

Orissa Power Transmission Corporation Ltd.
Bhubaneswar.



*Agenda
for
60th Power System Operational
Coordination Meeting*

Date: 30.12.2009

Venue: PTC, Chandaka, Bhubaneswar

**AGENDA FOR THE 60th POWER SYSTEM OPERATIONAL CO-ORDINATION MEETING
TO BE HELD AT PTC, Chandaka, Bhubaneswar ON
30.12.2009 (WEDNESDAY) AT 11.30 HOURS**

ITEM NO: 1 Confirmation of the minutes of the 59th Operational Coordination Meeting held at, SAIL, RSP, Rourkela, OPTCL, Bhubaneswar on 24.09.09.

The minutes of meeting was circulated vide letter No. SGM (PS)-PI-15/2007(Vol.-V)-1962⁽²⁷⁾, Dated 12.10.2009. No comment has been received from any of the members.

Members may offer their comments. If there is no comment, the minutes of the meeting may please be confirmed.

ITEM NO: 2 REVIEW OF GRID PERFORMANCE FOR NOVEMBER'09.

(A) Frequency:

Hourly frequency variation for the month of October & November'09

| Month | % of time frequency remained | | | | | |
|-------------|------------------------------|-----------|-----------|-----------|-------|-----------|
| | <49.2 | 49.2-49.5 | 49.5-50.0 | 50.0-50.3 | >50.3 | 49.2-50.3 |
| October-09 | 4.86 | 22.78 | 61.42 | 10.61 | 0.32 | 94.82 |
| November-09 | 0.40 | 7.62 | 54.13 | 32.34 | 5.51 | 94.09 |

Maximum & Minimum frequency during the month of October & November'09

| Month | Freq (Hz) | Date | Time |
|--------------|-----------------|------------|-----------|
| October-09 | Maximum – 50.50 | 19.10.2009 | 08:08 Hrs |
| | Minimum – 48.71 | 01.10.2009 | 05:47 Hrs |
| November-09 | Maximum – 50.64 | 22.11.2009 | 14:10 Hrs |
| | Minimum – 48.86 | 28.11.2009 | 13:41 Hrs |
| November-08* | Maximum – 50.58 | 24.11.2008 | 05:07 Hrs |
| | Minimum – 48.82 | 12.11.2008 | 04:08 Hrs |

The detail of frequency profile for the month of November'09 is enclosed as **Annexure-I**.

(B) Grid Demand for the month of October & November'09

| Month | Demand | Maximum Consumption | | Maximum Demand | | | Minimum Demand | | |
|-------------|--------|---------------------|----------|----------------|----------|-------|----------------|----------|-------|
| | MU | MU | Date | MW | Date | Time | MW | Date | Time |
| October-09 | 1729 | 58.33 | 06.10.09 | 3021 | 19.10.09 | 19:00 | 1695 | 28.10.09 | 14:00 |
| November-09 | 1547 | 56.13 | 14.11.09 | 2897 | 13.11.09 | 19:00 | 1540 | 30.11.09 | 02:00 |
| Nov-08* | 1554 | 55.20 | 20.11.08 | 2901 | 10.11.08 | 19:00 | 1475 | 04.11.08 | 14:00 |

The Hrly average demand on daily basis for the month of **November'09** is enclosed as **Annexure-II**. **Members may please discuss.**

***The grid demand is calculated from the generation-exchange figures basing on instantaneous meter readings at STPS-TTPS, STPS-Duburi, STPS-Rengali & Indravati Generation and average meter reading of the rest.*

(C) Voltage Profile of 220 KV Buses in OPTCL system for the month of November '09

| S/s Name | Maximum (KV) | Minimum (KV) | S/s Name | Maximum (KV) | Minimum (KV) |
|-------------|--------------|--------------|-------------|--------------|--------------|
| Jayanagar | 254 | 235 | Budhipadar | 232 | 220 |
| Theruvalli | 249 | 216 | Duburi | 240 | 223 |
| Bhanjanagar | 236 | 210 | Balasore | 230 | 205 |
| Chandaka | 232 | 210 | Meramundali | 230 | 215 |
| Narendrapur | 259 | 196 | Bidanasi | 234 | 211 |
| Joda | 228 | 217 | Katapalli | 227 | 213 |
| Tarkera | 227 | 220 | Nayagarh | 237 | 212 |
| Bhadrak | 230 | 190 | | | |

The maximum voltage at Narendrapur Grid S/s was 259kV occurring during off peak hours due to under loading of long transmission lines.

The minimum Voltage at Bhadrak occurred due to loading of radial Transmission lines.

