

EASTERN REGIONAL POWER COMMITTEE

14, GOLF CLUB ROAD, TOLLYGUNGE
KOLKATA-700033

MINUTES OF 47th OCC MEETING HELD AT ERPC, KOLKATA ON 11.02.2010 (THURSDAY) AT 11:00 HRS

Sh. A. K. Rampal, Member Secretary, ERPC chaired the meeting. List of participants is at Annexure-I.

MS, ERPC welcomed the participants to the 47th OCC meeting. He informed that frequency profile during the month of January'10 was relatively comfortable. He suggested developing a system to monitor the implementation of decisions taken at various levels viz. RPC meeting/ OCC meeting. Therefore, he proposed to review the follow-up actions on the following decisions taken in 12th ERPC meeting held on 04.12.09:

- ✓ *The constitution of a committee to look into issues concerning coal allocation between Talcher Stage-I and Stage-II TPS: The issue was placed as an agenda.*
- ✓ *To invite two representatives of appropriate level from Railways in ERPC meetings: As a follow up, ERPC Secretariat requested all thermal generating stations in Eastern region to provide information on coal supply companies and zonal railway network being used for supplying coal to the station so that appropriate persons from coal suppliers and railways could be invited in the ERPC meeting. However, only IB TPS and Talcher STPS, NTPC had supplied the information. He requested rest of the thermal stations to get the above information sent to ERPC Secretariat on urgent basis.*

Then agenda items were taken up one by one.

ITEM NO. 1: CONFIRMATION OF MINUTES OF 46th OCC MEETING OF ERPC HELD AT ERPC, KOLKATA ON 12.01.2010

The minutes were circulated vide letter no. ERPC/SE(OPRN)/OPERATION/2010/2132-81 dated 19.01.2010 to all the constituents and no observation was received.

Members may kindly confirm the minutes.

Deliberation in the meeting

At the outset, SE(O), ERPC informed about a typographical error in the fourth line of deliberation under item no. 3 i.e. "Review of Grid performance during December'09", and stated that the phrase "below 48.5 Hz" may be read as "below 49.5 Hz".

With this amendment, members confirmed the minutes of 46th OCC meeting.

ITEM NO. 2: ACTION TAKEN ON DECISIONS OF EARLIER MEETING

2.1 LILO OF 220 KV JODA-JAMSHEDPUR LINE AT JINDAL BUS

As follow-up of discussions in 45th OCC meeting, a meeting was held on 30/12/09 at ERPC among DVC, OPTCL, ERPC and ERLDC to discuss the above issue. In the meeting, it was agreed that till construction of 220/132KV Lohanda S/s is completed, as an interim measure, 220 kV Joda-Jamshedpur would be LILOed at Jindal bus (JSPL) subject to following activities be complied with before energizing the LILO:

- a. 220KV Joda-JSPL would be considered as an ISTS tie-line between DVC and OPTCL. Accordingly, ABT compliant meter at JSPL side for the above line is to be installed within a week.
- b. OPTCL would ensure suitable arrangement for getting the JSPL end meter read and communicating the same to ERLDC for energy accounting purposes.
- c. Protection co-ordination of JSPL-Jamshedpur line at both ends to be carried out.
- d. Adequate voice communication between JSPL and Jamshedpur to be also set up.

OPTCL was further requested to take care of the following:

- a. OPTCL shall adhere to operational modalities of Grid and take requisite permissions from RLDCs/SLDCs.
- b. OPTCL may provide synchronization facility at JSPL Bus.
- c. OPTCL may initiate action for installation of RTU at JSPL for telemetry of real time data.

Subsequently, PGCIL installed an ABT compliance meter at Jindal end of proposed 220 kV Jindal-Jamshedpur line segment on 09.01.10. Finally, LILO of 220 kV Joda-Jamshedpur at Jindal was charged and synchronized for the first time at 20:27Hrs of 25/01/10.

Concerned members may kindly confirm.

Deliberation in the meeting

Members noted the action taken in this regard by respective parties. Representative of OPTCL informed that synchronization facility and RTU at JSPL bus would be available by February'10. It was confirmed that energy meter data from JSPL is being sent to ERLDC for energy accounting purposes.

