

EASTERN REGIONAL POWER COMMITTEE

14, GOLF CLUB ROAD, TOLLYGUNGE
KOLKATA-700033

MINUTES OF 43rd OCC MEETING HELD AT ERPC, KOLKATA ON 14.10.2009 (WEDNESDAY) AT 11:00 HRS

The meeting was chaired by Sh. A. K. Rampal, Member Secretary, ERPC. List of participants is at Annexure-A.

Sh. A. K. Rampal, Member Secretary, ERPC welcomed all the participants of 43rd OCC meeting. He introduced himself and informed that Sh. R. K. Grover, erstwhile Member Secretary was transferred from ERPC to CEA Head Quarter and joined as Chief Engineer, GM Division, CEA. He proposed to keep on record the excellent contribution made by Sh. R. K. Grover in his duties. The members agreed with him and adopted the resolution, "This body comprising of OCC members, appreciates the excellent contribution made by Sh. R. K. Grover toward solving various operational problems of the Eastern Region". It was decided to send this portion of resolution to Sh. R. K. Grover.

Sh. Rampal also conveyed "Shubho Bijoya" and "Happy deepavali" to all members and their family. Subsequently he deliberated on the following issues:

- Electricity generation from Eastern Region power stations in the month of September'09 (excluding Bhutan Import) registered a y-o-y growth of 2.32% against national electricity generation growth of 7.52%. This modest growth was mainly due to inadequate coal stock position of various thermal generating stations in Eastern Region.
- Import from Bhutan (Tala, Chukha and Kiruchi HEP) helped in improving power supply position of Eastern Region.
- Peak demand of Eastern Region in the month of September'09 registered a y-o-y growth of 5.48% against national average of 5.11%.
- Power Sector of Eastern Region is haunted by coal shortage problems in spite of the fact that coal reserves are in Eastern Region. M/s Coal India was specially invited to help us in sorting out the issue.
- Efforts should be made to use gas turbine units that were lying idle for so many years. Concerned utility should explore the possibility of getting "deemed import status" for purchase of naphtha to make this units viable.
- Power Supply Position in West Bengal during puja days was almost normal. He appreciated all stakeholders for their untiring effort in maintaining the electrical grid on wheel during the puja days.

He requested Sh. A. K. Bandyopadhyaya to take on the agenda items.

Agenda items were then taken up one by one by Sh. A. K. Bandyopadhyaya.

ITEM NO. 1: CONFIRMATION OF MINUTES OF 42ND OCC MEETING OF ERPC HELD AT ERPC, KOLKATA ON 14.09.2009

The minutes were circulated vide letter no. ERPC/SE(OPRN)/OPERATION/2009/5080-5126 dated 18th September 2009.No comment is received from the constituents.

Members may kindly confirm the minutes of the meeting.

Deliberation in the meeting

Members confirmed the minutes without any modification.

ITEM NO. 2: REVIEW OF GRID PERFORMANCE

(A) DURING SEPTEMBER, 2009

Details of Power Supply Position, Frequency, Energy Exchange, UFR operation, Voltage Condition during the month of September'09 are given at Annexure-I.

ERLDC may kindly brief the members on ER grid performance during September 2009.

Deliberation in the meeting

Representative of ERLDC made a brief presentation on the grid performance during September'09 (Copy at Annexure-II). ERLDC informed that

- Generation from Bhutan decreased compared to previous month.
- Hydro Generation of Orissa also reduced compared to previous month.
- Inter-regional energy exchange reduced from 1034 mu in August'09 to 842 mu in September'09 and gradual increase of WR injection to ER grid was noticed.
- 'A', 'B', 'C' type messages issued by ERLDC during the month reduced considerably compared to the same in last month.

(B) DURING PUJA DAYS (23RD SEPT-28TH SEPT'09)

Puja Days	Regional Peak Demand			West Bengal Peak Demand			Regional Peak Generation		
	Actual (MW)	Anticipated (MW)	% Deviation	Actual (MW)	Anticipated (MW)	% Deviation	Actual (MW)	Anticipated (MW)	% Deviation
23/09/09 (Panchami)	12606	12654	0.38	5575	5501	-1.35	13743	13581	-1.19
24/09/09 (Sasthi)	12223	12795	4.47	5469	5737	4.67	13724	13581	-1.05
25/09/09 (Saptami)	12572	12355	-1.76	5323	5460	2.51	14038	13581	-3.36
26/09/09 (Ashtami)	12063	11671	-3.36	5317	4987	-6.62	13733	13581	-1.12

27/09/09 (Navami)	12150	10937	-11.1	4826	4539	-6.32	13732	13581	-1.11
28/09/09 (Dashmi)	11416	10691	-6.78	4718	4528	-4.20	12653	13581	6.83

From the above table, it may be noted that power supply position parameters were in line with anticipated figures.

ERLDC may further elaborate on Regional/West Bengal power supply position during puja days.

Deliberation in the meeting

Members noted the above and it was informed that

- Power supply position in West Bengal was normal though frequency remained below 49.0 Hz for quite some time. (ERLDC)
- Performance of DVC stations, especially Mejia TPS was really good. (ERLDC)
- Farakka generated only 700-800 MW against the commitment of 1400 MW made during puja meeting taken by West Bengal.
- During the evening of Sashti day frequency was hovering below 49.0 Hz and NTPC could have generated committed quantity of 1400 MW even for one hour.
- Above commitment was subject to availability of coal and the coal supply was not adequate enough to generate committed quantity. (NTPC)

(C) IMPORTANT EVENTS

- 400 kV Purulia Pumped Storage Plant-Bidhannagar line was taken into service for the first time on 12/09/09 after upgradation of Bidhannagar S/s to 400 kV.
- 400 kV Purnea-Muzzaffarpur-I & II were test loaded upto a maximum of 1800MW each on 22/09/09.

