

Odisha Power Transmission Corporation Ltd.
Bhubaneswar.



Agenda
for
96th Power System Operational Coordination Meeting

Date: 25.04.2016
Venue: PTC, Chandaka.

Agenda for 96th PSOC Meeting to be held on 25.04.2016 at PTC, Chandaka

Item no. 1: Confirmation of the minutes of the 95th PSOC Meeting held on 29.03.2016

The minutes of meeting was circulated vide letter No. SGM (PS)-PI-15/2015/1114⁽⁴³⁾ dated 20.04.2016 to all the members and also uploaded in the SLDC website. 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.

PART A

(List of items to be discussed for which the details are given in the subsequent parts)

B : Grid Performance for the month of March'2016

C.1: Implementation of Automatic Demand Management Scheme

C.2: 220 kV inter-connecting lines of OPTCL with 400/220 kV Bolangir (PG), Keonjhar & Pandiabil S/s

C.3: Restoration of PLCC system of important lines

C.4: Preparation of crisis management plan for Cyber Security in Power Sector in line with CERT-IN.

C.5: Certification through BIS as per IS 18001:2007 to all generating/ transmission units.

C.6: Energy Generation data management from Renewable Energy Sources

C.7: Compilation of data for meeting Renewable Energy targets of 175 GW by 2020 - Reference from MNRE

C.8: Long outage of important transmission lines

C.9: Replacement / Repair of meters on various locations

C.10: Dynamic data of Generator Models required in PSSE for Simulations –ERLDC

D.1: Non-compliance of drawal schedule by DISCOMs

D.2: Revival of Station transformer for station auxiliary supply at Balimela HEP

D.3: Non-compliance of Grid Code provision by Mendhasal sub-station.

D.4: Prolonged outage of transmission elements and tentative revival dates

D.5: Maintenance of 400 kV Indravati (OHPC)- Indravati (PG) S/C line.

D.6: Communication issues

D.7: Web based drawal / generation scheduling.

D.8: Implementation of Automatic Meter Reading for OPTCL-Discom interface points.

D.9: Software for Deviation charge billing.

D.10: DISCOM Issues

E.1: Commissioning status of New Transmission elements.

E.2: Energy Metering at Hydro Stations.

E.3: TTPS Issue.

E.4: Reactive Power Management

E.5: Major Events in the month of March'16

E.6: Important Grid Incidences during the month of March'16.

E.7: Outage of major transmission Elements during the month of March'16. (above 10 hrs).

E.8: Review of Outage Program of State Generators for the month of May'2016.

E.9: Generation Program for the month of May'16.

E.10: Anticipated power generation and demand for the month of May'2016.

F.1: Date and Venue of the next (97th) PSOC meeting

PART B: GRID PERFORMANCE

Review of Grid Performance for the month of March'16.

(A) Frequency:

Hourly frequency variation for the month of March'16.

| Month | % of time frequency remained | | | | |
|---------------|------------------------------|-------------|-------------|--------------------|--------|
| | <49.00 | 49.00-49.70 | 49.70-49.90 | 49.90-50.05 | >50.05 |
| Jan'16 | 0.00 | 0.00 | 7.56 | 65.59 | 26.86 |
| Feb'16 | 0.00 | 0.02 | 11.92 | 75.09 | 12.97 |
| Mar'16 | 0.00 | 0.02 | 12.27 | 73.46 | 14.25 |

Maximum & Minimum frequency during the month of March'16.

| Month | Freq (Hz) | Date | Time |
|--------------------|-----------------|----------|-----------|
| February'16 | Maximum – 50.18 | 01.02.16 | 13:00 Hrs |
| | Minimum – 49.76 | 25.02.16 | 18:45 Hrs |
| March'16 | Maximum – 50.17 | 23.03.16 | 18:00 Hrs |
| | Minimum – 49.75 | 18.03.16 | 14:30 Hrs |

(B) Grid Demand for the month of March'16.

| Month | Demand | | Maximum Consumption | | Maximum Demand | | | Minimum Demand | | |
|---------------|-------------|------------------|---------------------|-----------------|----------------|-----------------|--------------|----------------|-----------------|--------------|
| | MU | Avg. (MW) | MU | Date | MW | Date | Time | MW | Date | Time |
| Feb'16 | 2083 | 2993 | 77.00 | 23.02.16 | 4021 | 23.02.16 | 20:00 | 2201 | 09.02.16 | 14:00 |
| Mar'16 | 2403 | 3230 | 81.85 | 23.02.16 | 4175 | 12.03.16 | 21:00 | 2427 | 28.03.16 | 07:00 |
| Mar'15 | 2203 | 2960 | 79.38 | 25.03.15 | 3981 | 25.03.15 | 21:00 | 2219 | 06.03.15 | 15:00 |

Members may please discuss.

(C) Voltage Profile of 220 kV Buses in OPTCL system for the month of: March'16

| Sl. No | S/s Name | Maximum | | | Minimum | | |
|--------|-------------|---------------|-----|-------|---------------|-----|-------|
| | | kV | Day | Time | kV | Day | Time |
| 1 | Jayanagar | 240.57 | 17 | 16:00 | 215.06 | 10 | 11:45 |
| 2 | Theruvalli | 234.28 | 17 | 17:00 | 202.24 | 30 | 18:45 |
| 3 | Bhanjanagar | 231.80 | 16 | 04:15 | 204.95 | 30 | 16:45 |
| 4 | Chandaka | 232.95 | 17 | 15:00 | 181.17 | 10 | 12:15 |
| 5 | Narendrapur | 221.35 | 16 | 04:15 | 164.08 | 30 | 18:45 |
| 6 | Joda | 238.22 | 1 | 14:00 | 208.81 | 12 | 19:00 |
| 7 | Tarkera | 232.90 | 28 | 06:00 | 224.06 | 10 | 19:30 |
| 8 | Bhadrak | 230.47 | 15 | 02:45 | 208.71 | 26 | 20:15 |
| 9 | Paradeep | 226.72 | 28 | 07:45 | 199.58 | 10 | 20:00 |
| 10 | Budhipadar | 234.97 | 28 | 02:45 | 221.41 | 31 | 19:15 |
| 11 | Duburi(O) | 229.89 | 8 | 03:45 | 212.17 | 10 | 20:00 |
| 12 | Duburi (N) | 224.01 | 8 | 03:30 | 206.74 | 10 | 19:45 |
| 13 | Balasore | 231.11 | 1 | 02:30 | 210.26 | 26 | 20:15 |
| 14 | Meramundali | 226.20 | 15 | 03:45 | 216.50 | 10 | 20:15 |
| 15 | Bidanasi | 232.72 | 28 | 06:45 | 215.98 | 26 | 19:15 |
| 16 | Katapalli | 237.00 | 28 | 3:00 | 210.38 | 10 | 19:00 |
| 17 | Nayagarh | 266.32 | 10 | 12:30 | 203.45 | 30 | 16:45 |
| 18 | Mendhasal | 233.47 | 17 | 15:00 | 199.87 | 30 | 16:45 |
| 19 | Bolangir | 240.86 | 28 | 02:45 | 194.16 | 10 | 18:45 |
| 20 | Barkote | 230.47 | 15 | 02:45 | 208.71 | 26 | 20:15 |
| 21 | Laxmipur | 292.53 | 10 | 12:30 | 210.38 | 30 | 18:45 |

The maximum Voltage of 240.57 kV occurred at Jaynagar 220 kV bus while Narendrapur, 220 kV buses have experienced the minimum Voltage of **164.08** kV. Bus Voltages at Samgara and Lapanga could not be incorporated due to non availability of energy meter in those S/Ss.