(D) Energy Generation / Import during the month of November'09

| Source of Power | Energy (MU) |
|---|-------------|
| Thermal (TTPS+IB) | 420.14 |
| OHPC Stations including Machhkund share | 215.06 |
| CGP Support | 357.635 |
| ISGS drawal | 594.632 |

(E) DISCO Drawal upto the month of November '09

| Name of DISCO | Approved Energy drawal Prorated up to November'09 in MU | Actual Energy Drawal upto November'09 in MU | Difference (MU) (Prorated Vs. Actual) |
|---------------|---|---|---------------------------------------|
| CESU | 3533.33 | 4210.00 | -676.67 |
| NESCO | 3106.66 | 3118.25 | -11.59 |
| WESCO | 3786.66 | 4138.36 | -351.7 |
| SOUTHCO | 1320.00 | 1518.96 | -198.96 |

**The above figures are as per EBC data and Pool Cost data.*

Energy drawal by SOUTHCO are excluding of energy consumed by NALCO, Damanjodi and IMFA, Theruvalli

(F) Major Events in the month of October & November'09.

06.10.09- 3rd 130 MW unit of M/s. Bhusan Power & Steel Ltd., Thelkoloi, Sambalpur synchronised with OPTCL system through the existing 220 kV S/C line on D/C tower between Budhipadar Grid S/S and M/s. BPSL at 16:40 Hrs..

07.10.09- 132 kV Railway feeder from Hind Metal Switching station of OPTCL charged at 1:25 Hrs. after disconnecting from Grid Sub-station.

28.10.09- 24 MW CGP of Orissa Sponge Iron & Steel Ltd. Synchronised with OPTCL system at Polasponga grid S/s. at 20:30 Hrs.

06.11.09- 2nd 40 MVA, 132/33 kV transformer of Alstom make is commissioned and idle charged at 18:27 hrs in place of 20 MVA transformer of Aditya Vidyut make at Dhenkanal grid S/S.

(G) Under Frequency Relay operation in OPTCL System during the month of November'09.

There is no UF Relay operation occurred during the month of November'09.

The status of procurement and installation of df/dt Relay in OPTCL network may please be deliberated

CGM (O&M) may please deliberate

(H) Important Grid Incidences during the month of October & November'09

The important Grid incidents occurred during the month of October'09 and November'09 is annexed as Annexure-III(a) & III (b).

Members may discuss

CGM (O&M) may please deliberate on the above issue

(I) Outage of major transmission Lines/ Elements during the month of October & November'09 (for more than 10 hours).

Outage of transmission lines/elements for the month of October-09

| Sl No | Transmission lines | Tripping time | Restoration time | Reason |
|-------|--|-------------------|-------------------|---|
| 1 | 220/132 kV 100MVA Auto-II at Duburi | 5.10.09 23:35 | 6.10.09 23:50 | 'Y' phase CT burst on 132kV side |
| 2 | 220 kV Joda-TTPS Ckt-II | 7.10.09 15:01 | 9.10.09 17:25 | 'R' phase conductor snapped at Loc No-92 on heavy lightning |
| 3 | 220 kV New Duburi-Paradeep Ckt-II | 10.10.09 11:17 | 11.10.09 09:05 | Tree branches touched the line between Loc. No.-374 to 380 & 'R' phase conductor snapped at Loc.No.-379 |
| 4 | 220/132 kV, 160 MVA Auto-I at Budhipadar S/S | 12.10.09 17:45 | 13.10.09 15:44 | 'Y' phase LA on 220kV side burst |
| 5 | 132 kV Aska-Chhatrapur Ckt-I | 13.10.09 22:16 | 14.10.09 11:30 | Tree branches touched the line between Loc. No.-25 to 26 |
| 6 | 220 kV New Duburi-Paradeep Ckt-I | 18.10.09 14:21 | 19.10.09 17:00 | Insulator damaged at Loc.No.-390 |
| 7 | 220 kV Theruvali-Indravati Ckt-I | 19.10.09 03:45 | 20.10.09 12:47 | 'Y' phase jumper snapped at Loc. No.-291. |
| 8 | 132 kV Katapalli-Bolangir Ckt. | 20.10.09 18:35 | 21.10.09 12:20 | 'B' phase conductor snapped at Loc. No-255 of 132kV Bargarh-Bolangir section. |
| 9 | 132 kV Paradeep-PPL Ckt-II | 28.10.09 16:01 | 29.10.09 14:02 | 'R' ph LA burst at Paradeep S/S. |