ERLDC may kindly brief the events.

Deliberation in the meeting

Representative of ERLDC made a brief presentation on chronological sequence of loading of 400 kV Purnea-Muzzaffarpur circuit I & II upto a maximum of 1800 MW (Copy at Annexure-III). It was noted that line loading of 1800 MW was sustained for nearly one hour. With this exercise, it was understood that in case of emergency, this extra margin in the line could be utilized to evacuate power. Members congratulated PGCIL for carrying out the task.

ITEM NO. 3: REVIEW OF COAL STOCK POSITION IN VARIOUS THERMAL GENERATING STATIONS IN EASTERN REGION

As on 30.09.09, out of 23 coal based thermal stations in Eastern Region, 11 stations were critical with less than 7 days coal stock and 9 stations were super-critical with less than 4 days coal stock (Source: CEA website). Coal stock position to various power stations in ER is as below:

Sl No.	Power Station	Capacity MW	Daily Coal Required '000 MT	Present Coal Stock '000 MT as 30.09.09	Linked Mines	Mode of transport
NTPC						
1	Farakka STPS	1600	26.112	0	ECL, BCCL, CCL, MCL and NEC	Pithead
2	Kahalgaon STPS	2340	47.736	6		Pithead
3	Talcher STPS	3000	57.600	63		Pithead
DVC						
4	BTPS-B	630	10.500	178	ECL, BCCL, CCL and MCL	Rail
5	Chandrapur	750	6.500	373		Rail
6	Durgapur	350	5.460	82		Rail
7	Mejia	1340	22.500	23		Rail
BSEB						
8	Barauni	320	0.6	38	ECL, BCCL	Rail
9	Muzzafarpur	220	1.0	8		Rail
JSEB						
10	Patratu	840	4.0	22	CCL	Rail
11	Tenughat	420	6.6	78	CCL	Road
Orissa						
12	IB TPS	420	8.0	53	MCL: Lakhanpur	Pithead
13	Talcher Old	470	8.3	120	MCL	Pithead
WBPDCL						
14	Kolaghat TPS	1260	17.85	46	ECL, BCCL and MCL	Rail
15	Bakreswar TPS	840	10.80	34		Rail
16	Santaldih TPS	730	6.235	91		Rail
17	Bandel TPS	450	4.970	9		Rail
18	Sagardighi	600	7.200	0		Rail
DPL						
19	DPL TPS	690	9.6	23	BCCL, ECL, MCL	Rail
CESC						
20	Budge-Budge	500	6.3	77	ECL, BCCL and MCL	Rail
21	Titagarh	240	3.1	25		Rail
22	Southern REPL	135	2.2	26		Rail
23	New Cossipore	130	1.2	15		Rail

List of Super-critical Stations as on 30.09.09 with less than 4 days coal stock are given below :-

Sl No.	Station	Coal Stock in days
1	Farakka STPP (NTPC)	0
2	Kahalgaon STPP (NTPC)	0
3	Sagardighi TPS (WBPDCL)	0
4	Talcher STPP (NTPC)	1
5	Mejia TPS (DVC)	1
6	Bandel TPS (WBPDCL)	2
7	Kolaghat TPS (WBPDCL)	2
8	DPL TPS (DPL)	2

9	Bakreswar TPS (WBPDC	3
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Further, it has been observed from ERLDC daily report on 07.10.09 that following units were out due to shortage of coal.

Sl No	Units	Capacity	Date of outage
1	Kahalgaon U#5	500 MW	10.08.09
2	Mejia U#2	210 MW	28.08.09
3	Kahalgaon U#1	210 MW	02.09.09
4	Farakka U#4	500 MW	04.10.09

Following stations have reported loss of generation in the month of September'09 due to shortage of coal.

Sl No	Station	Loss of generation (MU)
1	Farakka (NTPC)	517.345
2	Kahalgaon (NTPC)	707.634
3	Talcher Stage-I (NTPC)	133.803
4	Patratu (JSEB)	0.650
5	Kolaghat (WBPDC	64.322

In light of the above facts, following needs to be deliberated:-

- i) In the last meeting it was agreed that with the planned coal supply of 16.3 rakes per day, Talcher STPS would not face coal shortage problem and generation of the station would improve during September 09. However, it can be noticed that Talcher has suffered loss of generation due to shortage of coal.----- M/s Coal India and M/s NTPC may please opine.
- ii) In the last meeting it was understood that problems of supply of BOBR rakes to Sagardighi, WBPDC were already sorted out at higher level meeting with M/s CIL. However, it may be seen that Sagardighi has zero coal stock as on 30.09.09. ----- WBPDC and M/s CIL may please opine.
- iii) In the last meeting, it was agreed that with the planned coal supply of 11.6 rakes per day, stations of WBPDC would not face coal shortage problem and generation of the stations would improve during September 09. As bulk of the coal supply would be from MCL, WBPDC was requested to tie up with both MCL and railways. However, it may be seen that coal stock position in WBPDC stations have deteriorated and 4 out of 5 WBPDC stations have super-critical coal stock. --- WBPDC and M/s CIL may please opine.
- iv) In the last meeting, it was agreed that with the planned coal supply of 2.5 rakes per day, stations of DPL would not face coal shortage problem and generation of the station would improve during September 09. However, it may be seen that coal stock position in DPL station was super-critical as on 30.09.09. In the last meeting, DPL was requested to intimate plan for generation and to enter into commercial arrangement for the said coal supply. ---- DPL and M/s CIL may please opine.
- v) As per Annual Maintenance schedule finalized during preparation of LGBR for the year 2009-10, Kahalgaon U#5 and U#1 will be availing shutdown during 01.11.2009 to 25.11.2009 and 15.02.2010 to 06.03.2010

respectively. Similarly, Farakka U#4 is planned to avail shutdown during 02.03.2010 to 26.03.2010. As these units were already out due to shortage of coal, it is proposed to prepone the planned shutdown of these units. ----- Members may kindly discuss.

