

Eastern Regional Power Committee

AGENDA FOR 52ND OCC MEETING TO BE HELD AT ERPC, KOLKATA ON 16.07.10

ITEM NO. 1: CONFIRMATION OF MINUTES OF 51ST OCC MEETING OF ERPC HELD ON 24.06.2010

The minutes were circulated vide letter no. ERPC/SE(OPRN)/OPERATION/2010/1743-86 dated 01.07.2010 to all the constituents and no observation was received.

Members may confirm the minutes.

ITEM NO. 2: DECISIONS OF EARLIER OCC MEETINGS

2.1 MOCK BLACKSTART EXERCISES IN EASTERN REGION

In line with decision taken in earlier OCC forum, black start exercise of Teesta HEP was carried on 22.04.10. In line with decision taken in the 51ST OCC meeting,

- *ERLDC may share the updated the status of black start facilities available with ER generating stations.*
- *OHPC may share its view on utilizing Meenakhsi HEP as start-up power for Balimela and Upper Kolab HEP.*
- *OHPC, DVC and JSEB may furnish programme for mock black start exercises for their respective projects i.e. Indravati (OHPC), Rengali(OHPC), Maithon (DVC) and Subarnarekha (JSEB) HEP in the month of July'10.*
- *ERLDC may share the outcome of test run of all DG sets conducted during June'10.*

2.2: NON RECEIPT OF REVISION REQUEST FROM CONSTITUENTS BY ERLDC RESULTING INTO DELAYED REVISION OF SCHEDULE

The issue of non-receipt of revision request by ERLDC from constituents like WBSETCL, Farakka and consequences were discussed in last couple of OCC meetings. E.g. instances on 03.05.10 (WBSETCL), 19.04.10 (FSTPP) were deliberated.

It was decided in the 50th meeting that that instances cited above would be bilaterally discussed between NTPC & ERLDC and separately between WBSETCL & ERLDC and their outcome would be placed before the next OCC meeting. However, in the 51ST OCC meeting, it was noted that the above meetings did not take place. Therefore it was agreed by the concerned parties to meet before 2nd July 2010.

In pursuance of above, NTPC, WBSETCL and ERLDC may place the outcome of their discussions before the house.

2.3 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 was allocated more coal than stage-I and stage I coal was 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. The matter was also discussed in 47th OCC meeting. The first meeting of the committee was held on 4th March 2010.

ERPC Secretariat collected information on coal linkages from CEA and CIL and the same was forwarded to NTPC for preparation of the report. In the 51st OCC meeting, NTPC was requested to ensure the formal circulation of the draft report to all committee members (i.e. GRIDCO & ERPC) before 10th July 2010. However, the same is yet to be circulated.

NTPC may inform the latest status.

2.4 ASSESSMENT OF INTER AND INTRA-REGIONAL TRANSFER CAPABILITIES

The issue was discussed in 51st OCC meeting. In the meeting, in order to ensure better co-ordination with SLDCs regarding computation of TTC, ATC etc., ERLDC suggested explaining the issues to SLDCs. In this regard, they invited nomination (2 from each SLDC, 3 from NTPC and 2 from PGCIL) to a reliability group to discuss all issues relating to computation of TTC/ATC etc. It was decided that this reliability group will act as standing group and ERLDC will interact with this group while finalizing the ATC & TTC figures. It was agreed that concerned parties would submit their nomination before 30th June'10 However, nomination to reliability group is yet to be received by ERLDC.

It was also agreed that ERLDC would arrange a workshop to explain various issues related with TTC, ATC and TRM etc. ERLDC has arranged a workshop on 8th July 2010 on the subject.

ERLDC and concerned SLDCs may place their respective progress before the house.

2.5 EVACUATION OF TENUGHAT POWER STATION

The issue was raised by Member Secretary, ERPC in the 51st OCC meeting. Tenughat Power Station (2x210 MW) is reportedly operating at low PLF due to constraints in power evacuation system (i.e. 220 kV Tenughat-Biharshariff and 220 kV Tenughat-Patratu lines). These lines are being maintained by JSEB and BSEB for the respective portions lying in their respective states. For ownership of these lines, litigation is underway between BSEB and JSEB.

It is more appropriate to entrust the maintenance of these lines (to be got done)

to TVNL for an efficient co-ordination between maintenance contractor and TVNL. It will also give flexibility to TVNL for getting these lines maintained from JSEB, BSEB, Powergrid or any other competitive party. This arrangement will not affect the liability of the consumer.