Members may discuss.

**(D) Loading of 220/ 132 kV Auto at 220 kV S/Ss in OPTCL system for the month of Mar-16
AUTO TRANSFORMER LOADING FOR THE MONTH OF MARCH'2016**

| Name of the 220 kV Sub-Station (Feeding Sub-stations/Feeders) | Capacity MVA | Drawal details | | | | | | REMARKS |
|--|-----------------|----------------|-------|-------|---------|-----|-------|---|
| | | Maximum | | | Minimum | | | |
| | | MW | Day | Time | MW | Day | Time | |
| JAYANAGAR 220/132 KV. {Damanjodi(NALCO), Traction S/Ss, Tentulikhunti, Sunabeda, Jayanagar} | 1x160 | 109.56 | 10 | 16:30 | 11.84 | 16 | 0:45 | |
| | 1x160 | 76.96 | 24 | 18:15 | 11.72 | 16 | 2:00 | |
| THERUVALLI 220/132 KV. {Theruvalli, IMFAL(I), JK(I), Junagarh, Kesinga,Powmex(I), Rayagada, } | 1x100 | 65.64 | 15 | 19:45 | 7.76 | 28 | 15:45 | Rayagada & Paralakhemundi can be fed from Machhkund system. |
| | 1x100 | 62.28 | 15 | 19:30 | 0.20 | 28 | 11:15 | |
| NARENDRAPUR 220/132KV { Narendrapur, NarendrapurTr, Berhampur, Chhatrapur, Ganjam, Balugaon, Digapahandi, Mohana.} | 1x160 | 118.04 | 31 | 21:45 | 21.68 | 17 | 14:45 | |
| | 1x160 | 117.72 | 31 | 22:00 | 22.08 | 17 | 15:00 | |
| | 1x100 | NOT AVAILABLE | | | | | | |
| BHANJANAGAR 220/132 KV { Bhanjanagar, Aska, Phulbani, Ganjam, Chatrapur} | 1x160 | 95.76 | 9 | 19:00 | 13.12 | 30 | 16:45 | |
| | 1x160 | 126 | 2 | 18:45 | 11.00 | 30 | 17:00 | |
| CHANDAKA 220/132 KV { Chandaka, Bhubaneswar, Nimapada, Ransinghpur, Puri,Kesura, Kaipadar Tr. } | 1x100 | 74.24 | 19 | 19:15 | 16.24 | 17 | 15:00 | |
| | 1x160 | 130.84 | 19 | 19:30 | 28.36 | 17 | 15:15 | |
| | 1x100 | 81.28 | 19 | 19:00 | 17.52 | 17 | 15:15 | |
| | 1x160 | 125.44 | 19 | 19:30 | 26.72 | 17 | 15:15 | |
| BIDANASI 220/132 KV {Bidanasi, Khurda } | 1x160 | NOT AVAILABLE | | | | | | |
| | 1x100 | 52.44 | 18 | 19:00 | 11.72 | 31 | 6:45 | |
| | 1x100 | 39.04 | 3 | 11:15 | 11.80 | 28 | 6:30 | |
| TTPS 220/132 KV { Chainpal, FCI (I), Angul, MCL Nandira(I), Rairakhole,Boinda,Kamakhyanagar, Kalarangi,Nuapatna, Choudwar } | 1x160 | 63 | 22 | 20:00 | 0 | 2 | 22:00 | |
| | 1x160 | 63 | 22 | 20:00 | 0 | 2 | 22:00 | |
| MERAMUNDALI 220/132 kv {Meramundali Traction, Dhenkanal, Navchrome(I), Hind Metal, Aarti,BRG} | 3x100 | 47.12 | 29 | 10:30 | 5.4 | 28 | 6:30 | |
| | | 46.28 | 29 | 10:30 | 5.12 | 28 | 6:30 | |
| | | 44.72 | 29 | 11:15 | 4.36 | 28 | 6:00 | |
| DUBURI 220/132 KV {Duburi, Barnipal(I), BRPL, MESCO, Jajpur Road, Kalarangi, Jajpur Town} | 3x100 | 70.48 | 5 | 19:00 | 8.12 | 30 | 15:15 | Auto-II under shutdown. |
| | | 65.40 | 25 | 19:00 | 8.12 | 30 | 15:15 | |
| | | 62.28 | 4 | 19:30 | 10.8 | 2 | 17:15 | |
| JODA 220/132 KV { Joda, Tensa, FAP(I), Bolani(I), Nakta Tr.,Polasponga, *Rairangpur, Bhalulata traction} | 3x100 | NOT AVAILABLE | | | | | | *** - Alternate P/S from KucheI. |
| | | NOT AVAILABLE | | | | | | |
| | | NOT AVAILABLE | | | | | | |
| BALASORE 220/132 KV { Balasore, Birta Tyre(I), Ispat Alloy(I), Jaleswar, Jaleswar(T)} | 2x160 | 122 | 18 | 19:45 | 53.32 | 28 | 11:45 | |
| | | 122 | 18 | 19:15 | 53.28 | 28 | 11:30 | |
| BUDHIPADAR 220/132 KV { Jharsuguda, Jharsuguda Tr, Cemco(I), MCL, Sundergarh,Brajarajagar, Rajgangpur} | 2x160 | 135.6 | 18 | 18:15 | 8.16 | 17 | 17:30 | |
| | | 122.72 | 19 | 9:30 | 11.48 | 18 | 8:15 | |
| TARKERA 220/132 KV { Rourkela, Rourkela Tr.,RSP(I), Chhend, Adhunik Metal, Rajgangpur, OCL(I), Rajgangpur Tr.} | 4x100 | 72.56 | 31 | 22:45 | 9.68 | 22 | 7:00 | |
| | | 63.16 | 30 | 16:30 | 9.68 | 22 | 6:45 | |
| | | 72.36 | 31 | 22:45 | 10.36 | 22 | 7:00 | |
| | | 71.76 | 29 | 19:30 | 9.92 | 22 | 6:45 | |
| KATAPALI 220/132 KV {Chipilima,Bargarh, ACC,Sonepur & Katapali area load.} | 1x100 | 32.68 | 28 | 19:15 | 7.12 | 19 | 13:45 | Supported by Burla & Chipilima power. |
| | 1x100 | 31.72 | 23 | 9:45 | 5.48 | 19 | 13:45 | |
| | 1x160 | NOT AVAILABLE | | | | | | |
| BHADRAK 220/132 KV {Bhadrak area load, Bhadrak(T),Soro, FACOR (I), Dhamra Port} | 3x100 | 48.56 | 25 | 21:00 | 3.56 | 5 | 11:45 | |
| | | 50.32 | 1 | 19:45 | 4.04 | 14 | 21:00 | |
| | | NOT AVAILABLE | | | | | | |
| PARDEEP 220/132 KV { Paradeep, Kendrapada, Pattamundai, Chandikhol, Cuttack, Jagatsinghpur, Phulnakhara} | 1x160 | 127.92 | 31 | 15:00 | 14.32 | 11 | 15:15 | |
| | 1x100 | 78.12 | 8 | 22:30 | 14.64 | 21 | 11:15 | |
| | 1x50 | NOT AVAILABLE | | | | | | |
| BOLANGIR (SADAIPALLI) 220/132 KV { Bolangir, Patnagarh, Sonepur, Sainatala, Khariar, Barpalli } | 2x160 | 55.44 | 4.00 | 19:00 | 9.12 | 28 | 19:15 | |
| | | 54.84 | 26.00 | 19:30 | 10.64 | 28 | 2:30 | |
| Lapanga | 1x160 | NOT AVAILABLE | | | | | | |
| | 1x160 | NOT AVAILABLE | | | | | | |
| Mendhasal | 1x100 | NOT AVAILABLE | | | | | | |
| Samangara | 1x100 | NOT AVAILABLE | | | | | | |

In the last meeting it was deliberated that procurement of meters was under process.