2.2 OPERATIONALISATION OF BALIMELA-UPPER SILERU LINE

In the 46th OCC meeting held on 12.01.10, representative from OPTCL intimated that line patrolling work would be taken up shortly and would be completed by 31st January'10 and it was agreed that the proposed meeting for energizing 220 kV Balimela-Upper Sileru line would be convened after completion of line patrolling work subject to confirmation of healthiness of line equipment by OPTCL.

OPTCL may kindly intimate the status of line patrolling work.

Deliberation in the meeting

Representative from OPTCL informed that out of 85 towers, 25 tower members were found lost. Representative from OPTCL expressed his concern that though ownership of Balimela-Upper Sileru line is not with OPTCL, still OPTCL maintains the line. He was also concerned as to who is going to bear the maintenance charge. In this regard, MS, ERPC opined that the owner of line is to bear the maintenance charges to OPTCL.

2.3 IMPLEMENTATION OF FREE GOVERNOR MODE OF OPERATION OF GENERATING UNITS

In the 46th OCC meeting held on 12.01.10, members were requested to take note of target implement date of FGMO/RGMO and stations, which are not ready for such operation, were requested to seek permission from CERC.

In this regard, representative from ERLDC suggested that like other regions, Eastern Region might undertake a mock FGMO exercise of its generating stations preferably before 1st March'09 (the deadline set in CERC order), and members agreed with this proposal. It was decided that each generating company would furnish unit-wise date by which it would be ready to participate in the mock exercise to ERPC and ERLDC by 28th January 2010 and ERLDC would decide the date for mock exercise accordingly.

Since then, response has been received from Teesta HEP, NHPC and OHPC. While Teesta HEP has conveyed their willingness to participate in the mock drill, OHPC has shared their constraints in implementing FGMO/RGMO.

Subsequently, ERLDC has communicated vide their letter no. ERLDC/OS/2010 dated 01.02.10 that mock FGMO exercise may be undertaken on 16.02.10, from 1000 hrs to 1300 hrs. They have requested all concerned generating stations to confirm participation of their relevant units in the mock exercise and the type of governor control (software/hardware).

Generating stations may confirm their participation in the mock FGMO exercise and share constraints in implementing FGMO, if any.

Deliberation in the meeting

Members noted that mock FGMO exercise would be undertaken on 16.02.10. Responses of generating stations regarding their participation in the mock FGMO exercise are given below:

NTPC	<i>Target implementation date for FGMO of Farakka is 01.06.10, as they have hardware type governor system. In case of Farakka, one 210 MW unit will be put in mock exercise. All units of Stage-I of Kahalgaon STPS and Talcher Stage-I will also be put into mock FGMO</i>
DVC	<i>Unit 4& 5 of Mejia will be put into mock FGMO</i>

CESC	<i>Budge-Budge units will be put into mock FGMO</i>
NHPC	<i>Rangit and Teesta units will put into mock FGMO</i>
DPL	<i>U#7 (300 MW) will participate in FGMO</i>
WBPDCCL	<i>Old stations like Kolaghat, Bandel have some problems in implementation of FGMO. However new units from Bakreswar and Sagardighi will participate in FGMO.</i>

Representative from ERLDC made a presentation on the issue. He requested generation companies to put maximum numbers of hydro units during mock FGMO. In this regard, he requested OPTCL to pursue with OHPC for putting at least 3 units of Balimela HEP and 3 units of Indravati HEP in mock FGMO. He also requested generating stations to intimate their governor type and units ready to participate in mock FGMO by 15.02.10.

On this issue, representative from OPTCL pointed out that OERC is contemplating raising the UFR frequency to above 49.0 Hz and proposed to raise UFR setting of Eastern Region in line with that. Representative from ERLDC suggested that the proposal for raising the UFR frequency could be discussed in subsequent meetings keeping in mind the changed dynamics of ER grid.

2.4 MOCK BLACKSTART EXERCISES IN EASTERN REGION

In the 46th OCC meeting held on 12.01.10, it was agreed that mock black start exercise of Teesta HEP and 2nd mock black start exercise of Maithon HEP would be held tentatively in the 2nd week of February 2010.

ERLDC vide letter dated 05/02/10 has forwarded details of segregation of load and switching actions to be carried out in process of implementation of mock black start exercise of Teesta units. The date of mock exercise for Teesta has been tentatively fixed in the first half of March'10.

