it was also informed by SLDC that the telemetry of balance transformers at 220KV S/S Ratlam, 220 KV S/S Rajgarh, 220 KV S/S Pithampur, 220 KV S/S Nepa Nagar, 220 KV S/S Barwahan, 132 KV S/S Indore (Chambal), is also required to be integrated before Kumbh Mela. MPPTCL representative agreed to complete the same on priority basis.

12.4 PRESENT STATUS OF PROCUREENT OF RTUs BY MPPGCL:-

SLDC informed that the Telemetry of Rajghat HPS is out since LAST TWO YEARS & telemetry of Bansagar-III is out since last four months . Further, the matter of procurement of RTU for Rajghat HPS and Bansgar III HPS was discussed in detail in last fourteen OCCM meetings as well as on two number special telemetry meetings, without any conclusive result In response, MPPGCL informed that the re-tendering of RTU procurement case is done and bids are scheduled for opening on 14th March 2016. SLDC requested to expedite the procurement.

12.5 THE ARRANGEMENT OF DATA CHANNEL FOR REMOTE VDU INSTALLED AT CENTROL DISCOM CONTROL ROOM /MPPCL OFFICE AND STATUS OF LAYING OF ADSS CABLE UPTO MPPMCL OFFICE.

It was informed by SLDC that the remote VDU from new SCADA /EMS system is successfully commissioned at East & West DISCOM Control room, GCC Jabalpur and MPPMCL CR at Jabalpur. The commissioning of remote VDU at CZ control room is pending for want of 2 mbps link. In last meeting CZ officials confirm to arrange the link by end of January. In response, Central DISCOM officers informed that the link shall be available by next fifteen days.

The matter of fibre optical connectivity upto MPPMCL office at Arera colony is also discussed and SLDC informed that the optical fibre connectivity from backup SLDC to MPPMCL office at Arera colony is required to be extended for which wide band node equipment and DC power supply is arranged under

Master telecom plan of WR while ADSS cable laying is to be arranged by MPPMCL. The MPPMCL officers informed that the progress in the matter shall be informed separately.

12.6 LONG OUTAGE OF RTUS, PROBLEM IN DATA AND VOICE CHANNELS

The long outage of telemetry of following S/s is discussed in detail :-

Sl No.	Name of Sub Station	Out from /Remark
01	Rajghat HPS	Out from last two years, procurement is under progress by MPPGCL
01	Bansagar III	Out since Last six Months, comm. Channel issue
02	132KV Morwa S/s	More then one and half Year
03	220KV Sagar	Restored
04	132KV Waidhan	Around three months
05	220KV Anuppur S/s	Intermittent
06	220KV Sidhi	From last three months
07	220 KV Chichli	Despite constant pursuance only analog values is available. (persued from last one year).MPPTCL informed to verify the configuration at both ends to sort out the issue.
08	220KV Katni	Restored

SLDC requested to look into the above outages and expedite the restoration procedure for which concern officers agreed.

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

SLDC informed that the commissioning of new SCADA,EMS system is under progress and for successful implementation of EMS system the availability of complete telemetry including CB status is a prerequisite. Hence the work regarding telemetry discrepancy is to be taken up on highest priority. SLDC further informed that during the special meeting held at SLDC on 24th August 2015, it was already agreed that the corrective action regarding STATUS telemetry which is essential for EMS functioning shall be completed by 31st October 2015, however the same is not completed. In response, MPPTCL officers requested to discuss the matter station wise , in the proposed site meeting at Bhopal, Indore and Jabalpur.

10.8 ARRANGEMENT OF NECESSARY SPACE, AIRCONDITIONING AND POWER SUPPLY, PLCC EQUIPMENTS FOR INSTALLATION OF WIDE BAND EQUIPMENTS & FOR HOT LINE PABX:-

It was informed by SLDC that under Master telecom Plan of WR and URTDSM project, replacement of existing wideband equipments are proposed for replacement and new wideband equipments are proposed to be installed at new locations.. For commissioning of these equipments, necessary space, air-conditioning and DC Power supply arrangement for all locations covered under master telecom project as well as in URTDSM project is required to be made by concern utilities. The same was requested in several OCCM

meetings. However, recently while commissioning of wideband equipments by M/s Tejas, it was observed that the proper air conditioning environment is not available at 400KV Nagda, & the commissioning of wideband node at 220KV Barwaha got delayed due to non-availability of space at S/s. Accordingly, it is necessary to identify and mark the space required for wideband locations so that delay in commissioning of equipments may be avoided. MPPTCL and MPPGCL representative agreed to initiate necessary action in the matter.

12.9 COMMISSIONING OF COMMUNICATION CHANNELS FOR DUAL REPORTING OF RTUS AS PER BACKUP SLDC REQUIREMENT:-

It was informed by SLDC that the commissioning of SCADA/EMS system at SLDC Jabalpur and backup SLDC Bhopal is already in advance stage and the additional communication channel is required to be extended to respective control centre's for testing with new SCADA/EMS system. The RTU wise progress is required to be provided by MPPTCL & MPPGCL. Further, the wideband node at SGTPS is commissioned but RTU channel for SGTPS, ATPS, Birsingpur S/s is required to be shifted to wideband node. Similarly, after commissioning of wideband node at 400KV S/s Nagda, the PLCC channel from Nagda 400KV S/s is decommissioned while functioning of both wideband and PLCC channel is required to be ensured. MPPTCL and MPPGCL officers agreed to initiate necessary action in the matter on top most priority.

12.10 Telemetry of railway TSS Sub Stations:-

The matter could not be discussed due to non-availability of railway representative during the OCCM meeting.

ITEM No 13 : DATE AND VENUE OF NEXT OCC MEETING :

It is proposed to hold 51st OCC meeting of Operation and Coordination Committee of MP on 26.04.2016 at Jabalpur.

LIST OF PARTICIPANTS OF OOC MEETING OF M.P HELD AT OMKARESHWAR HPS ON 27.02.2016

Sr. No.	Name of Participants	Designation	Office	Telephone No.	Sign	Email Address
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