CGM (O&M) may please deliberate the status.

(E) DISCOM Drawal up to the month of March'16

| Name of DISCOM | Month | Approved Energy Drawal Prorated for the month (MU) | Scheduled Energy (MU) | Actual Energy Drawal (MU) | Open Access Import Schedule (MU) | Net Energy Drawal (MU) | Overdraw (MU) |
|----------------|---------------|--|-----------------------|---------------------------|----------------------------------|------------------------|---------------|
| | | 1 | 2 | 3 | 4 | 5=(3-4) | 6=(5-2) |
| CESU | April'15 | 721.644 | 676.468 | 700.852 | 3.892 | 696.96 | 20.492 |
| | May'15 | 745.699 | 741.683 | 803.331 | 4.582 | 798.749 | 57.066 |
| | June'15 | 721.644 | 680.782 | 731.303 | 4.094 | 727.209 | 46.427 |
| | July'15 | 745.699 | 682.482 | 747.814 | 4.552 | 743.262 | 60.78 |
| | Aug'15 | 745.699 | 730.38 | 787.091 | 1.844 | 785.247 | 54.867 |
| | Sept'15 | 721.644 | 668.276 | 716.483 | 1.247 | 715.236 | 46.96 |
| | Oct'15 | 745.699 | 729.776 | 733.265 | 3.606 | 729.659 | -0.117 |
| | Nov'15 | 721.644 | 607.136 | 636.447 | 4.449 | 631.998 | 24.862 |
| | Dec'15 | 745.699 | 572.148 | 596.675 | 4.497 | 592.178 | 20.03 |
| | Jan'16 | 745.699 | 579.168 | 586.311 | 4.414 | 581.897 | 2.729 |
| | Feb'16 | 697.589 | 605.229 | 633.293 | 5.129 | 628.164 | 22.935 |
| | Mar'16 | 745.699 | 689.994 | 738.028 | 4.468 | 733.56 | 43.566 |
| WESCO | April'15 | 604.11 | 569.419 | 692.842 | 124.592 | 568.25 | -1.169 |
| | May'15 | 624.247 | 608.011 | 742.524 | 132.217 | 610.307 | 2.296 |
| | June'15 | 604.11 | 571.331 | 677.972 | 107.811 | 570.161 | -1.17 |
| | July'15 | 624.247 | 550.147 | 716.622 | 102.587 | 614.035 | 63.888 |
| | Aug'15 | 624.247 | 571.706 | 700.166 | 107.046 | 593.12 | 21.414 |
| | Sept'15 | 604.11 | 530.99 | 668.478 | 96.912 | 571.566 | 40.576 |
| | Oct'15 | 624.247 | 550.739 | 732.87 | 124.713 | 608.157 | 57.418 |
| | Nov'15 | 604.11 | 524.758 | 655.613 | 116.562 | 539.051 | 14.293 |
| | Dec'15 | 624.247 | 489.838 | 656.939 | 132.988 | 523.951 | 34.113 |
| | Jan'16 | 624.247 | 542.391 | 677.377 | 123.847 | 553.53 | 11.139 |
| | Feb'16 | 583.973 | 511.488 | 646.392 | 104.372 | 542.02 | 30.532 |
| | Mar'16 | 624.247 | 598.1 | 733.219 | 122.113 | 611.106 | 13.006 |
| NESCO | April'15 | 431.507 | 412.235 | 432.73 | 17.888 | 414.842 | 2.607 |
| | May'15 | 445.89 | 452.964 | 475.162 | 19.32 | 455.842 | 2.878 |
| | June'15 | 431.507 | 428.938 | 458.649 | 23.262 | 435.387 | 6.449 |
| | July'15 | 445.89 | 429.905 | 462.235 | 29.387 | 432.848 | 2.943 |
| | Aug'15 | 445.89 | 460.083 | 495.915 | 31.255 | 464.66 | 4.57702 |
| | Sept'15 | 431.507 | 417.33 | 486.661 | 38.715 | 447.946 | 30.616 |
| | Oct'15 | 445.89 | 449.492 | 493.603 | 41.506 | 452.097 | 2.605 |
| | Nov'15 | 431.507 | 380.024 | 443.309 | 68.066 | 375.243 | -4.781 |
| | Dec'15 | 445.89 | 382.554 | 437.523 | 64.787 | 372.736 | -9.818 |
| | Jan'16 | 445.89 | 419.675 | 500.987 | 80.535 | 420.452 | 0.777 |
| | Feb'16 | 417.123 | 415.908 | 464.245 | 52.968 | 411.277 | -4.631 |
| | Mar'16 | 445.89 | 506.473 | 559.631 | 57.179 | 502.452 | -4.021 |
| SOUTH CO | April'15 | 281.096 | 275.391 | 264.684 | 0 | 264.684 | -10.707 |
| | May'15 | 290.466 | 277.641 | 285.102 | 0 | 285.102 | 7.461 |
| | June'15 | 281.096 | 253.054 | 263.675 | 0 | 263.675 | 10.621 |
| | July'15 | 290.466 | 282.015 | 285.292 | 0 | 285.292 | 3.277 |
| | Aug'15 | 290.466 | 285.264 | 290.409 | 0 | 290.409 | 5.145 |
| | Sept'15 | 281.096 | 252.453 | 257.882 | 0 | 257.882 | 5.429 |
| | Oct'15 | 290.466 | 279.951 | 281.598 | 0 | 281.598 | 1.647 |
| | Nov'15 | 281.096 | 254.482 | 260.385 | 0 | 260.385 | 5.903 |
| | Dec'15 | 290.466 | 258.079 | 265.705 | 0 | 265.705 | 7.626 |
| | Jan'16 | 290.466 | 262.208 | 265.313 | 0 | 265.313 | 3.105 |
| | Feb'16 | 271.726 | 269.423 | 265.941 | 0.627 | 265.314 | -4.109 |
| | Mar'16 | 290.466 | 294.188 | 292.316 | 0.214 | 292.102 | -2.086 |

The figures are as per EBC data. Energy drawal by SOUTHCO are excluding of energy consumed by NALCO at Damanjodi and IMFA at Theruvalli.

Members may please discuss.