BSEB and JSEB spontaneously agreed to the Member Secretary's suggestion and these two lines were declared "in-principle" as Associated Transmission System (ATS) of the Tenughat Power Station.

In the meeting, it was decided that BSEB and JSEB will discuss this part further in their respective organisation for taking a formal decision in the next OCC meeting and ensuing TCC/ERPC meeting.

TVNL, BSEB and JSEB may express their views.

2.6: OPERATION OF AUTO RECLOSE FACILITIES ON TRANSMISSION LINES

The issue was discussed in the 51st OCC meeting. In the meeting, ERLDC pointed out that during May 2010 number of lines tripped due to adverse weather conditions resulting in minor grid incidences. While analyzing such incidences, operation of auto-reclose system was not up to satisfactory level. He urged constituents to take remedial steps to ensure higher level of auto-reclose operation during transient faults. He also requested constituents to submit the following information by 14.07.10.

- a. Line length
- b. Availability of line reactor (with or without NGR), Reactor Capacity & NGR capacity.
- c. Auto reclose dead time.
- d. DRs of the events in which auto reclose failed.

It is reported that each constituent is yet to submit its information.

Members may discuss.

ITEM NO. 4: GRID DISTURBANCES IN CESC SYSTEM

Part of Kolkata suddenly had gone into dark at 18:09 hrs of 01.07.10 due to disturbance in CESC system. CESC generation came down from 1190 MW to 300 MW and demand reduced from 1506 MW to 450 MW. Major part of the supply was restored by 21:00 hrs. Disturbance report received from CESC is at Annexure-I.

ERLDC has requested members to deliberate on the following aspects:

- a. The monitoring of evacuation system of Budge-Budge station(750MW) is of utmost importance at state/as well as RLDC. In view of frequent isolation of CESC system in recent past it is felt that telemetering of the following data may be made available for an effective monitoring
 - Frequency of Southern TPS, Titagarh TPS, New Cossipore TPS and Budgebudge TPS
 - 132 KV Kasba-Princep ST Receiving Station T/C
 - 132 KV Budgebudge TPS-Chakmir Quad Ckt

- 132 KV Kasba-Jadavpur S/C
 -
- b. In view of single point synchronisation of CESC system, the associated Intertrip/SPS schemes for Budge-Budge evacuation system vis-à-vis its interconnection at EM (Kasba) points need a review in order to avoid recurrence of such disturbance.

Member Secretary, ERPC desires to explore the possibility of according Kolkata (CESC system) the same status as Mumbai [Tata Power, Reliance Energy, BEST, MSDCL systems) is given in the state of Maharashtra. In Maharashtra, the supply to Mumbai is given preference and no load shedding is carried out. Instead entire deficit is borne by rest of Maharashtra. For this purpose, views of West Bengal state government and WBSEDCL should be solicited.

He also observed that he was unable to get any help extended towards CESC during this crisis, because the CESC system is probably designed in such a manner that it got islanded. It is the need of the hour to get this incident investigated by an expert group, whose TOR would be to advise ERPC such measures that will avoid reoccurrence of similar incident.

Members may discuss.

ITEM NO. 4: OPERATIONAL PLANNING

(A) ANTICIPATED POWER SUPPLY POSITION FOR THE MONTH OF AUGUST'10

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the months of August'10 were prepared by ERPC Secretariat on the basis of finalized LGBR for 2010, keeping in view that the units are available for generation and expected load growth etc. The details are at Annexure-II.

Members may confirm.

(B) PROLONGED OUTAGE OF POWER SYSTEM ELEMENTS IN ER

<i>Name</i>	<i>Date of Outage</i>	<i>Reason</i>	<i>Restoration Status</i>
Mejia#6 (250MW)	18/06/10	Tube leakage	Not available
DPL#7 (300 MW)	30/05/10	Auxiliary supply failed	Likely to be restored by September'10
CTPS#7(250 MW)	24/04/10	C & I problem	Minor damage in LP rotor and taken to Haridwar, BHEL. Likely to be restored by August'10
Mejia#3 (210MW)	24/06/10	Economiser Tube Leakage	Not available
400 kV Malda-Purnea D/C	24/07/09	Tower collapse at Loc.71	Likely to be restored by November'10
400 kV Tala - Binaguri - II	29/05/10	XLPE Cable problem at TALA	Referred the matter to manufacturer
400 kV Binaguri-Purnea-II	13/04/10	Tower Collapse	Likely to be restored by August'10