ERLDC may like to share the sequence of events to be carried out during mock start exercise of Teesta HEP with the members and DVC may like to indicate the schedule for mock start exercise of Maithon HEP.

Deliberation in the meeting

Representative from ERLDC briefly mentioned about various activities (Annexure-II) involved with mock black start operation of Teesta HEP. He requested WBSETCL/WBSEDCL to furnish their comments on switching arrangement being made by ERLDC for providing around 100 MW radial load at Binaguri for facilitating mock black start operation of Teesta HEP. Representative from WBSETCL agreed to shortly give their views to ERLDC.

Representative from ERLDC also mentioned that in anticipation of voltage problems during radial operation of Teesta HEP with around 100 MW load, they had requested PGCIL to extend support of their reactors, if needed.

Members decided that the exact date for mock black start exercise would be decided by ERLDC in consultation with WBSETCL, WBSEDCL and Teesta HEP and would be communicated to all OCC members.

Representative from DVC suggested that 2nd mock black start exercise be carried out in the 2nd week of March'10. Members agreed to this and decided that exact date would be finalized by DVC in consultation with ERLDC.

2.5 MODIFICATION OF CT RATIOS OF 400KV LINES IN ER

The above issue was discussed in the 45th OCC meeting, wherein it was mentioned that telemetry of several 400 kV lines had got clipped during tripping of 765 kV Bina-Gwalior (charged at 400KV) on 28/11/09, when a large quantum of power flowing from WR to NR was diverted via WR-ER-NR path. Such high loadings of 400 kV lines in ER have also occurred during shutdown of 400 kV lines in ER Grid.

In view of above, in the 45th OCC meeting, ERLDC had requested PGCIL to take necessary steps for modification of CT ratios at places where they are presently set at 1000/1. It is felt that CT ratios, wherever feasible, may be changed to a value higher than 1000/1 i.e 2000/1. The above changes in CT ratios would prevent clipping of telemeter data for line currents upto 2000A. All changes are to be done with intimation to ERLDC before/after changes, as reading of ABT compliant energy meters would be affected.

PGCIL may share its remedial action and experiences.

Deliberation in the meeting

Representative from ERLDC informed that clipping of telemeter data was noticed during tripping of 765 kV Bina-Gwalior line on 28.11.09 and list of lines which recorded clipping of data were also identified. Representative from PGCIL informed that new lines are constructed with 2000/1 CT ratio, and action in regard to changing the CT ratio for identified lines was under progress. He further informed CT ratio of Jeypore -Gazuwka line was changed from 1000/1 to 2001/1. In this regard, it was noted that each circuit of Jeypore-Gazuwka line would be adequately loaded on 11.02.10 for half an hour (flow through the gate would be restricted to 850 MW) to ascertain desired effect of changes in CT ratio on clipping of telemeter data.

2.6 PROCUREMENT OF TWO NOS OF 315 MVA, 400/220 KV AUTOTRANSFORMER AND ONE NO OF 50 MVAR SHUNT REACTOR AS O&M SPARE

The above issue was discussed in the 46th OCC meeting held on 12.01.10. In the meeting PGCIL proposed for procurement of two number of 315 MVA, 400/220 Autotransformer and one no 50 MVAR shunt reactor at strategic location so that in case of any failure fast restoration is assured.

After deliberation, PGCIL was advised to submit detailed report justifying the need for such transformers on the basis of their operational experience, failure rate of existing transformers, the number of transformer envisaged, the cost of such transformer and how it would yield benefits. It should also explore the possibility of including within the same proposal the requirement of constituents

also. It was also decided that PGCIL will co-ordinate with constituents and get a copy of this report sent to the constituents for their perusal, so that they are fully aware of the usefulness. Thereafter, the issue could be taken up in the next OCC meeting.

Subsequently, as per discussion in Member Secretary's chamber with PGCIL representatives on 18.01.10, PGCIL was intimated the details of 315 MVA, 400/220 kV ICT of ER constituent States vide FAX message dated 28.01.10.

PGCIL may share latest status in the matter.