- vi) It has been observed that constituents did not submit detail calculations for loss of generation on account of coal shortage. ---- Constituents may submit the same.

Deliberation in the meeting

Following deliberation took place:

a. Farakka and Kahalgaon STPP:

- Coal supply to Farakka and Kahalgaon STPP in the month of September'09 was 82% and 130% of committed quantity and Farakka - Kahalgaon combined got coal supply of 101.4% of committed quantity. (CIL)
- On all India basis, 306 MMT of coal was allocated to existing power stations during the year 2009-10 and additional 7 MMT was kept as allocation for upcoming power stations. Last 500 MW unit of Kahalgaon STPP, which was commissioned after 31st March 2009 could get additional coal allocation out of 7 MMT kept as allocation for upcoming power station. NTPC had already applied for it. (CIL)
- Apart from coal linkage of 15 MMT for Farakka and Kahalgaon, NTPC had arranged for 2 MMT (1 MMT each for Farakka and Kahalgaon) coal from ECL (Raniganj coal field). (NTPC)
- Import of coal is likely to commence by the end of this month. (NTPC)
- Coal production at Rajmahal has started improving. (CIL)

b. Talcher STPP (NTPC)

- Coal supply to Talcher STPP in the month of September'09 was 124% of committed quantity and it was also mentioned that in CEA website, "less import of coal" was cited as the reason for low coal stock position of Talcher STPP. (CIL)
- Poor coal quality received from Ib coal field was cited as the reason for less generation. (NTPC)
- Power stations of Eastern Region have to operate under the present coal scenario of the country. (CIL)
- Coal stock position of Talcher STPP has slightly improved in the month of September'09.

c. WBPDCCL Stations

- With active co-operation from CIL, WBPDCCL was able to meet the puja load in West Bengal. Performance of WBPDCCL and CIL during puja days were appreciated in the meeting.
- Coal supply during Puja days was as per commitment. (CIL)

- Unloading problems faced by Sagardighi TPP due to non-supply of BOBR rakes had been sorted out. (CIL/WBPDCL)
- Low coal stock positions at various WBPDCL station in the month of September'09 could be attributed to payment related issues. (CIL)
- CIL assured regular coal supply to WBPDCL if the payment issues were resolved.

d. DPL Station

- Coal supply during September'09 was as per commitment. (CIL)
- Coal supply was disrupted during 1st week of October'09 due to inclement weather condition. (CIL)
- Commercial arrangements with MCL tied up. (DPL)
- Coal supply commitment shall be adhered to. (CIL)

e. IB TPS

- Poor coal quality affected generation from IB TPS. (OGPC)
- CIL was unaware of it.

f. Preponement of maintenance schedule of NTPC Stations:

Regarding proposal of ERPC under item 3 (v), representative of NTPC intimated that they had already taken care of it. Regarding demonstration of availability of all the units under coal shortage condition, representative of NTPC informed that recently during outage of Kahalgaon Unit#5, U#6 was brought into the grid.

Summarising the deliberations, members noted the following:

- ✓ With improving coal production from Rajmahal and with better quality coal receipt from ECL, generation of Farakka and Kahalgaon is likely to improve in the next month.
- ✓ With present coal supply arrangement, coal stock position of Talcher STPP is likely to improve in the next month.
- ✓ WBPDCL may ensure early settlement of commercial issues with CIL so that WBPDCL stations could generate full in the coming months.
- ✓ With committed coal supply, DPL station would generate full in the next month.
- ✓ OGPC was requested to take up the matter of poor coal supply to IB TPS with CIL.
- ✓ Constituents may like to submit the detailed calculation for loss of generation due to shortage of coal.

ITEM NO. 4: WITHDRAWAL OF COAL SHORTAGE DECLARATION BY NTPC WITHOUT FURNISHING REASONS --- ERLDC

In the month of September'09, NTPC had initially declared coal shortage but had later withdrawn coal shortage declaration and furnished blockwise DC without stating any reasons. The details are furnished below:

On 27/09/09::

Coal shortage was furnished for both FSTPP and KhSTPP-II. However coal shortage was later withdrawn for KhSTPP-II. Initial DC furnished for KhSTPP-II was 8.745MUs with Max DC of 465 and minimum DC of 330MW. The schedule arrived on basis of requisitions by constituents was 364.4MW(round the clock). However later NTPC withdrew coal shortage for KhSTPP-II without furnishing any reasons and furnished blockwise DC of 375MW (round the clock).

On 28/09/09

Coal shortage was furnished for both FSTPP and KhSTPP-I. However coal shortage was later withdrawn for KhSTPP-I. Initial DC furnished for KhSTPP-I was 11.160 MUs with Max DC of 570 and minimum DC of 402MW. The schedule arrived on basis of requisition by constituents was 465MW (round the clock). However later NTPC withdrew coal shortage for KhSTPP-II without stating any reasons and furnished blockwise DC of 500MW(round the clock).

It can be observed that DC energy furnished after foregoing coal shortage was more than that furnished for coal shortage case. Also, NTPC had withdrawn coal shortage in both cases without any reasons.