220 kV Purnea-Dalkhola D/c	13/04/10	Tower Collapse	Likely to be restored by July'10
220 kV Pusauli - Sahupuri	07/05/10	Four towers at location no 172, 173, 174 & 202 collapsed.	Dismantling of tower members completed. Agency is fixed, but same agency is right not engaged in restoration of 220 kV Biharshariff-Bodhgaya line. After completion of the line, restoration of present like would be taken up.
220 kV Biharshariff - Bodhgaya D/C	07/05/10	37 towers collapsed	Three agencies engaged for restoration of the line. Foundation of damaged towers completed. Erection of only one/two towers left as on 23.06.10. Stringing work is also side by side in process. This line is likely to be completed within a week.
220 kV Ara - Khagol - II	30/05/10	Tower Collapse	Three towers in Sone river crossing damaged at location no 46, 47 & 48. Circuit -I of this line is restored by PGCIL on 10.06.10
132 kV Dehri - Dumraon D/C	07/05/10	3 Tower Collapse	Restoration will be taken up shortly. Arrangement of tower members and manpower is in process. Likely to be restored within 15/20 days.
132 kV Biharshariff/Rajgir - Barhi D/C	07/05/10	26 Tower Collapse	Dismantling of tower member completed. Agency is fixed but the same agency is engaged in 220 kV Biharshariff-Bodhgaya, which is likely to be completed within a week. After completion of the work, the restoration of the line would be taken up.
132 kV Deheri - Karmanasa - I (Kudra - Karmanasa section)	07/05/10	4 Tower Collapse	Dismantling of tower member completed. Agency is fixed but the same agency is engaged in 220 kV Biharshariff-Bodhgaya, which is likely to be completed within a week. After completion of the work, the restoration of the line would be taken up.
50 MVAR Line Reactor of 400KV KhSTPP-Maithon- II at Maithon end	August,2009	----	Likely to be restored by June'11
Circuit Breaker in 400 kV bus reactor bay at Jeerat S/s	10.04.10	CB failure	Likely to be restored by June'10

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

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

Shutdown proposals of the generating stations for the month of July' 2010 as agreed during preparation of LGBR for the year 2010-11 are placed at **Annexure-III**. Shutdown proposals of transmission elements as received are also given in the annexure.

Deviations, if required, may please be intimated along with reasons and Members may please discuss.

(D) STATUS OF COMMISSIONING OF NEW UNITS IN EASTERN REGION DURING 2010-11 AND 2011-12

Name of the Power Project	State (Agency)	Unit no	Capacity MW	Schedule Year Commissioning	Expected Commissioning
(1)	(2)	(3)	(4)	(5)	(6)
Mejia Phase-II TPS	WB (DVC)	Unit#1 Unit#2	500 500	2010-11 2010-11	July-10 Sept-10
Teesta Low Dam-III HEP	WB (NHPC)	4 units	4x33	2010-11	Feb-11
Teesta Low Dam-IV HEP	WB (NHPC)	4 units	4x40	2011-12	
Teesta -III	Sikkim (Teesta Urja)	3 units	3x200	2011-12	
Farakka Stage-III TPS	WB (NTPC)	Unit#6	500	2010-11	Feb-11
Kodarma TPS	Jhar (DVC)	2 units	2x500	2010-12	
Durgapur Steel TPS	WB (DVC)	2 units	2x500	2010-11	Mar-11
Raghunathpur TPS	WB (DVC)	2 units	2x600	2011-12	
Santalalh TPS	WB (WBPDCCL)	Unit#6	250	2010-11	Dec-10
Chujachen HEP	Sikkim (GATI)	2 units	99	2010-11	Oct-10
Maithon RBC JV TPS	Jhar (IPP)	2 units	2x525	2010-12	
Sterlite TPP	Orissa (Sterlite Energy)	4 units	4x600	2010-11	June-10

Members may like to add/update the present status of generating stations and associated transmission system.

ITEM NO. 5: ISSUES RAISED BY ERLDC

5.1 NON RECEIPT OF GRID INCIDENT REPORTS

Non submission of report of Grid incident was discussed threadbare in 51st OCC meeting. Since non submission of report is violation of IEGC. It is once again reiterated to submit Report as per IEGC.