Deliberation in the meeting

PGCIL had circulated a report on the above issue to all the constituent states vide its letter dated 08.02.10 and copy of the same was also circulated among the beneficiary States during the meeting. Representative from BSEB, WBSETCL and OPTCL intimated that they would communicate their views in due course. Representative from OPTCL suggested that the above mentioned spare 3phase Auto-transformers be allowed to be used by constituent states on commercially agreeable terms and conditions. Representative from PGCIL did not agree to his proposal. MS, ERPC advised that it not a stage to disagree.

It was decided that a meeting with representative from transmission licensees of constituent states would be held separately before the next OCC so that issues/clarifications, if any, from the constituents may be deliberated and a final decision may be taken in the next OCC meeting.

2.7 CONSTITUTION OF A COMMITTEE TO LOOK INTO ISSUES PERTAINING TO GENERATION FROM TALCHER STPS STAGE I & II

In the 12th ERPC meeting held on 04.12.09, constituent members had expressed their apprehensions that Talcher STPS stage II is being allocated more coal than stage-I and stage I coal is diverted by NTPC to stage-II with an intent to earn higher revenue. To remove their doubts, it was decided that a Committee will be constituted comprising of Director (Commercial), GRIDCO, Member Secretary, ERPC, Executive Director (TSTPS), NTPC and one officer of Talcher STPS.

As a follow up, ERPC constituted the Committee vide its letter dated 01.01.10.

NTPC may share the progress in the matter.

Deliberation in the meeting

Concerned representative of NTPC from Bhubaneswar was on his way and shall apprise the Member Secretary, ERPC after the meeting.

2.8 LAND ACQUISITION BY PGCIL IN JAMSHEDPUR FOR BAY EXTENSION

PGCIL vide its letter no. E/PT/OS/ dated 01.09.09 had informed ERPC that for construction of Jamshedpur S/s, Adityapur Industrial Area Development Authority (AIADA) allotted 116.25 acres of land to POWERGRID near Village: Ramchandrapur, P.O.: Gamharia, Dist.: Saraikela-Kharsawa, Jharkhand. Out

of total 116.25 acres, only 55.0 acres of land is in actual possession of POWERGRID and balance 61.25 acres of land is yet to be handed over to POWERGRID by AIADA. While exploring the augmentation of ICT capacity at Jamshedpur in the 11th ERPC meeting held at Raichak on 29.08.09, non-availability of land was forwarded as a main constraint in the bay extension of existing 400/220 kV S/s at Jamshedpur.

PGCIL had approached ERPC Secretariat to pursue the matter with Jharkhand Govt. Member Secretary, ERPC vide its DO letter dated 16th October 2009 requested Secretary (Energy), Govt of Jharkhand to direct the concerned department to get the handing over of the possession of balance 61.25 acres of land to PGCIL.

PGCIL may apprise the latest status.

Deliberation in the meeting

Representative from PGCIL intimated that possession of balance land is yet to be given to PGCIL. A meeting was held on 04.02.10 with Chief Secretary (Revenue), Govt. of Jharkhand , Secretary (Energy), Govt of Jharkhand and MD, AIDIA and the next follow up meeting would be held in 3rd week of February 2010 at Jamshedpur.

MS, ERPC requested PGCIL to intimate the outcome of the said meeting to ERPC secretariat and shared with all constituents to ensure that the Secretariat is apprised on the progress/status of all issues in which ERPC is a party.

ITEM NO. 3: DECLARING OF PEAK HOURS FOR SCHEDULING PURPOSES UNDER FUEL SHORTAGE CONDITIONS --- ERLDC

For purposes of scheduling under fuel shortage conditions prior declaration of peak hours needs to be done on a month ahead basis. Considering advancement of Sunset timings, it is proposed that peak Hours for the month of March'10 may be considered from 1800 hrs to 2100 hrs.

Members may deliberate & confirm.

Deliberation in the meeting

Members agreed that peak Hours for the month of March'10 would be considered from 1800 hrs to 2100 hrs.

ITEM NO. 4: OPERATIONAL PLANNING

(A) ANTICIPATED POWER SUPPLY POSITION FOR THE MONTH OF FEBRUARY'10 AND MARCH'10

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the months of February'10 and March'10 were prepared by ERPC Secretariat on the basis of finalized LGBR for 2009-10, keeping in view that the units are available for generation and expected load growth etc. The details are shown at **Annexure- III.**

Members may kindly note.