Members may kindly deliberate.

Deliberations in the meeting

It was informed that

- Coal shortage declaration was revoked on the above occasions to ensure maximum generation during peak hours and sometimes on request from constituents. (NTPC)
- On 3rd and 4th October'09, Kahalgaon STPP had peak hour schedule less than off-peak hour schedule. (NTPC)
- Any deliberate intention to give less peak hour schedule compared to lean hour schedule could be seen as gaming on the part of constituents and should be discouraged. (NTPC)
- Requisition given by any constituent from any ISGS could be less during peak hours depending on generation profile of the constituents and in particular if the constituent has pumped storage power plant. (WBSEDCL)
- Under ABT regime, there is no restriction on constituents giving less requisition during any particular period. (ERLDC)
- Discussion in the 10th TCC meeting of ERPC held on 28th August'09 on peak hour scheduling of thermal stations was recollected, wherein it was

emphasized that peak hour schedule of thermal stations should normally be higher than off peak hour schedule.

Members agreed for the following:-

- ✓ Once coal shortage is declared for a particular day, coal shortage declaration should not be withdrawn by NTPC during the day except under exceptional circumstances for which reason should be intimated to ERLDC and ERPC.
- ✓ As far as possible, schedule given by beneficiary States should be in consonance with the nature of demand curve.

ITEM NO. 5: MAJOR GENERATING UNIT AND TRANSMISSION LINES/ELEMENTS OUTAGES IN ER GRID

Sl	Description	Date of Outage	Reason	Remarks
Lines / Elements under outage				
1	400 kV Tala - Binaguri-IV	02/05/09	CB problem at Tala end	Expected by November'09. Tala may furnish latest status.
2	400 kV Malda-Purnea D/C	24/07/09	Tower collapse at Loc.71	Expected by 30 th November'09. Powergrid may furnish latest status
3	220 kV Meramundali-Bhanjanagar D/C	21/07/09	Tower collapse	One circuit is restored on ERS. Tentative schedule for completion of works is by end of November'09. OPTCL may furnish latest status

Members may kindly update expected date of restoration of transmission elements.

Deliberation in the meeting

The updated status of the line is given below:

Sl	Description	Date of Outage	Reason	Remarks
Lines / Elements under outage				
1	400 kV Tala - Binaguri-IV	02/05/09	CB problem at Tala end	Expected by December'09.
2	400 kV Malda-Purnea D/C	24/07/09	Tower collapse at Loc.71	Expected by 30 th November'09.
3	220 kV Meramundali-Bhanjanagar D/C	21/07/09	Tower collapse	OPTCL will inform later.

ITEM NO. 6: GRID INCIDENCES IN ER SYSTEM DURING SEPTEMBER 2009

I. Tripping of lines/units in South Orissa system

(a) Tripping on 10/09/09

At 09:43 Hrs of 10/09/09 220 kV Theruvali-Bhanjanagar-I tripped due to snapping of R-Ph conductor at location No.720 with indications:: D/P R-Ph, E/F, Zone-I, Dist: 51.24 km(Bhanjanagar end) and E/F(Theruvali end). The following tripping also occurred simultaneously:

- 220 kV Theruvali-Bhanjanagar-II on O/C E/F, DP RYB Ph, 130.18 Km, at Theruvali end and at Bhanjanagar end on RY-Ph E/F, Zone-I, 58.13Km.
- 220/132 kV 100MVA Theruvali ATR-I & II at both sides on relay indication E/F
- Bus voltage at Theruvali dropped to around 163 kV and low voltages observed at Upper-Kolab, Jeynagar S/S
- Unit#3 at Upper Kolab H/T on low voltage
- Unit#3,4 at Indravati PH were hand tripped on occurrence of abnormal sound at Indravati PH
- 220 kV Theruvali-Jeynagar-I & II and 220KV Theruvali-Upperkolab tripped at Theruvali end on E/F
- As a result of above tripping 400Kv Indravati-Indravati(PH) tripped at Indravati(PH) end on over-voltage
- Power supply was interrupted at Theruvali/Narendrapur command area as a result of above tripping.

All tripped lines except 220Kv Theruvali-Bhanjanagar-I were restored by 11:44 Hrs of same day.

(b) Tripping on 18/09/09

At 01:45 Hrs of 18/09/09, due to snapping of R-Ph jumper of 220 kV Theruvali-Indravati-I at Theruvali S/S all four lines viz. 220 kV Theruvali-Indravati Q/C tripped on E/F.

- 400 kV Indravati-Indravati(PH) tripped on over-voltage.
- 220 kV Theruvali-Bhanjanagar-I & II tripped at Bhanjanagar end only (Ckt-I-DP RYB Ph, E/F Zone-III & ckt-II on RYB Ph E/F, Zone-III)
- 220/132 kV 100MVA ATR-I & II at Theruvali tripped at both ends on E/F
- 220 kV Theruvali-Jeynagar-I & II tripped tripped at Theruvali end only on relay indication E/F
- 220 kV Theruvali-Upper Kolab tripped at Upper Kolab end only on DP R-Ph, Zone-II
- Balimela Unit#5 tripped on over speed even after isolation from the grid on low voltage of 183KV. Other running units at Balimela#1,3,6, H/T and kept under spinning condition.
- Voltage at Jeynagar shot up to 258KV as a result of the trippings. Power interruption at Theruvali, Narendrapur occurred as a result of the trippings. All tripped lines were restored by 04:32 hrs. 220Kv Theruvali-Indravati-I was restored at 13:51 Hrs after rectification work.