(F) Energy Generation / Import during the month of March'16

| Source of Power | Energy (MU) |
|---|----------------|
| Thermal (TTPS+IB) | 517.91 |
| OHPC Stations including Machhkund share | 325.88 |
| IPP & CGP Support | 738.86 |
| ISGS drawal | 820.83 |
| TOTAL | 2403.48 |

(G) Drawal of Machhakund Power

The drawal of Machhakund power up to the month of **March'16** are as detailed:

| Month | Total Generation | | Odisha Drawal | | AP Drawal | |
|-----------------|------------------|---------------|----------------|---------------|----------------|---------------|
| | MU | MW | MU | MW | MU | MW |
| April'15 | 60.537 | 84.08 | 26.706 | 37.09 | 31.114 | 43.21 |
| May'15 | 38.508 | 51.76 | 17.300 | 23.25 | 19.478 | 26.18 |
| June'15 | 24.556 | 34.11 | 8.927 | 12.40 | 14.345 | 19.92 |
| July'15 | 52.651 | 70.77 | 24.036 | 32.31 | 26.266 | 35.30 |
| August'15 | 60.393 | 81.17 | 29.393 | 39.51 | 28.749 | 38.64 |
| September'15 | 43.426 | 60.31 | 18.045 | 25.06 | 23.316 | 32.38 |
| October'15 | 54.825 | 73.69 | 25.288 | 33.99 | 27.537 | 37.01 |
| November'15 | 52.776 | 73.30 | 23.079 | 32.05 | 27.339 | 37.97 |
| December'15 | 51.372 | 69.05 | 26.510 | 35.63 | 22.520 | 30.27 |
| January'16 | 50.821 | 68.31 | 27.415 | 36.85 | 21.077 | 28.33 |
| February'16 | 61.299 | 88.06 | 28.501 | 40.94 | 30.314 | 43.55 |
| March'16 | 52.789 | 70.95 | 25.354 | 34.07 | 25.213 | 33.88 |
| TOTAL | 603.953 | 811.76 | 280.554 | 377.08 | 297.268 | 399.55 |

In the 95th PSOC meeting it was decided that:

Sr. G.M (O&M), Zone-I shall instruct Jayanagar S/S to monitor Machhakund drawal to avoid hand tripping at their end.

DGM (OHPC) Upper Kolab shall coordinate Machhakund authority to make the traction bay functional and to pursue them for taking up the maintenance work.

Southco shall co-ordinate for early commissioning of 33 kV Akhusing –Gumuda feeder.

CGM (Telecom) shall explore installation of RVDU at Jayanagar Control room for monitoring of Machhakund drawal in co-ordination with M/s Chemtrol.

SLDC/ CGM (Const) / CGM (Telecom) / OHPC/ Southco Utility may deliberate the status.

(H) Under Frequency Relay operation in OPTCL System during the month of March'16.

Since, the frequency had never gone beyond the lowest setting of UFR, there was no UF Relay operation occurred during the month of **March'16**.

Members may note

PART C – Issues to be raised in 120th OCC meeting of ERPC sceduled on 28.04.16

C.1: Implementation of Automatic Demand Management Scheme

OPTCL vide mail dated 24.02.2016 pointed that Hon'ble CERC vide their order dated 31.12.2015 passed in Sou-motu Petition No.- 5/SM/2014 in the matter of non-compliance of Regulation 5.4.2 (d) of IEGC directed all Respondents (SLDCs) for implantation of ADMS in their respective control area. CERC have allowed dead line till 30.06.2016 to the Respondent for implementation of ADMS. Failing which they will be liable for action under Section 142 of the Act.

In 119th OCC, advised all the SLDCs to implement the ADMS in their respective control area by 30.06.2016.

Subsequently, on request from DVC & WBSEDCL, ERPC vide letter dated 05.04.2016 requested Powergrid to take up the issue for inclusion of DMS/ADMS application software in the new SCADA system under new ULDC project which would be of great help for the ER constituents in implementing the ADMS system in their respective control area and subsequent compliance of CERC directive

As decided in the 95th PSOC, SLDC has invited offer for providing consultancy service to prepare the tender documents for implementation of ADMS in OPTCL system.

O&M / Discoms / SLDC may deliberate

C.2: 220 kV inter-connecting lines of OPTCL with 400/220 kV Bolangir (PG), Keonjhar & Pandiabil S/s

PGCIL has already commissioned the 2 X 315MVA 400/220kV Bolangir S/s by LILOing of 400kV Meramandali-Jeypore S/C line and 400/220 kV Keonjhar S/s with an objective of supplying power from ER grid to its adjoining areas in Odisha. The status deliberated in the last meeting as detailed.

| Sl. No. | Name of the transmission line | Completion schedule |
|----------------|--|--|
| 1. | 2 X 315MVA 400/220kV Bolangir S/s | |
| a. | LILO of one circuit of Sadeipalli-Kesinga 220 kV D/C line at Bolangir S/S. | 7 out of 14 completed. Severe ROW problem. Negotiation under progress. |
| b. | LILO of one circuit of Katapalli-Sadeipalli 220 kV D/C line at Bolangir S/S. | All work completed. ERLDC agreed to charge the line without PLCC. Powergrid, Odisha has sent the relay settings to their corporate office for approval. Expected to be made through by end of April' 16. |
| 2. | 400/220 kV Keonjhar S/S. | |
| a. | Keonjhar (PG)-Keonjhar (OPTCL) 220 kV D/C line | Work order expected to be issued by Feb-16 |
| b. | Keonjhar (PG)-Turumunga (OPTCL) 220 kV D/C Line. | Yet to be awarded |
| 3. | 400/220 kV Pandiabil Grid S/s | |
| a. | Pratapsasan(OPTCL)-Pandiabil (PG) 220 kV D/C line | It will take 1 year for completion. |
| b. | LILO of one circuit of Atri-Puri (Samangara) 220 kV D/C line at Pandiabil (PG) | Pandiabili S/S is expected to be completed by April' 16. LILO of Atri-Samangra 220 kV line at Pandiabili, by July' 16 |

CGM (Const) / CGM (O&M) may please update the status.

C.3: Restoration of PLCC system of important lines

In 119th OCC, JUSNL informed that the following:

d) In 220 KV Ramchandrapur-Joda line auto-reclosure has been enabled and termination done in PLCC panels at Ramchandrapur end but due to non-availability of PLCC panels at Joda (OPTCL) end the A/R and PLCC scheme could not be implemented.

Further, it was informed that JUSNL is ready to share their standby PLCC panels (BPL make) with WBPDCCL (for Snataldih end) and OPTCL (for Joda end) to complete the PLCC schemes of both the above lines.

OCC advised WBPDCCL and OPTCL to accept the JUSNL offer and implement the PLCC scheme at the earliest for both the 220 kV lines.

WBPDCCL and OPTCL agreed and nominated their coordinators as follows to complete the work:

2) For 220 kV Ramchandrapur-Joda line:

Sh. L. Nayak, GM, OPTCL, M.- 943890780, e-mail: ele.lanayak@optcl.co.in

(ERPC Secretariat has issued a fax message vide no. 138 dated 21.03.2016 to JUSNL for taking up the issue with the above nominated coordinators for restoring the PLCC scheme of both the lines at the earliest.)