Deliberation in the meeting

Members confirmed the anticipated power supply position of February'10 and March'10.

(B) MAJOR GENERATING UNIT AND TRANSMISSION LINES/ELEMENTS OUTAGES IN ER GRID

Following elements are out for more than one month.

- i. Tenughat Unit#2 (210 MW)
- ii. 400 kV Malda-Purnea D/C (One circuit restored on ERS)
- iii. 220 kV Meramundali-Bhanjanagar D/C (One circuit restored on ERS)
- iv. 80MVAR Line Reactor of 400KV Ranchi-Sipat-I at Ranchi end
- v. 50MVAR Line Reactor of 400KV KhSTPP-Maithon-II at Maithon end

Concerned constituents may share the latest status on outage of above elements.

Deliberation in the meeting

Status of the elements is as under:

<i>Sl.No.</i>	<i>Element</i>	<i>Status</i>
1	Tenughat Unit#2 (210 MW)	<i>Unit would be restored by 2nd week of March'10.</i>
2	400 kV Malda-Purnea D/C	<i>Circuits on normal tower are expected by May'10.</i>
3	220 kV Meramundali-Bhanjanagar D/C	<i>One circuit already restored through ERS. It was decided to reroute a portion of the above line. The line is expected by February'10.</i>
4	80MVAR Line Reactor of 400KV Ranchi-Sipat-I at Ranchi end	<i>The element is expected by March'10.</i>
5	50MVAR Line Reactor of 400KV KhSTPP-Maithon-II at Maithon end	<i>The element is expected by June'11.</i>

(C) SHUTDOWN PROPOSAL OF TRANSMISSION LINES AND GENERATING UNITS FOR THE MONTH OF MARCH'10.

The shut down proposals which are received by ERPC for the month of March'10 are placed for discussion.

Members may please discuss and finalize the proposed programme.

Deliberation in the meeting

The approved shutdown programme is at Annexure IV.

(D) SCHEDULING OF CHPC/TALA DURING WINTER MONTHS --- ERLDC

Presently 400 kV Tala-Malbase-Binaguri section is kept open due to CB problem at Tala end. Under above conditions, Malbase load is met partly from Birpara. Consequently, it has been observed that there has been net export from Birpara to CHPC on a daily basis and over the month.

BPC may comment regarding declaration of availability and scheduling of Tala/CHPC under above conditions.

Deliberation in the meeting

Representative from ERLDC stated that during the lean period, generation from Tala and Chukha HEP reduces drastically. However, load at Malbase is also increasing. Under these circumstances, in future it may happen that receipt from Tala and Chukha HEP after accounting for Malbase load may become negative, in which case scheduling and commercial adjustment may become difficult. He expressed that the issue might be flagged well in advance. Representative from BPC was not present; however representative from Chukha HEP agreed to convey the concern to appropriate authority.

Representative from Chukha requested members to allow opening of one circuit of Chukha-Birpara lines to control overvoltage. Members agreed that one direct circuit between Chukha -Birpara might be opened to control over voltage.

(E) STATUS OF COMMISSIONING OF NEW UNITS IN EASTERN REGION DURING 2009-10 AND 2010-11

Name of the Power Project	State (Agency)	Unit no	Capacity MW	Schedule Year Commissioning	Actual Commissioning /synchronisation
(1)	(2)	(3)	(4)	(5)	(6)
Bakreswar TPS	WB (WBPDCL)	Unit#5	210	2009-10	07.06.09
Budge-Budge TPS-III	WB (CESC)	Unit#3	250	2009-10	12.07.09
Kahalgaon Stage-II TPS	Bihar (NTPC)	Unit#7	500	2009-10	31.07.09
Mejia Phase-II TPS	WB (DVC)	Unit#1 Unit#2	250 250	2009-10 2010-11	March-10 July-10
Chandrapura TPS	Jhar (DVC)	Unit#7 Unit#8	250 250	2009-10 2009-10	04.11.09 Dec-10
Teesta Low Dam-III HEP	WB (NHPC)	4 units	4x33	2010-11	-----
Farakka Stage-III TPS	WB (NTPC)	Unit#6	500	2010-11	Feb-11
Kodarma TPS	Jhar (DVC)	2 units	2x500	2010-11	-----

Durgapur Steel TPS	WB (DVC)	2 units	2x500	2010-11	-----
Santaldih TPS	WB (WBDCL)	Unit#6	250	2010-11	<i>Dec-10</i>
Chujachen HEP	Sikkim (GATI)	2 units	99	2010-11	-----
Maithon RBC JV TPS	Jhar (IPP)	Unit#1	525	2010-11	-----
Sterlite TPP	Orissa (Sterlite Energy)	4 units	4x600	2010-11	<i>June-10</i>

Members may like to add/update the present status.

