



STATE LOAD DESPATCH CENTRE
OFFICE OF THE CHIEF LOAD DESPATCHER
ODISHA POWER TRANSMISSION CORPORATION LIMITED
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CIN - U40102OR2004SGC007553

No-SGM (PS)-PL-15/2016 / 1280 (44)

Dated: 1/ .04.2017

From:

The Chief Load Despatcher
SLDC, OPTCL, Bhubaneswar-17.

To:

As per distribution list

Sub: Minutes of 107th PSOC meeting held on 22.03.2017 at TTPS, Talcher

Sir,

Please find enclosed herewith the minutes of 107th Power System Operational Co-ordination meeting held on 22.03.2017 at TTPS, Talcher under the aegis of NTPC.

This is for your information & necessary action.

Encl: As above

Yours faithfully;

Chief Load Despatcher,
SLDC, OPTCL

Copy along with enclosures forwarded to the Executive Assistant to CMD, Gridco / OPTCL for kind information of CMD.

Distribution list

1. The Director (Commercial), GRIDCO, Bhubaneswar
2. The Director (Operation), OHPC, Bhubaneswar
3. The CGM (O&M), OPTCL, Bhubaneswar.
4. The CGM (Const.), OPTCL Bhubaneswar.
5. The CGM (RT&C), OPTCL, Bhubaneswar.
6. The CGM (PP), GRIDCO, Bhubaneswar.
7. The CGM (Telecom), OPTCL, Bhubaneswar.
8. The CGM (IT), OPTCL, Bhubaneswar.
9. The Sr. G.M (Const)-I, OPTCL, Bhubaneswar.
10. The Sr. G.M (Const)-II, OPTCL, Sambalpur.
11. The Sr. G.M (CPC), OPTCL, Bhubaneswar.
12. The Sr. G.M (CP), OPTCL, Bhubaneswar.
13. The Sr. G.M. (O&M), Zone-I, Narendrapur.
14. The Sr. G.M.(O&M), Zone-II, Meramundali.
15. The CEO, CESU, Bhubaneswar.
16. The A.O., WESCO Utility, Burla
17. The A.O., NESCO Utility, Balasore
18. The A.O., SOUTHCO Utility, Berhampur.
19. The Member Secretary (GCC), OPTCL.
20. The ED, Power Grid Corporation of India, Bhubaneswar.
21. The Sr. G.M. (El.), BHEP, Balimela
22. The A.G.M. (El.), CHEP, Chiplima
23. The Sr. G.M. (El.), UIHEP, Mukhiguda
24. The Sr. G.M. (El.), RHEP, Rengali
25. The D.G.M. (El.), HHEP, Burla
26. The D.G.M. (El.), UKHEP, Bariniput, Koraput
27. The S.E. (O&M), Machhakund
28. The DGM (Elect.), IbTPS, OPGC, Banharpali.
29. The Vice President (O), IMFA, Choudwar.
30. The D.G.M. (O&M), NTPC (TTPS), Talcher.
31. The AGM (Elect.), JINDAL Stainless Ltd., Duburi
32. The G.M, HINDALCO, Hirakud.
33. The G.M.CPP, NALCO, Angul.
34. The Director, M/s. Jindal Steel & Power Ltd., Angul
35. The AVP-Vedanta Ltd (IPP), Jharsuguda
36. The G.M, Vedanta Ltd (CGP), Jharsuguda.
37. The DGM (Power Distribution), RSP, Rourkela.
38. Joint President, Aditya Aluminium Ltd., Lapanga, Sambalpur
39. The G.M.(Elect.), Bhusan Steel Limited. Meramundali
40. The G.M. (Elect.), Bhusan Power & Steel Ltd, Budhipadar.
41. The G.M.(Elect.), IFFCO Limited.
42. Director & COO, GMR Kamalanga Energy Limited, Satyanagar, Bhubaneswar.
43. The CEO, Bhubaneswar Power Pvt. Ltd, IRC Village, Nayapalli, Bhubaneswar

Odisha Power Transmission Corporation Ltd. Bhubaneswar.