OPTCL vide mail dated 16.03.2016 informed the PLCC communication status of the important links under OPTCL as follows:

1. Jeypore(PG)-Jayanagar (Commn. in OPGW exists)
2. Rourkela(PG)-Tarkera (Commn. in OPGW exists)
3. Rengali(PG)-Rengali S/Y (Proposal for Commn. in OPGW is pending)
4. Indravati(PG)-Indravati(PH) (Proposal for Commn. in OPGW pending)
5. Baripada(PG)-Baripada (Tendering in Progress for OPGW)
6. Baripada(PG)-Rairangpur (Tendering in Progress for OPGW)

Subsequently, JUSNL vide letter dated 13.04.2016 has asked for consent of OPTCL and WBPDCCL for cost estimate details for further needful action.

CGM (Telecom) / CGM (O&M) may please update the status.

C.4: Preparation of crisis management plan for Cyber Security in Power Sector in line with CERT-IN.

The activity of the preparation of Crisis Management Plan for countering the cyber attacks and its implementation including the Mock Drills, audits etc. is being monitored by CEA regularly in line with crisis management plant of Ministry of Power. Power Utilities (including generation, transmission & distribution utilities) of eastern region are to furnish regularly, the updated status to Chief Engineer, Distribution Planning & Development Division, CEA. NTPC communicated their activity of the preparation of Crisis Management Plan for countering the cyber attacks vide letter dated 2nd August, 2013.

In 113th OCC, Member Secretary informed that during interaction with consultants of Grid Study Committee, NLDC agreed that they will plan for conducting workshops on crisis management plan for Cyber Security and few workshops will also be held in Eastern Region.

In the last meeting, CGM (IT) stated that the draft report has been prepared, which has to be finalized by the consultant. After finalizing the report, a workshop shall be organized by IT.

In the 95th PSOC IT representative stated that tendering for consultancy has been done. It may take one month time.

CGM (IT) may please deliberate the status.

C.5: Certification through BIS as per IS 18001:2007 to all generating/ transmission units.

In 84th OCC meeting all constituents were requested to interact with BIS with intimation to ERPC and get certified as per CEA direction.

In 85th OCC, NTPC informed that NTPC-Farakka has been certified with IS 18001. Other constituents including OHPC requested to interact with BIS with intimation to ERPC and get certified as per CEA direction. The matter is getting reviewed by highest authorities with top priority.

In the 95th PSOC, O&M stated that BIS, Kolkata have responded to send their offer

CGM (O&M) may deliberate the status.

C.6: Energy Generation data management from Renewable Energy Sources

RES development Division, CEA has been receiving monthly **generation details** and **installed capacity** of Renewable Energy Sources from respective SLDCs and other authorized agencies.

Some discrepancies have been found in the data as received by CEA and MNRE. The discrepancies indicated by CEA are as tabled below:

| Sl. No. | Generation Type | Data furnished to MNRE | Data furnished to CEA |
|---------|-----------------|------------------------|-----------------------|
| 1. | Small Hydro | 64.63 | 57.00 |
| 2. | Solar | 66.92 | 108.00 |
| 3. | Biomass | 20.00 | 20.00 |

Constituents are requested to reconcile/confirmed the correct information at the earliest.

SLDC / Gridco may please deliberate.

C.7: Compilation of data for meeting Renewable Energy targets of 175 GW by 2020 -- Reference from MNRE

CEA vide letter dated 29.03.16 has referred Ministry of Power letter no. 23/2/2005-R &R (Vol-XI), dated 22.03.2016 & MNRE letter dated 02.03.2016 regarding compilation of data for meeting Renewable Energy targets of 175 GW by 2020.

Concerned State Utilities /Generating companies are requested to submit data of their respective control areas in the format given below.

Installed Capacity (MW) & Generation (MU) from Renewable sources (Injected to Grid):

1. State / Centre
2. Month
3. Year

| Renewable resources / Organisation | Installed Capacity (MW) as on last date of the month | | | Generation (MU) during the month | | | Cumulative generation (MU) up to end of the month | | |
|---|--|--------------|----------------|----------------------------------|--------------|----------------|---|--------------|----------------|
| | Central sector | State sector | Private sector | Central sector | State sector | Private sector | Central sector | State sector | Private sector |
| 1. Wind | | | | | | | | | |
| 2. (a) Solar 1MW and above (b) Solar less than 1MW | | | | | | | | | |
| 3. Biomass | | | | | | | | | |
| 4. Biogas | | | | | | | | | |
| 5. Small Hydro (1MW to 25MW) | | | | | | | | | |
| 6. Any other | | | | | | | | | |

SLDC / Gridco may please deliberate.

C.8: Long outage of important transmission lines

a) Prolonged shutdown of 220kV Mermundali-Bhanjanagar-I

220kV Meramundali-Bhanjanagar-I was taken under shutdown on continuous basis for replacement of deteriorated conductors on 09/02/16 with scheduled completion date being 25/03/16. However, till date the shutdown has not yet been returned. It needs to be noted that with the depletion of hydro at South Odisha stations, any tripping of ckt-II is leading to cascade tripping of Mendhasal ICTs(2 x 315MVA), leading to disruption of capital area and important loads at Chandaka, Bhubhaneshwar, Nimapara and at times also the entire south Odisha has also gone into blackout subsequently.

OPTCL may furnish the day wise schedule of the pending works indicating the completion time as there has already been significant time over-run.

b) Prolonged shutdown of 220kV TTPS-Joda-I

220kv TTPS-Joda-I was taken under shutdown for replacement of old Sheep conductor by ACSR Zebra conductor w.e.f 13/02/16 to 15/04/16. However, the shutdown has not been returned till date. The above line is important specially in context of feeding Joda loads during s/d of 220kv Joda-Ramchandrapur during which redundancy of feed to Joda/Jindal/ Jamshedpur (DVC) is affected.

OPTCL may furnish the day wise schedule of the pending works indicating the completion time as there has already been significant time over-run.

CGM(O&M) may please deliberate.

C.9: Replacement / repair of meters on Various Locations

ii. Installation of New SEMs in B/C panels at Joda Grid S/s of OPTCL - OPTCL

OPTCL vide mail dated 30.12.2015 have requested for installation of new SEMs at B/C panel at their Joda GSS for 220kV Joda- Ramchandarpur & Joda – Jindal Interstate tie lines.

In the 117th OCC meeting Powergrid informed that required meters are already installed and SEM for bus coupler is not required.

SLDC deliberated in the OCC that, since there is no line CT, installation of meter in the B/C bay was sought for.

In 119th OCC, OPTCL informed that SEM at Joda end needs to be checked and corrected.

OPTCL informed that there is no line CT so 2 nos SEM for the bus-coupler at Joda end is required.

ERLDC requested OPTCL to furnish the SLD of the Joda Sub-station for their study and assessment of requirement of SEM for bus-coupler. OPTCL agreed.

Powergrid also agreed to look into the matter and resolve it.

CGM (O&M) may please discuss

C.10: Dynamic data of Generator Models required in PSSE for Simulations – ERLDC

To carryout proper simulation studies in PSSE, actual generator parameters are required as incomplete or incorrect modeling of generator may not give valid simulation result. Hence all the generating companies are requested to furnish data for generator, exciter, governor, PSS of their all generating units in the format.

In 114th OCC, the house was informed that the formats are available at ERPC website.(www.erpc.gov.in)

OCC advised all the generating utilities to submit the relevant information as per the format.