Disturbance in South Orissa System due to tripping of one of Theruvalli-Bhanjanagar is recurring in nature. Similar incident took place on 03.09.09 and was discussed in 42nd OCC meeting held on 14.09.09. As exact reason for tripping could not be traced in the meeting, members referred the matter to Protection sub-Committee. Members also requested OPTCL to explore installing one numerical relay in Theruvelli-Bhanjanagar line, which would give lot of insight into these incidents.

As both the incidents were similar in nature, the following points may be discussed w.r.t the above incidents:

- Simultaneous tripping of 220 kV Theruvali-Bhanjanagar D/c has occurred in both occasions. The same needs to be discussed w.r.t relay settings at both ends.
- In case of tripping of any line on E/F, low voltages are experienced in South Orissa system leading to either hand-tripping / tripping of units at Balimela/Upper-Kolab PH

- Fault in any one line section is being seen by another line section under Zone-III with associated tripping. Thus due to a fault in one section cascade tripping on E/F is occurring.

Deliberation in the meeting

In view of the similarity of the incident with the grid incident that took place in South Orissa System on 03.09.09, which was already referred to Protection sub-Committee for further discussion, **members decided that this incident should also be discussed in the Protection sub-Committee meeting.**

II. Tripping of lines/units in Budhipadar on 13/09/09

The following sequence of events occurred starting from 12:57 Hrs of 13/09/09:

- ✓ 12:57 Hrs:: 220 kV Budhipadar-Tarkera-II tripped from both ends(Tarkera end-O/C. and DP at Budhipadar end, 79%, RYB Ph)
- ✓ 12:58 Hrs:: 220 kV Budhipadar-Tarkera-I tripped on overloading at Tarkera end(O/C in B-Ph at Tarkera end)
- ✓ 12:59 hrs:: 220 kV Budhipadar-Raigarh hand tripped on observation of high power flow to WR(as reported)
- ✓ 13:18 Hrs:: 220 kV Budhipadar-Tarkera-I charged with power flow of 230MW
- ✓ 13:24 Hrs:: 220 kV Budhipadar-Tarkera-I tripped on O/C
- ✓ 13:50 Hrs:: 220 kV Budhipadar-Raigarh charged at Budhipadar end but was hand tripped shortly on observation of power flow of 217MW towards WR.
- ✓ 15:11 hrs:: 220 kV Budhipadar-Korba-II & III tripped due to disturbance in CSEB system. All running Units at Burla (Units#1 to 7) and both units at IBTPS [which were isolated from ER and synchronized with CSEB] also tripped.

During restoration it was observed that 220 kV Budhipadar-Tarkera-I was repeatedly tripping on distance protection at Tarkera end. The line could finally be charged at 20:20 Hrs and restoration was completed. No fault was found on patrolling the 220 kV Budhipadar-Tarkera section.

With respect to the above incident, following may be discussed

- O/C settings for 220 kV Budhipadar-Tarkera section.
- Suspected malfunctioning of DP relay at Tarkera end.

Deliberation in the meeting

The matter was referred to Protection sub-Committee meeting for further discussion.

III. Tripping of all units of Tala on 17/09/09

- ✓ At 19:02 Hrs of 17/09/09 Eastern Region suffered generation loss of 950MW due to tripping of all units at Tala HEP.
- ✓ The area was facing inclement weather and the incident was initiated due to possible lightning strike leading to tripping of 400 kV Tala-Binaguri I & II.
- ✓ With 400 kV Tala-Binaguri-IV out of service, all generation was diverted through only available path of 400KV Tala-Malbase which tripped thereafter. All running units at Tala thus tripped on loss of evacuation path.
- ✓ However generation at other HPS in Bhutan/Sikkim and connectivity of Binaguri/NER with rest of grid were unaffected.

It may be noted that similar incident had occurred in the past on 12/08/09 which was discussed in the 42nd OCC meeting. In the meeting, it was agreed that feasibility of providing Auto Reclosure feature at Tala end needed to be studied. Representative of Tala HEP informed that the matter would be taken up with the Tala management and decision in this regard would be intimated by next OCC meeting.

ERLDC may kindly explain the incident and Tala HEP may comment regarding keeping auto reclosure feature operative at Tala end.

Deliberation in the meeting

- Tala units were out due to loss of evacuation path. (ERLDC)
- Comments were asked from M/s BHEL and M/s Siemens regarding feasibility of providing Auto Reclosure feature at Tala end and comments were yet not received. It would be intimated in next OCC meeting. (TALA HEP)
- Tala-Binaguri feeder-3 tripped on overpower setting. (Tala HEP)

In view of security of Tala units, which is of immense importance to Eastern Region power system, Members requested Tala HEP to share the following information by next OCC meeting:

- ✓ **The decision of Tala Management regarding keeping Auto Reclosure feature operating at Tala end.**
- ✓ **O/C setting at Tala-Binaguri(Malbase) feeder-3.**

IV. Disturbance in CESC system on 22/09/09

- ✓ At 10:47 hrs of 22/09/09, CESC suffered generation loss of 518MW at Budge-Budge and 144MW at Southern GS causing widespread load shedding in Kolkata area
- ✓ The incident initiated with snapping and falling of guard wire at 132 kV Chakmir S/s and non isolation of the fault due to stuck breaker problem at Chakmir.
- ✓ The fault was fed from Budge-Budge, Southern and Titagarh-New Cossipore systems. 132 kV Howrah (WBSETCL) also fed the fault through 132 kV Howrah-SRS T/C which tripped on O/C E/F .
- ✓ BBGS tripped through operation of distance protection.
- ✓ From SRS both 132 kV circuits to Majerhat also tripped on DP.
- ✓ This resulted in isolation of Southern GS and both running units tripped on over speed.
- ✓ 132KV BT Road-New Cossipore tie also tripped through back up E/F resulting in islanding of Titagarh and New Cossipore systems which survived.
- ✓ The isolated system was later synchronized with Titagarh (WBSETCL). All supplies was restored by 17:05 Hrs.