Deliberation in the meeting

Updated status was mentioned under column 6 of the above table in italics. Respective generating companies, in respect of which, information was not available were requested to furnish the present status by February'10.

(F) STATUS OF COMMISSIONING OF NEW LINES IN EASTERN REGION

Transmission system associated with Barh gen project(3x660MW):

- 1) LILO of KhSTPP-Patna-II at Barh
- 2) 400KV Barh-Balia D/c(Quad)

East West Corridor strengthening scheme-I

- 1) 400 kV Ranchi-Rourkela D/C

Transmission system associated with Mejia Unit5 & 6

- 1) 220 kV Mejia-Ramgarh via Gola D/C

Transmission system associated with CTPS Unit#7 & #8

- 1)LILO of 220 kV CTPS-Kalyneshwari at Dhanbad
- 2)220 kV Dhanbad-Giridh
- 3)220 kV Giridh -Koderma
- 4)220 kV CTPS-Pithakari(PG) bypassing Kalyneshwari
- 5)220 kV LILO of CTPS-MTPS at Kalyneshwari & Ext. to Pithakari

Transmission system associated with Sagardighi

- 1)400 kV Sagardighi-Purulia D/C

Eastern region strengthening Scheme

- 1) 400 kV Durgapur-Jamshedpur 2nd circuit
- 2) 400 kV Jamshedpur-Baripada D/c
- 3) 400 kV Baripada-Mendhasal D/c
- 4) 400 kV Durgapur-Maithon D/C

Members are requested to furnish latest status of their respective assets.

Deliberation in the meeting

Status of the transmission elements is as under:

Sl. No	Transmission lines	Target date of completion
1	LILO of KhSTPP-Patna-II at Barh 400KV Barh-Balia D/c(Quad)	Commissioned in Oct'09 March-10
2	400 kV Ranchi-Rourkela D/C	March-10
3	220 kV Mejia-Ramgarh via Gola D/C	March-10
4	LILO of 220 kV CTPS-Kalyneshwari at Dhanbad 220 kV Dhanbad-Giridh 220 kV Giridh -Koderma 220 kV CTPS-Pithakari(PG) bypassing Kalyneshwari 220 kV LILO of CTPS-MTPS at Kalyneshwari & Ext. to Pithakari	Construction work is going on, tentative target is June'10
5	400 kV Sagardighi-Purulia D/C	June'10
6	400 kV Durgapur-Jamshedpur 2 nd circuit 400 kV Jamshedpur-Baripada D/c 400 kV Baripada-Mendhasal D/c 400 kV Durgapur-Maithon D/C	June'10 March'10 June'10 June'10

ITEM NO. 5: REVIEW OF GRID PERFORMANCE DURING JANUARY, 2010

(A) REVIEW OF OPERATIONAL STATISTICS OF GRID

Provisional power supply position, frequency, voltage profile, UFR operation, reservoir level and coal stock position is given in **Annexure-V(a)**.

ERLDC may kindly give a brief on performance of ER grid.

Deliberation in the meeting

Representative of ERLDC made a presentation on ER grid performance during January'10 (Copy at Annexure V(b)).

(B) IMPORTANT EVENTS

- i) LILO of 220 kV Joda-Jamshedpur at Jindal was charged and synchronized for the first time at 20:27Hrs of 25/01/10. It has been reported that presently, there are 2 nos 220/33KV, 63MVA ICTs at Jindal.
- ii) LILO of 400 kV Maithon-Jamshedpur-I at Mejia was charged and synchronized for the first time at 20:42 hrs of 29/01/10. One no. 400/11KV, 90MVA ICT has also been test charged.
- iii) 400 kV Meramundali-Mendhasal was charged at 17:08 hrs of 31/01/10 for the first time and 2x315MVA 400/220 kV ICTs at Mendhasal were also loaded with 110MW load of Chandaka at 18:56 Hrs.