In the 95th PSOC meeting, OHPC stated that only 30 % data are available with them. SLDC stated that they may forward the data to ERPC / ERLDC. All other generators including CPPs may furnish their data to ERPC.

OHPC / OPGC/ TTPS / CGPs may deliberate.

PART-D – Operational Issues

D.1: Non-compliance of drawal schedule by DISCOMs

Non compliance of drawal schedule messages issued to Discoms during the month of **March'16**:

| Sl. No | Name of Discom | No. of message issued | Over drawal (MU) |
|---------------|-----------------------|------------------------------|-------------------------|
| 1 | CESU | 8 | 43.566 |
| 2 | WESCO | 11 | 13.006 |
| 3 | NESCO | 5 | -4.021 |
| 4 | SOUTHCO | 2 | -2.086 |
| | Total | 15 | 50.465 |

It is noticed that CESU had overdrawn to the tune of 43 MU followed by WESCO to the tune of 13 MU.

SLDC/ Discoms may please deliberate.

D.2: Revival of Station Transformer for Station Auxiliary supply at Balimela HEP.

It was suggested in earlier meetings for revival of station supply for Balimela HEP from Balimela Grid S/S.

In the 95th PSOC meeting, OHPC stated that revival of station supply from Balimela 220/33 kV S/S will be done by end of March' 2016.

OHPC may update.

D.3: Non-compliance of Grid Code provision by Mendhasal sub-station.

On 12.09.15, 400kV Mendhasal - New Duburi ckt tripped which was subsequently charged at Mendhasal in absence of charging code from ERLDC through SLDC. It should be ensured that all the executives in charge of 400 kV Grid S/Ss must be aware of Grid Code provisions. O&M may arrange training programme on “Awareness of GRID CODE” to all the executives posted at 400/220 kV S/Ss through OPTCL training cell to avoid such incidents in future.

Members may discuss

D.4: Prolonged outage of transmission elements and tentative revival dates

The tentative revival dates of transmission elements are updated in the last meeting are as follows:

| Sl.No | Name of transmission element | Reason of outage | Probable date of revival |
|--------------|---|--|--------------------------------------|
| 1 | 220kV Jayanagar-Theruvali ckt-III breaker | Breaker already erected but not commissioned. Isolator problem | All work completed. Not yet charged. |
| 2 | 132 kV Jayanagar-Sunabeda line | For conversion to double ckt | April'16. |
| 3 | 220 kV TTPS-Joda ckt-I | Replacement of conductor | April'2016 |
| 4 | 220 kV Meramundali-Bhanjanagar ckt-I | Replacement of conductor | April'2016 |

Outage of 220 kV Meramundali –Bhanjanagar ckt-I is causing overloading of Mendhasal ICT, which may aggravate during summer. Outage of TTPS-Joda ckt-I, limit the operational flexibility.

C.G.M. (O&M) may please update the status.

D.5. Maintenance of 400 kV Indravati (OHPC)- Indravati (PG) S/C line.

Indravati(OHPC)-Indravati(PG) 400 kV S/C line was being maintained by Powergrid since commissioning of the line. At present Powergrid is insisting OHPC / OPTCL for maintenance of the said line. As per Powergrid's statement, the line and bay at PGCIL end belongs to the then OSEB. A meeting was convened between Powergrid, OPTCL, Gridco and SLDC to resolve the ownership dispute. Powergrid vide their letter dated 19.03.2016, addressed to CGM (O&M) also indicated the same and requested OPTCL to take up the maintenance work. The line was tripped at PG end due to blasting of R-phase CB. OHPC and OPTCL may verify the records and resolve the issue.

In the 95th PSOC meeting Powergrid stated that since the line and bay at Indravati PG belongs to OPTCL / OHPC they should take up the maintenance work. Director (Commercial) stated that OHPC may collect the documents pertaining the ownership of the line and ICT at Indravati (OHPC) S/S from Govt. office, as the matter was dealt by the then Indravati Cell of under Electricity-cum –Electrical Projects. OHPC may intimate to OPTCL, the details of the 400 kV SC line. CGM (O&M) stated that let Powergrid maintain the bay at Indravati (PG) and OPTCL the two nos of bays at Mendhasal S/S (Baripada PG and Duburi line) for smooth operation of the system. It was decided that a meeting shall be convened to take a decision in this regard by 15th April'16. It was further decided that OPTCL shall provide the breaker pole and Powergrid will take up the restoration work. OHPC shall coordinate.

Powergrid/OHPC / O&M may deliberate the status.

D.6: Communication issues

Installation of communication equipment by CGPs / Industries.

The status of data communication from CGPs as deliberated in the last meeting is as follows

| Sl. No | Name of CGP | Present status |
|--------|------------------------------------|--|
| 1 | M/s IFFCO, Paradeep | Outdoor commissioning work completed. RTU was locally tested. After replacement of the faulty CVT, data will be integrated. |
| 2 | M/s MSP Mettalicks | PLCC / RTU installed. Database has already been prepared by OPTCL. Final RTU integration with OPTCL system by the vendor is awaited. |
| 3 | M/s NINL, Duburi | M/s NINL has requested for Scheme, BOQ for PLCC / SCADA, which has been forwarded by OPTCL. No action has been taken by NINL so far. |
| 4 | M/s Rohit Ferro tech | PLCC established and inspection by Telecom Engineers completed. Database has already been prepared by OPTCL. |
| 5 | M/s Vedanta Ltd. (IPP), Jharsuguda | Generators data remains suspect most of the times. |

It was decided that GCC, OPTCL may file a case before the OERC through RT&C wing of OPTCL against those CGPs not complying the data communication provisions with SLDC.

GCC / O&M / RT&C/ C.G.M. (Telecom.) may please deliberate.

D.7: Web based drawal / generation scheduling.

SLDC is going to implement web based drawal / generation scheduling for Dist. Utilities and State generating stations including IPPs and CGPs soon. A demo has been organized on 29.07.15. In the last meeting, CGM (IT) stated that, web based generation scheduling module for State generating stations has been already been developed by IT wing. Modules for Discom and CGP / IPP shall be made available before the next PSOC meeting. After approval by the stake holders the same shall be go live from September'15. All Users were requested to forward their respective schedule in the prescribed format.

In the 95th PSOC it was decided that, SLDC shall organize the training by 2nd week of April'16 after confirmation by IT wing.

CGM (IT) / SLDC may deliberate.

D.8: Implementation of Automatic Meter Reading for OPTCL-Discom interface points.

The work for Automatic Meter Reading (AMR) for all the interface points is in progress.

In the last meeting all Discoms have agreed to display the meter data on the dashboard required for analysis purpose.

In the last meeting CGM (IT) stated that from 1st March onwards the AMR shall be made "Go live". Data will be available after one hour lapses of time.

CGM (IT) stated that AMR data for six types of meters has been mailed to GM (SLDC) for checking and acceptance. Action will be taken after acceptance of the data.

In the 95th PSOC IT stated that after receiving report from SLDC the process will be implemented.

SLDC / CGM (IT) may deliberate.

D.9: Software for Deviation charge billing.

Hon'ble OERC may notify "Intra State Deviation settlement and related matters" Regulation at any time. For implementation of the regulation, required software for Deviation Charge billing need to be developed and tested. CGM (IT) may take necessary steps for development of the software.