CESC/WBSETCL may furnish further details.

Deliberation in the meeting

Representative of CESC made a presentation on the incident (Copy at Annexure-IV). It was noted that the guard wire snapped and fell on diameter 3 and then on diameter 4 at 132 kV Chakmir S/s. "STUB" protection on M1 side operated but the fault was not isolated as main 1 side circuit breaker of diameter 4 did not trip due to mal-operation of relay.

ITEM NO. 7: OPERATIONAL PLANNING

(A) SHUTDOWN PROPOSAL OF TRANSMISSION LINES AND GENERATING UNITS FOR THE MONTH OF NOVEMBER'09.

The shut down proposals which are received by ERPC for the month of November' 09 are placed for discussion.

Members may please discuss and finalize the proposed programme.

Deliberation in the meeting

Approved shutdown Programme for generating units and transmission elements for the month of November'09 is at Annexure-V.

(B) ANTICIPATED POWER SUPPLY POSITION FOR THE MONTH OF OCTOBER'09 AND NOVEMBER' 09

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the months of October'09 and November'09 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- VI.

Members may please discuss.

Deliberation in the meeting

Members noted the above.

ITEM NO. 8: 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. Based on existing demand curve, ERLDC has proposed that peak Hours for the month of November'09 may be considered from 18:00 hrs to 21:00 hrs.

ERLDC may like to show the demand curve of ER and members may kindly decide on timing of peak hours during November'09.

Deliberation in the meeting

It was noted that commencement of "Peak Hours" for the month of November'09 was advanced by half hour compared to that in previous month i.e. October'09 due to onset of winter season.

Members agreed that "Peak Hours" for the month of November'09 would be considered from 18:00 hrs to 21:00 hrs.

ITEM NO. 9: PROVISION OF FGMO OF GENERATING UNITS AS PER IEGC

On petition No. 66/2003 in the matter of Free Governor Mode of Operation on all generating units, CERC in its order dated 20th August, 2009 has considered the issue

of FGMO of generating units as per IEGC and inter-alia directs the implementation of only restricted governor operation in various types of thermal and hydro units as per the following schedule:

- “(a) KWU & LMZ turbines for thermal sets of 200 MW and above:
(i) *Software based EHG system* : 1.3.2010
(ii) *Hardware based EHG system where boiler controls are in “auto”* : 1.6.2010
(b) *Hydro units of 10 MW and above* : 1.3.2010

All the generating companies are directed to place before the Commission, within a month, their action plan in line with the above schedule and furnish **monthly progress reports** to the Commission in this regard.”

Members may kindly note.

Deliberation in the meeting

ERPC Secretariat requested generating companies to comply with the above CERC order and furnish a copy of “monthly progress report” to ERPC.

Representative of generating stations informed that they were already taking action in this regard and assured to submit copy of the “monthly progress report” to ERPC.

ITEM NO. 10: FURNISHING OF INFORMATION FOR PREPARATION OF LOAD GENERATION BALANCE REPORT (LGBR) FOR THE YEAR 2010-11

In line with Indian Electricity Grid Code (IEGC) issued by CERC, the LGBR in respect of Eastern Region has to be finalized by January 2010. ERPC Secretariat vide FAX message no. M-1556 dated 6th October 09 has requested constituents to furnish following information required for preparation of LGBR.

- i) Month-wise and annual generation plan (in MU) - Power Station wise (thermal and hydro both).
- ii) Annual maintenance programme for each of the generating units (thermal and hydro both).
- iii) Generating units under R&M/ long outage indicating date of outage and reasons of outage and expected date of return (thermal and hydro both).
- iv) Partial and forced outage figures (in %) of generating units for the last 3 years.
- v) Month wise peak demand (in MW) - restricted and unrestricted peak demand.
- vi) Month wise energy requirement (in MU).
- vii) Schedule of commissioning of new generating units during 2010-11 and unit-wise monthly generation programme (in MU).
- viii) Allocation of power from new generating units.

Members may please expedite furnishing of the said information.

Deliberation in the meeting

ERPC Secretariat requested constituents to furnish the said information within a fortnight and constituents agreed to it.

ITEM NO. 11: REVIEW OF OVER-VOLTAGE SETTINGS IN ER --- ERLDC

Powergrid,CC, New Delhi had intimated vide letter dtd.07/09/09 regarding revised over-voltage protection(Time delayed) settings for ER. While the revised settings are being implemented at Powergrid end, the same also needs to be implemented at Substations owned/operated by other agencies. The details of the revised settings to be implemented are enclosed at **Annexure-VII**. It may be noted that revised settings are for Stage-I only and Stage-II settings remain unchanged.

Members may kindly note above and take necessary action for implementation of the revised settings.

Deliberation in the meeting

Members took note of the above.

Regarding implementing the above setting in Powergrid lines, where one end belongs to other agency other than Powergrid, it was decided that PGCIL might like to communicate/co-ordinate with other agencies.