Members may deliberate.

5.2 ANALOG TRIGGERING OF DISTURBANCE RECORDERS

GM, ERLDC has written a letter to all constituents on this subject on 03/06/10

and deliberation on the subject was made in the 51st OCC meeting for implementation of the same.

Members may inform the initiative taken in this regard.

5.3 UNDER FREQUENCY RELAY OPERATION-STATUS

As per present UFR scheme of ER, following are the UF relay settings and load relief expected:

SYSTEM	STAGE-I(48.5 HZ INSTANTANEOUS)	STAGE-II(48.2 HZ INSTANTANEOUS)	STAGE-I(48.0 HZ INSTANTANEOUS)
BSEB	30 MW	36 MW	43 MW
JSEB	17 MW	12 MW	22 MW
DVC	56 MW	55 MW	76 MW
OPTCL	77 MW	77 MW	105 MW
WBPDC(INCL CESC)	120 MW	120 MW	164 MW
TOTAL	300 MW	300 MW	410 MW

Since UFR operation is the ultimate defence mechanism to prevent grid disturbance, it is a must to keep all UFR always in service and functional. Further to get actual relief in terms of MW as mentioned in above said scheme during real time, it is felt necessary to connect at least double the load the mentioned in the scheme.

As per clause no 5.2(n) of IEGC, all constituents are to furnish the details of UFR operations as and when called upon to operate and monthly consolidated report on UFR operation for onward transmission to CERC and RPC.

In view of above, all SLDCS and Constituents may

- *Confirm the status of their UFR*
- *Agree to connect double the load as mentioned in the scheme*
- *Send report on UFR operations as and when called upon to operate and a monthly consolidated report.*

5.4 DEMAND MANAGEMENT MEASURES

As per 5.4.2(e) of Demand Management clause of IEGC, to maintain the system frequency within permissible band all constituents are identify following four categories of interruptible loads

1. loads for scheduled power cuts/loadshedding
2. loads for unscheduled load shedding
3. loads for UFR actuated shedding
4. loads for SPS(special protection scheme) actuated shedding

The clause also mentions that there will be no overlapping between different groups of loads to be shed as mentioned above. ER at present does not have any SPS actuated load shedding scheme.

A presentation on the subject was made by ERLDC in 51st OCC meeting and constituents were requested to furnish the details of first three categories of

identified load. However, details are still awaited.

Members may discuss.

5.5 NON-COMPLIANCE OF DIRECTIONS ISSUED BY SLDC

Vide clause no 5.5.1.c (h) of IEGC, non-compliance of SLDC direction by SEB/Distribution licenses/bulk consumers to curtail overdrawal is to be reported to ERLDC for incorporating the same in weekly report to be prepared and published by ERLDC.

All SLDCs are to inform ERLDC the instances of non-compliance of SLDC directions by SEB/Distribution licenses/bulk consumers to curtail overdrawal, within two days of the incident.

No report of violation of SLDC direction by any of the SEB/Distribution License/Generating station for the month of May'10 and June'10 was received by ERLDC. Hence ERLDC considers 'Nil' report for the month of May'10 and June'10.

Members may note.

5.6 NON AVAILABILITY OF DATA TELEMETRY AND VOICE COMMUNICATION AT ERLDC

Sagardighi (W.B.) :	All connections have been completed locally. RTU couldn't be integrated due to non availability of healthy communication link.
PPSP (W.B)	Generation data is not available.
Tala (Bhutan) :	PLCC is not healthy. Also Gateway doesn't give appropriate response.
Barh - NTPC :	NTPC to ensure real time data availability at ERLDC.
Mejia- B (DVC):	DVC to ensure real time data availability at ERLDC.
CESC	Station wise all data telemetry is not available.
Sterlite, Adhunik ,DSTPS.	No Telemetry has been planned for new generating stations coming up.

All data and voice discrepancies at ERLDC are given at Annexure-IV.

Members may discuss.

ITEM NO. 6: REVIEW OF GRID PERFORMANCE DURING JUNE, 2010

Frequency, hydro reservoir levels, important events, grid disturbances etc are given at Annexure-V.

ERLDC may kindly present the salient features of grid during JUNE 2010.