In the 95th PSOC, IT stated that the proposal for appointment of outside agency for development of the software has been placed before the CMD for approval.

CGM (IT) may deliberate the status

D.10: DISCOM Issues

CESU

A. CESU has forwarded different issues relating to augmentation of EHT S/S capacity, conversion of S/C line to D/C, bay extension at different S/Ss etc. These issues have already been discussed in the technical workshop on “Effective Grid Management” held on 19.04.2016. Also the concern wings of OPTCL have been advised to take required steps. The Distribution utilities were also advised to contact with the concerned GM /DGM, EHT (O&M) of OPTCL and for necessary action in this regard. CESU may deliberate whether any such follow up action has taken in this regard.

B.

- (i) Mismatch of SCADA drawal with the billing meter data to the tune of 45 MU during March’16.
- (ii) Fixed data indicated on dashboard may be converted to variable for accurate drawal display.
- (iii) Interruption of RVDU data.
- (iv) Provision of on line recording of drawal data for CESU on real time basis.
- (v) Mismatch in dashboard and RVDU data.
- (vi) Deviation charge bill need to be replaced with UI charge bill from 17.02.2014.
- (vii) Gridco to facilitate for realizing the long outstanding dues of CESU from WESCO & NESCO.

CGM (Telecom) / SLDC / CESU may please deliberate

NESCO

NESCO has forwarded the requirement of additional bays at different Gris Sub-stations. As decided in the technical workshop on “Effective Grid Management” held on 19.04.2016, NESCO may contact the respective GM / DGM of EHT (O&M) for necessary action in this regard.

NESCO may deliberate / Members may discuss

SOUTHCO

- a. RVDU should be in the new proposed format, which will be user friendly for Discoms
- b. Data of 33 kV Khallikote and Sonepur feeders are fixed due to non installation of RTU for which total power drawn by Southco is not computed by the actual value accurately. Early action solicited.
- c. Providing meter data through AMR for computing the actual in parallel with RVDU.
- d. Energy bill has been done on actual energy instead of scheduled energy from July’2015, which should be revised on scheduled energy as deviation charges has been claimed by SLDC simultaneously.

SOUTHCO may deliberate / Members may discuss

PART E: OPERATIONAL PLANNING

E.1: Commissioning status of New Transmission elements.

The status of commissioning of new transmission elements is as follows:

| Sl. No | Transmission element details | Present Status |
|--------|---|---|
| 1 | Commissioning of 220 kV Jayanagar-Jeypore 2 nd DC line | Work has already been started. Expected to be completed by June 2016. |
| 2 | Commissioning of 400 kV Meramundali-Mendhasal 2nd ckt | Line is ready and shall be charged after commissioning of 3 rd ICT at Mendhasal, which is under progress. ICT is at BHEL factory |
| 3 | Commissioning of 220 kV Bidanasi-Cuttack line | Work in progress and expected to be completed by April 2016. |
| 4 | Commissioning of 220/132 kV Cuttack S/S | Work in progress and expected to be completed by April 2016. |
| 5 | Commissioning of 132 kV Baripada (PG)-Jaleswar line | Work has already been started, which will be completed by June 2016. |
| 6 | Commissioning of 220/132 kV Kesinga S/S | Work under progress. Expected by September 2016. |

Status of Discom's action plan for power drawal from the S/Ss commissioned / expected to be commissioned in near future.

| Sl. No | Name of the sub-station | Probable month of commissioning | Name of DISCOM | Action taken by Discoms |
|--------|---------------------------------|---------------------------------|----------------|-------------------------|
| 1 | 132/33kV, 2x20 MVA Khajuriakota | July'16 | CESU | Action being taken |
| 2 | 220/33kV, 2x20 MVA Banei | Dec'17 | WESCO Utility | Stayed by Court. |
| 3 | 132/33kV, 2x20 MVA Udala | Dec-17 | NESCO Utility | Line existing |

In the 95th PSOC meeting

CESU stated that action is being taken for construction of 33/0.4 kV S/S at Mendhasal to avail power supply for Mendhasal area.

WESCO stated that diversion of 11 kV lines from Jharusuguda S/S will be done soon.

All DISCOMS may update the status / CGM(O&M) & CGM(Const.) may please deliberate.

E.2: Energy Metering at Hydro stations.

Energy meters have already been installed at all hydro stations. Billing for all OHPC stations, except Upper Kolab, is being done from the newly installed energy meters. The energy meters at Upper Kolab are have been rectified in the mean time.

In the last meeting OHPC stated that Upper Kolab and Balimela PH meters are showing error. Mismatch noticed at both ends metering data of Burla-Chipilima Tie line. Rengali-TTPS feeder meter is not functioning. The meter data can be considered for billing purpose only after rectification of all defects. OHPC has already written to CGM (O&M) in this regard. It was decided that O&M shall take up the matter with the vender for rectification of energy meters.

In the 95th PSOC, O&M stated that the matter has already been taken up with the vendor and rectification action is being taken.

GRIDCO / OHPC / SLDC may please deliberate.

E.3: TTPS Issue.

Implementation of Feeder Metering

In the earlier PSOC meeting, TTPS deliberated that all the meters were tested & calibrated by the STL on 09.10.2015. The 132kV CTs for TTPS-Duburi-1 have been replaced. Further, as per the PPA dated 08.03.1995, the energy meters are to be installed at GT end. Since the meter locations will be shifted to feeders, the corresponding clause in the PPA is required to be amended. Accordingly, the proposal has been sent to the competent authority of NTPC for approval.

TTPS in their letter No.045/GGM/TTPS, Dated. 20.11.2015 addressed to CGM (PP) Gridco pointed out that, as per clause 7(1), 1st proviso of CEA (Installation and operation of Energy meters) Regulation, 2006 as amended in 2010 “ for existing stations the location of Main, Check and Standby meters shall not be changed unless permitted by the Authority”.

In the present case, for the first time, energy meters have been installed at the interface points, which should have been installed earlier, without changing the position of the existing meters. As such the regulation as mentioned by TTPS is not applicable. However the existing meters will be treated as standby meters.

In the 93rd PSOC meeting, GRIDCO stated that, in response to the letter of GRIDCO, CEA has sought for some information such as location of Main, Check and Standby meters. TTPS was requested to comply those queries. OPTCL may take action for installation of feeder meters.

In the 94th PSOC meeting TTPS stated that the reply has already been sent to CEA. DGM (O&M), Meramundali stated that action has been taken for installation of feeder meters at TTPS.

In the 95th PSOC, TTPS stated that CEA has asked the signed copy of the reply, which will be sent by TTPS. DGM (O&M), Meramundali stated that installation of panel and meters is expected to be completed by end of April'16.

GRIDCO / OPTCL/ TTPS / SLDC may please deliberate.

E.4: Reactive Power Management

SLDC is preparing the mock reactive charge billing to all Dist. Utilities as per the direction of Hon'ble Commission. The issue of low voltage at different 33 kV feeders is also being raised at various forums. Although OPTCL is maintaining 132 kV Voltage profile within limit, it is observed that 33 kV Voltage profile is low. The reason may be due to increase in feeder length and low power factor. It is suggested that the distribution utilities may examine for installation of capacitor banks at their 33 kV S/Ss to improve the Power Factor as well as Voltage profile.