ITEM NO. 12 : REQUEST FOR ALLOWING DRAWAL OF 15 MW POWER FROM JODA TO BOLANI GSS OF SAIL AGAINST JSEB CENTRAL SECTOR SHARE --- JSEB

- ✓ Presently SAIL is availing power at 33 kV for their mining works at Kiruburu, Meghataburu, Gua from Noamundi GSS of JSEB.
- ✓ The power availability at Noamundi GSS is not adequate to meet the rising demand of SAIL which will be approx. 130 MW by 2015-16.
- ✓ As a result, SAIL is suffering huge loss due to power interruption.
- ✓ JSEB has proposal for LILO of Baripada-Noamunui transmission line at Kiruburui (Murgapara) as well as connectivity of Noamundi GSS from on going 220/132/33 kV GSS at Chaibasa. However, these proposals will take time.
- ✓ SAIL desired to avail 15 MW power from Joda GSS (OPTCL) territory of State of Orissa for their mining works at Kiriburu-Meghatuburu mining area under Jharkhand State territory.
- ✓ SAIL has also requested JSEB for construction of 132 kV transmission line from their proposed GSS at Kiruburu (Murgapara) in the territory of State of Jharkhand to Bolani GSS of SAIL under territory of state of Orissa.
- ✓ SAIL urged JSEB to request OPTCL for drawing 15 MW power from Joda to Bolani GSS of SAIL under Orissa territory against JSEB central sector allocation of power.

In view of above and considering production loss of SAIL, JSEB desires that OPTCL may allow drawal of 15 MW of power from Joda to Bolani and then to Kiruburi (Murgapara) from JSEB central sector allocation.

JSEB may further explain and OPTCL may please opine.

Deliberation in the meeting

It was understood that the above proposal was not discussed by JSEB with OPTCL.

Members decided that JSEB should first discuss their proposal with OPTCL and the outcome might be communicated to ERPC. Members assured JSEB that the issue, if still not resolved, would be taken up by ERPC.

ITEM NO. 13: ISSUE OF LINE CLEARANCE (L/C) PERMIT OVER TELEPHONE --- OPTCL

- ✓ The maintenance unit of OPTCL stationed at Rengali is also looking after the maintenance work of 220 kV TSTPP-TTPS line. In case of any breakdown in the said line, OPTCL engineer has to go to TTPS via TSTPP to get the L/C since TSTPP does not issue L/C directly to the OPTCL engineer in charge of the maintenance of the line. By this, the concerned engineer has to travel another 30 km distance to reach TTPS from TSTPP. TSTPP is 30 km away from Rengali. Thus the engineer has to travel total 60 km to get the L/C.
- ✓ To get inside the TTPS, permission has to be obtained from CISF, which takes a lot of time.
- ✓ Sometimes, during shift change over, TSTPP takes about 1-2 hours from issuing the L/C.
- ✓ The above practice consumes lot of time and the line availability is also affected.

It is proposed to introduce the issue and return of L/C over telephone with code word as it is being done with different units of OPTCL.

NTPC may please opine.

Deliberation in the meeting

NTPC and OPTCL informed that the issue was already resolved.

ITEM NO. 14: ANY OTHER POINT

I) FURNISHING OF INFORMATION ON CRISIS MANAGEMENT PLAN -- ERPC

Representative of ERPC pointed out that constituents were requested to furnish information on crisis management plan vide ERPC FAX message no. M-1563 issued under file no. ERPC/SE(PS)/MISC/2009 dated 12th October'09. However, no information was received from the constituents. Copy of said FAX message was also distributed in the meeting.

In the message, constituents were requested to submit following information:

- (a) The last occasion on which mock trial for procedure for recovery from partial/total blackouts in accordance with clause 5.8(b) of IEGC was carried out and the schedule for next mock trial for the same.
- (b) Whether plans and procedures have been prepared for the generating stations, transmission line and substation for dealing with disasters due to natural calamities such as earthquakes, floods, storms, cyclones etc and crisis situation arising due to terrorist threats/attack & sabotage, bomb threats and explosions, fire etc.
- (c) If yes, when was last trial for the disaster management plan carried out, and
- (d) The schedule for next trial.

Members agreed that constituents would submit the relevant information pertaining to above by the end of October'09.

ITEM NO. 15: DATE AND VENUE OF THE NEXT (44th) OCC MEETING OF ERPC.

Date and venue of the next OCC meeting of ERPC would be intimated later on.

The meeting ended with thanks to the Chair.

ANNEXURE- VI**Tentative Programme of Maintenance Of Transmission Lines And Generating Units as proposed for****NOVEMBER, 2009****(A) GENERATING UNITS:**

Organization	Name of the Element	From		To		Remarks
		Date	Time hrs	Date	Time hrs	
CHUKHA HEP	Unit # 4	12.11.09	0830	12.12.09	1830	Annual Maintenance
TEESTA HEP	Unit #1	24.11.09	OCB	14.12.09	OCB	Annual Maintenance
	Unit #2	16.12.09	OCB	05.01.09	OCB	
	Unit #3	06.01.09	OCB	27.01.09	OCB	
RANGIT HEP	Unit # 2	16.11.09	OCB	11.12.09	OCB	Annual Maintenance
IB TPS	Unit # 1	01.11.09	OCB	05.12.09	OCB	AOH
BALIMELA HEP	Unit #4	11.11.09	OCB	10.12.09	OCB	Annual Maintenance
RENGALI HEP	Unit #5	01.11.09	OCB	30.11.09	OCB	Annual Maintenance
UPPER KOLAB HEP	Unit # 2	03.11.09	OCB	18.11.09	OCB	Annual Maintenance
	Unit # 3	23.11.09	OCB	08.12.09	OCB	Annual Maintenance
INDRAVATI HEP	Unit # 3	03.11.09	OCB	30.11.09	OCB	Annual Maintenance
TALA HEP	Unit#1	08.10.09	OCB	20.11.09	OCB	Annual Maintenance
	Unit#2	21.11.09	OCB	25.12.09	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 Farakka-Jeerat line -1	04.11.09	0930	04.11.09	1630	Relay testing
	400 kV Farakka-Durgapur line -2	18.11.09	0930	18.11.09	1630	Relay testing
KAHALGAON STPP, NTPC						
	400 kV Kahalgaon-Biharshariff line-2	04.11.09	ODB	04.11.09	ODB	Preventive maintenance and testing
	400 kV Kahalgaon-Biharshariff line-4	11.11.09	ODB	11.11.09	ODB	
ERTS-II, PGCIL						
	132 kV Siliguri-Rangit line	09.11.09	ODB	10.11.09	ODB	Annual Maintenance
	132 kV Rangit-Gangtok line	12.11.09	ODB	13.11.09	ODB	Annual Maintenance