ITEM NO. 6: ANY OTHER ISSUES

ANTICIPATED POWER SUPPLY POSITION OF ER DURING AUGUST'10

SL.NO	P A R T I C U L A R S	Peak demand (MW)	Energy (MU)
1	BIHAR		
	i) NET MAX DEMAND	1945	1100
	ii) NET POWER AVAILABILITY- Own Source	119	55
	- Central Sector	1443	1023
	iii) SURPLUS(+)/DEFICIT(-)	-383	-22
2	JHARKHAND		
	i) NET MAX DEMAND	1010	590
	ii) NET POWER AVAILABILITY- Own Source	605	325
	- Central Sector	484	294
	iii) SURPLUS(+)/DEFICIT(-)	79	28
3	DVC		
	i) NET MAX DEMAND (OWN)	2240	1404.6696
	ii) NET POWER AVAILABILITY- Own Source	2673	1427
	- Central Sector	171	124
	Long term Bi-lateral(200 MW MP+230(DTL)	430	320
	iii) SURPLUS(+)/DEFICIT(-)	173	-174
4	ORISSA		
	i) NET MAX DEMAND	3520	2100
	ii) NET POWER AVAILABILITY- Own Source	2801	1665
	- Central Sector	908	649
	iii) SURPLUS(+)/DEFICIT(-)	189	214
5	WEST BENGAL		
5.1	WBSEDCL		
	i) NET MAX DEMAND (OWN)	4000	2130
	ii) CESC's DRAWAL	450	105
	iii) TOTAL WBSEDCL's DEMAND	4450	2235
	iv) NET POWER AVAILABILITY- Own Source	3135	1716
	- Import from DPL	64	126
	- Central Sector	1116	798
	v) SURPLUS(+)/DEFICIT(-)	-135	406
5.2	DPL		
	i) NET MAX DEMAND	323	202
	ii) NET POWER AVAILABILITY	387	328
	iii) SURPLUS(+)/DEFICIT(-)	64	126
5.3	CESC		
	i) NET MAX DEMAND	1550	865
	ii) NET POWER AVAILABILITY - OWN SOURCE	1100	786
	FROM WBSEDCL	450	105
	iii) TOTAL AVAILABILITY	1550	891
	iv) SURPLUS(+)/DEFICIT(-)	0	26
6	WEST BENGAL (WBSEDCL+DPL+CESC) (excluding DVC's supply to WBSEDCL's command area)		
	i) NET MAX DEMAND	5874	3197
	ii) NET POWER AVAILABILITY- Own Source	4622	2831
	- Central Sector	1116	798
	iii) SURPLUS(+)/DEFICIT(-)	-135	432
7	SIKKIM		
	i) NET MAX DEMAND	105	33
	ii) NET POWER AVAILABILITY- Own Source	16	2
	- Central Sector	141	98
	iii) SURPLUS(+)/DEFICIT(-)	52	67
8	EASTERN REGION At 1.03 AS DIVERSITY FACTOR		
	i) NET MAX DEMAND	14682	8424
	Long term Bi-lateral(200 MW MP+230(DTL)	430	320
	ii) NET TOTAL POWER AVAILABILITY OF ER (INCLUDING C/S ALLOCATION)	15099	9289
	iii) PEAK SURPLUS(+)/DEFICIT(-) OF ER (ii)-(i)	-14	545

ANNEXURE- III**Tentative Programme of Maintenance Of Transmission Lines and Generating Units for AUGUST'10****(A) GENERATING UNITS :**