Members may kindly note and OPTCL may present the network

configuration around the Mendhasal area after commissioning of the lines/ICTs.

Deliberation in the meeting

Members noted the above.

(C) GRID INCIDENCES IN ER SYSTEM DURING JANUARY 2010

Grid incidences in ER System during the month of JANUARY 2010 are placed for discussion.

Concerned constituents may kindly apprise the grid incidences.

Deliberation in the meeting

Deliberations on grid incidences are at Annexure-VI.

ITEM NO. 6: ANY OTHER POINTS

MS, ERPC shared with the house that Sh. L. K. Kanungo, GM, ERLDC would retire on 28th February 2010.

Meeting ended with thanks to the Chair.

ANNEXURE- IV

**Approved Programme of Maintenance Of Transmission Lines And Generating Units
for
MARCH'10**

(A) GENERATING UNITS:

Organization	Name of the Element	From		To		Remarks
		Date	Time hrs	Date	Time hrs	
NHPC	Rangit HEP, U#3	17.02.10	OCB	13.03.10	OCB	Annual Maintenance
NTPC	Farakka, U#4 (500 MW)	20.03.10	OCB	31.03.10	OCB	Overhauling/ Maintenance
CHUKHA HEP	Unit # II	01.03.10	OCB	27.03.10	OCB	Annual Maintenance
	Unit # I	12.03.10	OCB	30.04.10	OCB	Annual Maintenance

(B) TRANSMISSION ELEMENTS:

Organization	Name of the Element	From		To		Remarks
		Date	Time hrs	Date	Time hrs	
FARAKKA STPP, NTPC						
	400 kV Bus Reactor-I	09.03.10	0930	09.03.10	1630	Relay Testing
	400 kV Farakka-Malda-I					Deferred
	400/220 kV Auto Transformer	04.03.10	0930	04.03.10	1630	Relay Testing
KAHALGAON STPP, NTPC						
	400 kV Kahalgaon-Patna line -II	17.03.10	ODB	17.03.10	ODB	Preventive maintenance and testing
	132 kV Kahalgaon-Lalmatia line	24.03.10	ODB (1000)	24.03.10	ODB (1500)	
	132 kV Kahalgaon-Kahalgaon (BSEB)line	10.03.10	ODB (1000)	10.03.10	ODB (1500)	
NTPC						
	400 kV Barh-Kahalgaon line-2 and Barh-Patna line #2 simulataneously	22.02.10	ODB 0900	24.02.10	ODB 1700	For further erection and testing work
PGCIL						
	400 kV Maithon-Ranchi D/c 400 kV Maithon-Mejai 400 kV Maithon-Jamshedpur	2 days shutdown on ODB basis for construction work of 400 kV Maithon - Durgapur D/C line				Approved, however date to be fixed up by ERLDC in consultation with PGCIL/DVC

400 kV Binaguri-Tala ckt-1	03.03.10	ODB	03.03.10	ODB	Erection of bushings of 63 MVAR reactor to be installed in Tala-I at Binaguri S/S
220 kV Baripada-Balasore 132 kV Baripada-Balasore	27.02.10	ODB	28.02.10	ODB	For construction work of 400 kV D/C Baripada-Mendasal line
400 kV Pusauli-Biharshariff line-1	05.03.10	ODB	06.03.10	ODB	Annual Maintenance
400 kV Pusauli-Biharshariff line-2	10.03.10	ODB	11.03.10	ODB	Annual Maintenance
400 kV Pusauli-Allahabad line	15.03.10	ODB	16.03.10	ODB	Annual Maintenance
400 kV Pusauli-Sarnath line	19.03.10	ODB	20.03.10	ODB	Annual Maintenance
132 kV Dehri-Pusauli	24.03.10	ODB	24.03.10	ODB	Annual Maintenance
132 kV Pusauli Bay at Dehri	25.03.10	ODB	25.03.10	ODB	Annual Maintenance
132 kV Pusauli Bay at Karmanasa	26.03.10	ODB	26.03.10	ODB	Annual Maintenance
WBSETCL					
400 kV PPSP(WBSEDCL)-Parulia(PG)	15.02.10	OCB	21.02.10	OCB	Commissioning of 400 kV Bidhannagar-Parulia circuit

OCB: On Continuous basis, ODB: On Daily Basis

Note: All shutdowns are cleared on tentative basis and concurrence from ERLDC needs to be taken before availing actual shutdown.