132 kV Mellli-Siliguri line	16.11.09	ODB	17.11.09	ODB	Annual Maintenance
132 kV Mellli-Gangtok	19.11.09	ODB	20.11.09	ODB	Annual Maintenance
132 kV Rangit-Rammam line	22.11.09	ODB	23.11.09	ODB	Annual Maintenance
220 kV Siliguri-Dalkhola line -1	10.11.09	ODB	10.11.09	ODB	Annual Maintenance
220 kV Siliguri-Dalkhola line-2	11.11.09	ODB	11.11.09	ODB	Annual Maintenance
100 MVA ICT at Siliguri	04.11.09	ODB	05.11.09	ODB	Annual Maintenance
315 MVA ICT-1 at Rourkella	03.11.09	ODB	03.11.09	ODB	Annual Maintenance
50 MVAR bus reactor at Rourkella	10.11.09	ODB	10.11.09	ODB	Annual Maintenance
315 MVA ICT-1 at Durgapur	10.11.09	ODB	11.11.09	ODB	Annual Maintenance
315 MVA ICT-2 at Durgapur	12.11.09	ODB	13.11.09	ODB	Annual Maintenance
220 kV Bus-I including 220 kV WBSETCL and DVC-II line at Durgapur	17.11.09	ODB	19.11.09	ODB	AM of bay equipment at Durgapur
220 kV Bus-II including 220 kV DVC-I line at Durgapur	20.11.09	ODB	21.11.09	ODB	Annual Maintenance
50 MVA ICT-2 at Malda S/S	03.11.09	ODB	04.11.09	ODB	Annual Maintenance
50 MVA ICT-4 at Malda S/s	06.11.09	ODB	07.11.09	ODB	Annual Maintenance
220 kV DVC-I at Maithon	04.11.09	ODB	05.11.09	ODB	Annual Maintenance of bay equipment at Maithon
220 kV DVC-II at Maithon	06.11.09	ODB	07.11.09	ODB	
400 kV Maithon-Jamshedpur D/C line	19.10.09	OCB	24.10.09	OCB	For making line LILO at Mejia
400 kV Talcher -Rourkela line 1	17.11.09	ODB	18.11.09	ODB	Annual Maintenance
400 kV Talcher -Rourkela line 2	19.11.09	ODB	20.11.09	ODB	Annual Maintenance
132 kV WBSETCL -1 at Birpara	20.11.09	ODB	20.11.09	ODB	Annual Maintenance
220 kV Dalkhola -Purnea-I	28.10.09	ODB	28.10.09	ODB	Annual Maintenance
220 kV Dalkhola -Purnea-II	29.10.09	ODB	29.10.09	ODB	Annual Maintenance
TSTPP (NTPC)					
400 kV TSTPP-HVDC line 1	20.10.09	ODB	20.10.09	ODB	Annual Maintenance
400 kV TSTPP-HVDC line 2	23.10.09	ODB	23.10.09	ODB	
400 kV TSTPP-HVDC line 3	27.10.09	ODB	27.10.09	ODB	
400 kV TSTPP-HVDC line 4	30.10.09	ODB	30.10.09	ODB	
ERTS-I, PGCIL					
80 MVAR Bus Reactor at Patna	28.10.09	ODB	29.10.09	ODB	Annual Maintenance
315 MVA ICT-1 at Jamshedpur	02.11.09	ODB	02.11.09	ODB	Annual Maintenance
315 MVA ICT-2 at Jamshedpur	05.11.09	ODB	05.11.09	ODB	Annual Maintenance
80 MVAR Bus reactor at Biharshariff	05.11.09	ODB	06.11.09	ODB	Annual Maintenance
Talcher-Kolar HVDC Pole-II	05.11.09	ODB	06.11.09	ODB	Annual Maintenance
Talcher-Kolar HVDC Bipole	07.11.09	ODB	08.11.09	ODB	Annual Maintenance

Talcher-Kolar HVDC Pole-1	09.11.09	ODB	15.11.09	ODB	Annual Maintenance
CHUKHA HEP					
220 kV Chukha-Bipara-I	19.10.09	ODB	19.10.09	ODB	Annual Maintenance
220 kV Chukha-Bipara-II	20.10.09	ODB	20.10.09	ODB	Annual Maintenance
220 kV Chukha-Bipara-III	21.10.09	ODB	21.10.09	ODB	Annual Maintenance

OCB: On Continuous basis, ODB: On Daily Basis

- Duration of maintenance on last day will be on daily basis

Note: 1) All shutdowns are cleared on tentative basis and concurrence from ERLDC needs to be taken before availing actual shutdown.
2) Timing of shutdown of Powergrid transmission elements connected with West Bengal system availed on ODB basis is 0800 hrs to 1600 hrs.