Members may Discuss

E.5: Major Events in the month of March'16

31.03.2016: 132/33kV, 1 X 12.5 MVA sub-station at Mania charged.

E.6: Important Grid Incidences during the month of March'16.

(i) On 10.03.16 at 12:29 hrs 400 kV Indravati PH-Indravati PG Ckt tripped pulling out all the running units at Balimela PH, Indravati PH and U. Kolab PH. Simultaneously 400/220 kV, 315 MVA ICT-I & II at Mendhasal tripped with power supply failure to Chandaka, Narendrapur, Bhanjanagar, Theruvali and Jaynagar command area.

(ii) On 30.03.2016 at 15:33 hrs 400 kV Mendhasal- Meramundali Ckt tripped at both ends (At Meramundali-'R' ph to E/F, dist-94.7 km, At Mendhasal- D/P, 'R' ph, 'Y' ph, 'B' ph, E/F, Zn-I, dist-12.4 km). At 16:52 hrs the above line was charged and stood Ok.

At 16:59 hrs 400 kV Mendhasal- Meramundali Ckt tripped at both ends, 400 kV Mendhasal-Baripada PG Ckt tripped at Mendhasal end and 400 kV New Duburi-Mendhasal Ckt tripped at both ends. 220 kV Meramundali-Bhanjanagar Ckt-II tripped.

E.7: Outage of major transmission Elements during the month of March'16. (above 10 hrs).

Outage of major transmission elements above 10 hours during the month of March'16 is as detailed.

| Sl No | Transmission lines | Tripping Dt/time | Restoration Dt/time | Reason |
|-------|-----------------------------------|-------------------|---------------------|--|
| 1 | 132 kV Meramundali-Dhenkanal Ckt | 03.03.16 01:49 | 03.03.16 17:28 | 'Y' ph CT burst with heavy fire at Meramundali. |
| 2 | 400 kV Meramundali-Vedanta Ckt-II | 12.03.16 14:09 | 16.03.16 10:13 | Line patrolling was done with tree cutting |
| 3 | 400 kV Meramundali-Vedanta Ckt-I | 12.03.16 14:57 | 16.03.16 10:12 | Line patrolling was done with tree cutting |
| 4 | 132 kV Budhipadar-Sundergarh Ckt | 17.03.16 17:26 | 19.03.16 20:21 | 'R' ph LA burst at Sundergarh S/S. |
| 5 | 400 kV Meramundali-Vedanta Ckt-II | 18.03.16 20:57 | 25.03.16 12:35 | Line patrolling was done with tree cutting |
| 6 | 400 kV Meramundali-Vedanta Ckt-I | 18.03.16 20:57 | 25.03.16 12:30 | Line patrolling was done with tree cutting |
| 7 | 400 kV Meramundali-Vedanta Ckt-II | 25.03.16 14:51 | 26.03.16 00:39 | Line patrolling was done with tree cutting |
| 8 | 400 kV Meramundali-Vedanta Ckt-II | 26.03.16 08:14 | 05.04.16 10:28 | Theft of conductor between loc. No-96/0 and 97/0 |
| 9 | 400 kV Meramundali-Mendhasal Ckt | 27.03.16 12:18 | 27.03.16 22:04 | Line patrolling was done but no fault found. |
| 10 | 400 kV Meramundali-Mendhasal Ckt | 28.03.16 05:13 | 28.03.16 16:14 | Line patrolling was done but no fault found. |
| 11 | 400 kV Meramundali-Mendhasal Ckt | 30.03.16 16:59 | 31.03.16 17:51 | Line patrolling was done but no fault found. On 01.04.2016 at 17:15 hrs the line again tripped and found that OPGW earth wire sagged between Loc. No. 272 and 273. |

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

E.8: Review of Outage Program of State Generators / Transmission elements for the month of May'16:

Tentative Outage programme for State Generators for the month of **May'2016** are as follows:

| Sl. | Station | Unit | Period | Remarks |
|-----|-----------------|-------------------|--|---|
| 1 | Burla | # 7 # 6 | 02.05.16 to 31.05.16 17.02.14 to continue | Annual Maintenance Programming for R, M & U |
| 2 | Chiplima | # 3 # 1 # 2 | 15.02.14 to continue 16.05.16 to 15.06.16 16.05.16 to 15.06.16 | Programming for R, M &U Power Chanel maintenance -do- |
| 3 | Balimela | # 1 # 7 | 31.01.13 to continue 02.05.16 to 31.05.16 | TGB problem and started R,M & U Annual maintenance |
| 4 | Upper Kolab | # 1 # 4 | 29.07.15 to 17.05.16 11.04.16 to 30.04 | Capital Maintenance Checking of turbine vibration |
| 5 | Rengali | # 3 | 04.04.16 to 03.05.16 | Annual maintenance |
| 6 | Upper Indravati | # 3 | 23.11.15 to 15.06.16 | Capital Maintenance |

OHPC / SLDC may deliberate.

E.9: Generation Program for the month of May'16.

Generation schedule for the month of May'16 furnished by OHPC are given below.

| Name of Hydro Gen. Station | Generation Programme (MW) | | Reservoir Level as on 15.04.15 | Reservoir Level as on 15.04.16 | MDDL | High Flood Reservoir Level |
|----------------------------|------------------------------------|------------------------------------|--------------------------------|--------------------------------|----------|----------------------------|
| | May'16 (1 st fortnight) | May'16 (2 nd fortnight) | | | | |
| HPS-I, Burla | 30 | 00 | 611.71ft | 612.83ft | 590 ft. | 630 ft. |
| HPS-II, Chipilima | 20 | 0 | - | - | - | - |
| Balimela | 120 | 160 | 1497.10ft | 1478.30ft | 1440 ft. | 1516 ft. |
| Rengali | 40 | 50 | 119.71mt | 115.31mt | 109.72m | 123.5 mtr. |
| U.Kolab | 100 | 100 | 853.17mt | 850.70mt | 844 mtr | 858 mtr. |
| U. Indravati | 110 | 180 | 635.40mt | 633.42mt | 625mtr | 642 mtr |
| MKD (O/D) | 30 | 30 | 2727.35ft | 2727.80ft | 2685 ft. | 2750 ft. |
| TOTAL | 450 | 530 | | | | |

OHPC may deliberate & Members may discuss.

E.10: Anticipated power generation and demand for the month of May'2016.

| Sl. No | Discom | Average | Peak |
|---------------------|---------------------------|-------------|-------------|
| 1 | CESU | 980 | 1200 |
| 2 | WESCO | 960 | 1150 |
| 3 | NESCO | 800 | 1000 |
| 4 | SOUTHCO | 400 | 550 |
| 5 | OPEN ACCESS | 200 | 200 |
| 6 | Total | 3340 | 4100 |
| Availability | | | |
| 1 | Hydro | 450 | 770 |
| 2 | State Thermal | 780 | 780 |
| 3 | IPP, small hydro &RE | 800 | 800 |
| 4 | ISGS share (including OA) | 1000 | 1100 |
| 5 | CGP support (OA) | 150 | 150 |
| 6 | Banking | 160 | 500 |
| 7 | Total availability | 3340 | 4100 |
| 8 | Surplus / Deficit | 0 | 0 |

Members may discuss.

PART F: OTHER ISSUES**F.1: Date and Venue of the next (97th) PSOC meeting**