Outage of transmission lines/ elements for the month of November-09

| Sl. No | Transmission lines | Tripping time | Restoration time | Reason |
|--------|---|-------------------|-------------------|--|
| 1 | 132 kV Joda-Nalda Ckt | 4.11.09 17:46 | 05.11.09 12:30 | Tree fell on line between Loc. No-234 to 235 |
| 2 | 220 kV Joda-Jamshedpur Ckt | 13.11.09 06:58 | 13.11.09 20:16 | Theft of CT cable at Joda S/S |
| 3 | 132 kV Tarkera-Rajgangpur Ckt | 15.11.09 13:50 | 19.11.09 16:10 | 'Y' ph CVT damaged at Rajgangpur S/S |
| 4 | 220 kV Tarkera- Barkot Ckt | 17.11.09 16:42 | 18.11.09 21:12 | B' phase conductor snapped between Loc. No-371 to 372 |
| 5 | 132 kV OCL-Salipur Ckt | 18.11.09 15:47 | 19.11.09 10:45 | 'R' ph insulator damaged at Loc. No-72 |
| 6 | 220 kV Budhipadar-IB Ckt-II | 21.11.09 14:40 | 22.11.09 18:40 | 'R' phase CVT burst at Budhipadar S/S |
| 7 | 220/132 kV, 100 MVA Auto-II at Duburi S/S | 24.11.09 17:10 | 25.11.09 19:48 | Oil leakage from 'B' phase 220 kV side breaker |
| 8 | 220 kV Jaynagar- U.Kolab Ckt-I | 25.11.09 19:18 | 27.11.09 20:58 | 'R' phase CT to breaker jumper snapped at Jaynagar S/S |

From the above data it is noticed that, most of the tripping are due to failure of insulators, jumper snapping and CT bursting.

C.G.M.(O&M) may please deliberate.

ITEM NO: 3 Drawal of Machhakund Power

The hourly drawal of Machhakund power during the month of November'09 is annexed herewith as Annexure-IV. The average drawal during November 2009 was **36 MW**. Present drawal from Machhkund is to the tune of **25 MW** in average. At present only four nos. of Machhakund units are available in the bus, generating 68 MW.

Sr. G.M (PP), Gridco Ltd. may please deliberate the status.

Display of Machhkund generation:

OHPC may deliberate regarding procurement action of RTU to be installed at Machhakund PH

ITEM NO: 4 Review of Outage Program of State Generators / Transmission elements for the month of December'09 & January'10:

Outage programme of EHT lines and S/S for the year 2009-10 is as per the approved schedule.

Tentative Outage programme for State Generators for December'09 & January'10 are as follows:

| Sl. | Station | Unit | December'09 | | January'10 | |
|-----|--------------|-------------------|---|--|---|---|
| 1 | Burla | # 3 # 4 | 03.12.09 to 17.12.09 - | Annual Maintenance - | - 1.01.10 to 31.01.10 | - Annual maintenance |
| 2 | Chiplima | # 3 | 24.11.09 to 15.12.09 | Annual Maintenance | - | - |
| 3 | U.kolab | # 3 | 10.12.09 to 28.12.09 | Annual Maintenance | - | - |
| 4 | Rengali | # 1 #5 #4/2 | 18.08.08 to Continue 17.11.09 to 16.12.09 17.12.09 to Continue | Generator fault - Annual maintenance | 18.08.08 to Continue - 17.12.09 to 18.01.10 | Generator fault Annual maintenance Annual maintenance |
| 5 | U. Indravati | # 3 | - | - | 15.01.10 to 10.02.10 | Annual maintenance |

Representative from OHPC is requested to give a deliberation on the outage programme.

ITEM NO: 5 Generation Program for the month of December'09 & January'10.

Generation schedule for the month of Dec & January'09 furnished by OHPC are given below.

| Name of Hydro Gen. Station | Generation Programme (MW) | | Reservoir Level as on 01.11.09 | Reservoir Level as on 01.12.09 | MDDL | High Flood Reservoir Level |
|----------------------------|---------------------------|------------|--------------------------------|--------------------------------|----------|----------------------------|
| | Dec-09 | Jan'10 | | | | |
| HPS, Burla | 10+5 | 15+10 | 626.02 ft | 625.52 ft | 590 ft. | 630 ft. |
| U.Indravati | 10 | 165 | 637.52mtr | 637.09 mtr | 625mtr | 642 mtr |
| Balimela | 10 | 90 | 1467.80ft | 1471.50 ft | 1440 ft. | 1516 ft. |
| U.Kolab | 10 | 30 | 849.64mtr | 849.46 mtr | 844 mtr | 858 mtr. |
| Rengali | 10 | 05 | 120.46mtr | 120.05 mtr | 109.2mtr | 123.5 mtr. |
| MKD (O/D) | 30 | 30 | 2735.35ft | 2732.20 ft | 2685 ft. | 2750 ft. |
| TOTAL | 85 | 345 | | | | |