Agency	Station	Unit no.	Capacity (MW)	Approved Programme in LGBR	Reason of S/d	Remarks
BSEB	BTPS	Unit No 6	105	16.08.2010 to 15.09.2010	Annual Maintenance	
JSEB	PTPS	Unit No 7	105	15.08.2010 to 05.09.2010	Boiler Overhauling	
TVNL	TVNL	Unit No. 1	210	15.07.2010 to 14.08.2010	Misc.work	TVNL did not show its willingness in last meeting for this maintenance.
DVC	DTPS	Unit No 3	140	01.08.2010 to 25.08.2010	Annual Overhauling	Presently not proposed.
DVC	MTPS	Unit No 1	210	01.08.2010 to 28.08.2010	Capital Overhauling	Presently not proposed.
WBPDC	STPS	Unit No 5	250	01.08.2010 to 30.08.2010	Boiler overhauling	
WBPDC	BKTPP	Unit No 1	210	18.07.2010 to 31.08.2010	Boiler+Turbine overhauling	S/d was approved for unit#3 during 23.07.10 to 31.08.10
DPL	DPPS	Unit No 6	110	01.07.2010 to 30.09.2010	Rewinding of generator	Not taken
NTPC	TTPS	Unit No 3	60	18.08.2010 to 16.09.2010	Boiler Overhaul	
NTPC	TTPS	Unit No 4	60	18.08.2010 to 16.09.2010	Boiler Overhaul	
OPGC	IB TPS	Unit No 2	210	01.07.2010 to 04.08.2010	Annual Overhaul	Planned programme deferred to 20.08.10 to 31.09.10. Now again proposed to plan during 01.11.10 to 10.12.10
NTPC	FSTPP	Unit No 2	200	16.08.2010 to 09.09.2010	Boiler + Chemical Cleaning	Proposed for s/d w.e.f 16.08.10 to 04.09.10
NTPC	KhSTPP	Unit No 1	210	01.08.2010 to 25.08.2010	Boiler + Chemical Cleaning	Presently Not proposed.
NTPC	TSTPP	Unit No 1	500	07.06.2010 to 11.07.2010	Boiler maintenance	Due to request from constituent states, s/d was deferred. Now proposed for s/d w.e.f. 20.08.10 to 18.09.10

(B) TRANSMISSION ELEMENTS:

Organization	Name of the Element	From		To		Remarks
		Date	Time hrs	Date	Time hrs	
Kahalgaon, NTPC						
400 kV Kahalgaon-Farakka line 2		11.08.10	ODB	11.08.10	ODB	Preventive Maintenance & testing
132 kV Kahalgaon-Lalmatia line		18.08.10	ODB	18.08.10	ODB	
400 kV Kahalgaon-Farakka line 1		25.08.10	ODB	25.08.10	ODB	
400 kV Kahalgaon-Patna line 2		02.08.10	OCB	07.08.10	OCB	Testing and isolator alignment
WBSETCL						
220 kV Durgapur-Parulia (PG)		19.07.10	ODB 0600	19.07.10	ODB 1800	Installation of bus-differential panel at Durgapur
220 kV Durgapur-Waria (DVC) ckt-I		20.07.10	ODB 0600	20.07.10	ODB 1800	
220 kV Durgapur-Waria (DVC) ckt-II		21.07.10	ODB 0600	21.07.10	ODB 1800	
PGCIL						
220 kV Tenughat-Biharshariff line of JSEB		20.07.10	ODB	22.07.10	ODB	Stringing of 400 kV Koderma-Biharshariff line

OCB: On Continuous basis, ODB: On Daily Basis

REVIEW OF GRID PERFORMANCE DURING JUNE'10**A) FREQUENCY:**

The frequency profile of ER for last couple of months is tabulated below:

Month	% of time frequency remained between					
	<49.2 Hz	49.2-49.5 Hz	49.5-49.7 Hz	49.7-50.2 Hz	> 50.2 Hz	49.5-50.2 Hz
May'10	1.95	14.09	30.78	49.56	3.63	80.61
April'10	0.53	5.22	17.45	72.38	4.42	89.83

Maximum and minimum frequency observed during the month was as under:

Maximum Frequency			Minimum Frequency		
Frequency (Hz)	Date	Time (Hrs)	Frequency (Hz)	Date	Time (Hrs)
50.76	06.06.10	18:08	48.82	01.06.10	23:54

B) UFR OPERATION IN ER

As system frequency remained above 48.5 Hz, no UFR operation took place in ER grid during the month.

C) WATER LEVEL IN MAJOR HYDRO RESERVOIRS IN THE EASTERN REGION

Name of the Reservoirs	MDDL (m)	FRL (m)	Level in mtrs.	
			30.06.10	30.06.09
Balimela	438.91	462.08	440.65	439.21
Hirakud	179.83	192.02	181.54	181.38
Indravati	625.00	641.84	625.43	625.20
Rengali	109.72	123.44	109.79	109.72
Upper Kolab	843.78	857.78	844.68	844.51

D) COAL STOCK IN VARIOUS TPSs OF EASTERN REGION AS ON 30.06.10

Out of 23 TPS in ER

- 4 stations were "Super-critical" (less than 4 days coal stock)
- 12 stations were "Critical" (less than 7 days coal stock)

E) IMPORTANT EVENTS

- 400 kV Barh-Balia D/c (quad) is test charged successfully on 30.06.10 at 1618 hrs (ckt-1) and 1809 hrs (ckt-2) respectively.