GRID INCIDENCES IN ER SYSTEM IN THE MONTH OF JANUARY' 10

i) TRIPPING OF ALL LINES FROM BIRPARA ON 22/01/10

At 14:43Hrs of 22/01/10, all 220 kV lines from Birpara S/s alongwith both 100MVA and 50MVA ICTs at Birpara tripped. Prior to the above trippings, around 70 MW power was being drawn from Birpara for Malbase/Singigaon loads and 220 kV Birpara - Salakati - II was under shut down. All tripped lines/ICTs were restored by 16:05 Hrs of same day.

CHPC/Powergrid may furnish further details.

Deliberation in the meeting

Not discussed.

ii) TRIPPING OF 400KV MALDA-PURNEA-II ON 23/01/10

At 16:20 Hrs of 23/01/10 tripping of 400 kV Malda-Purnea-II along with other 400 kV lines/ICTs as detailed below occurred. Prior to incidence of events, 400/220kV ICT-1 which was previously under long shutdown for ERSS-I works, was test charged from 400kV side at 14:55 Hrs. At 16:20 Hrs, the B-ph LA on 220kV side of the ICT burst leading to the tripping of the following elements:

- 400kV Purnea - Binaguri-I (Main-I Distance Protection from Binaguri end)
- 400/220kV 315MVA ICT-I (directional O/C and E/F protection)
- 400kV Purnea - Malda-II (from Purnea end due to operation of back-up E/F protection). The line remained idle-charged from Malda end.
- 220kV Purnea (New) - Purnea (Old) D/C (on overcurrent protection)

With the above tripping, 400kV Bus-I got isolated from Bus-II and only 400kV Purnea-Binaguri-IV remained connected to 400 Bus-I, due to which the power flow through this circuit too came down to NIL. However, 400kV Purnea - Muzaffarpur-II, 400/220kV ICT-2 (both connected to Bus-II), 220kV Purnea - Dakhola D/C and 220/132kV ICT s continued to remain in service.

With the loss of all 400kV circuits between Binaguri and Purnea, 400kV Binaguri S/S remained connected with the rest of ER grid only through the 2X315MVA, 400/220kV ICTs. Power flowing from Malda to Purnea through Malda-Purnea-II got partly diverted through 220kV Chukha transmission system and partly through 400kV Farakka-Kahalgaon D/C. Flow through 220kV Malda - Dalkhola D/C went up from 102MW / ckt to around 220MW /ckt while flow through 400kV Farakka - Kahalgaon D/C shot up from 405 MW / ckt to 505MW /ckt.

The following need to be explained w.r.t incident:

- 1) Non operation of differential protection for ICT-I at Purnea.
- 2) Powergrid may confirm the Phase and zone of tripping of 400 kV Purnea-Binaguri-I from Binaguri explaining operation of the protection at Binaguri end.
- 3) Sensing of fault in reverse direction by operation of back up E/F at Purnea end for 400Kv Purnea-Malda-II line, may be explained.

4) Tripping of 220 kV Purnea-Purnea D/c on over-current also needs to be explained.

Deliberation in the meeting

Representative from PGCIL informed that

- *There was failure of 220 kV LA in the B phase of 315 MVA ICT-1 of New Purnea s/s at 1620 hrs on 23.01.10*
- *The fault was in the operating zone of differential protection of 315 MVA ICT-1, which did not operate. After testing of the relay, the same was found faulty and has been replaced with spare.*
- *The fault was cleared due to operation of back up O/C and E/F current protection on 400 kV side of ICT-1.*
- *As the fault was highly resistive in nature, there was delay in tripping of the ICT, which caused operation of E/F protection of the lines.*
- *The case of tripping of MICOM relay for reverse direction fault in Malda line-II was referred to the manufacturer and problem in the setting of characteristic angle was found. The same has been modified.*
- *The Siliguri line-I tripped from Siliguri end due to operation of E/F protection.*
- *220 kV Purnea-New Purnea line tripped due to operation of E/F protection at Purnea end.*