ITEM NO: 6 Status of New Lines funded by WB/ADB / Deposit work / OPTCL's own funding

| Sl. No | Details of project | Status as on last meeting | Need to be deliberated by |
|--------|---|--|---------------------------|
| 1 | 132 kV Burla-Sambalpur SC line LILO at Katapali | The construction is under progress and expected to be charged during September 2009. | Sr.GM (TP &C) |
| 2 | of 220/132 kV Bolangir S/S and 220 kV Katapali – Bolangir SC line | The construction is under progress and expected to be charged during September 2009. | Sr.GM (TP &C) |

Sr.GM.(TP&C), OPTCL may please deliberate the present status

ITEM NO:7 Communication issues

(I) Integration of NALCO & RSP CGPs with OPTCL –Present status May be intimated.

In the last meeting NALCO has stated that procurement action for RTU has been taken by them
NALCO may please deliberate the status.

Installation of RTU and associated equipments for RSP.

G.M (Telecom) may please deliberate the present status

(II) Installation of communication equipment by CGPs/ Industries.

As stated by A.G.M (Telecom), in the last meeting, the status of installation of SCADA/PLCC equipments of some of the major CGPs is as follows.

| Sl. No | Name of CGP | Status of procurement of RTU and equipments |
|--------|---|---|
| 1 | M/S BSSL, Meramunduli | All equipments commissioned. Data is not displaying due to problem in digital system. Breaker status has yet to be displayed. |
| 2 | M/S Hind Metals, Meramunduli | Arrival of ABB engineers to rectify the problem is awaited. |
| 3 | M/s Bhushan Power & Steel Ltd, Jharsuguda | Order for modification has been placed with Gfenu. |
| 4 | M/S EMAMI | Already commissioned, but still under observation due to erratic display. |

G.M (Telecom) may please deliberate the present status.

- (III) At present 22 Nos. of CGPs have been allowed connectivity with OPTCL system at different Voltage levels. Out of them only a handful of CGPs have complied SCADA provision for real time data display, due to which, a substantial quantum of power injection / drawal could not be monitored on real time.

G.M (Telecom) may please deliberate the action taken in this regard.

(IV) Non- displaying of data of the transmission elements / generating units.

It was deliberated in the last meeting that a proposal has been sent to PGCIL to for Detail Project Report (DPR) for integrate the remaining elements in the SCADA system. The same shall be placed in the BoD, OPTCL for approval.

G.M (Telecom) may please deliberate the present status.

ITEM NO:8 JSL issues:

- (1) Tripping of 220 kV Duburi(old)-Duburi(New) & Baripada (PG)-Balasore line

On 29.11.2009 at 19:45 hrs 220 kV Baripada(PG)-Balasore line tripped due to over load and subsequently Duburi (old)-Duburi(new) pulled out.

On 12.12.2009 at 21:37 hrs 220 kV Duburi-Balasore line tripped on E/F relay indication followed by tripping of Duuburi(Old)-Dubuti (new) line.

Due to the above tripping Generators of M/S JSL got islanded. It is suggested by JSL to review the relay co-ordination at Duburi command area.

(2) Metering of 220 kV JSL-I & II feeders through summation CT arrangement.

(3) M/S JSL is likely to enhance their drawal to 50 MW during 2011. For better stability, Baripada (PG)-Balasore and Balasore-Duburi may be made double circuit.

ITEM NO:9: Issue of planned outage.

It is noticed that, permission for planned outages of important elements, effecting power supply to the State Capital Bhubaneswar and prolonged outages are being sent to SLDC without the knowledge of CGM (O&M) / Director (Engg). SLDC is forwarding the proposal again to Director (Engg) for approval for which, a lot of time is being consumed. It is suggested that all such proposals may be routed through CGM (O&M), OPTCL so that, SLDC may not forward the proposal again.

CGM (O&M) may please take necessary action and instruct all the G.M in charge of EHT (O&M) accordingly.

ITEM NO:10: Over drawal by Discoms.

It is noticed that instead of repeated instructions the Discoms are not limiting their drawals as per the schedule, which causes over drawal from the grid at adverse frequency conditions.

Members may discuss.

ITEM NO:11: Members may raise issues if any.

ITEM NO:12 Date and Venue of the next (61st) PSOC meeting:

The members may decide the Venue and date of the 61st Power System Operational Co-ordination meeting.