Minutes of 107th PSOC meeting held on 22.03.2017 at TTPS, Talcher

List of participants is at Annexure.

GGM, TTPS (NTPC) welcomed all the members attended the 107th PSOC meeting. CLD, SLDC in his welcome address highlighted the system performance during the month of February'2017 and overall power scenario of the State. He also emphasized on the power drawal, made by all the Discoms during the month.

D.G.M. (SS), SLDC took the agenda items for discussion.

The review proceeded as follows:

1: Confirmation of minutes of 106th PSOC meeting held on 20.02.2017

The minutes of meeting was circulated vide letter No. SGM (PS)-PI-15/2016/742⁽⁴⁵⁾ dated 28.02.2017 to all the members and also uploaded in the SLDC website. No comment has been received from any of the members except IT wing of OPTCL regarding data for 97 interface meters are available in place of 105 meters by 1st February 2017. However this has been taken care in the agenda of 107th PSOC meeting.

Deliberation in the meeting:

Since no comments have been received from any other members, the minutes of 106th PSOC meeting was confirmed.

PART A: List of items

List of items to be discussed in the meeting are given in the subsequent parts

PART B : SYSTEM PERFORMANCE

B1: Review of Grid Performance for the month of February'2017.

(A) Frequency

It was noticed that, during the month of February'17, **76.35 %** of times the frequency remained in the IEGC band i.e. 49.90Hz - 50.05Hz in comparison to **72.88 %** during the month of January'16. The maximum and minimum System frequency during the month was **50.15 Hz & 49.84 Hz** respectively.

(B) Grid demand

Grid demand for the month of February'17 was reviewed. The average consumption during the month was **2932 MW**. The maximum System demand of **3845 MW** occurred on **23.02.17** at 20:00 Hrs and minimum demand of **2305 MW** occurred on **04.02.17** at 15:00 Hrs.

Deliberation in the meeting

It is observed that the average demand during the month of February' 17 was increased by 112 MW while the peak demand was increased by 51 MW from that of January'17. The average demand during the month has been decreased by 61 MW in comparison to February'16. The energy consumption has been decreased due reduction of energy drawal by the industrial consumers. WESCO Utility stated that most of the industrial consumers had reduced their contract demand due to higher retail tariff.

(C) Voltage Profile of important Sub Stations in OPTCL System during the month of February'17.

The Voltage profile at different 220 kV buses in OPTCL system during the month of **February'17** was reviewed. The maximum Voltage of **242.31** kV occurred at Jaynagar 220 kV bus while Narendrapur, 220 kV bus has experienced the minimum Voltage of **183.30** kV. Bus Voltages at Samgara and Lapanga could not be incorporated due to non availability of energy meter in those sub-stations. Status of replacement of defective CVT at Narendrapur may be updated. The 220 kV Voltage profile of Jayanagar and Narendrapur and 400 kV Voltage profile of Meramundali bus during the month of February 2017 is shown.

Deliberation in the meeting:

Sr. G.M (O&M)-I stated that CVT at Narendrapur has been replaced during the month of March'2017. However, Narendrapur Voltage shall be improved after charging of Atri S/S. From the Voltage profile at Jayanagar it is noticed that the high Voltage persisted at Jayanagar bus during the month. At Narendrapur, the Voltage has gone below 185 kV in only one day of the month. CGM (O&M) stated that proposal for installation of Reactor at Meramundali has been proposed through PSDF funding.

[Action: CGM (O&M) / SLDC]

(D) Loading of 220/ 132 kV Auto at 220 kV S/Ss in OPTCL system for the month of February'17.

Auto loading of all 220 kV S/Ss was reviewed. It was noticed that some of the Autos have not been provided with energy meter.

Deliberation in the meeting:

CGM (O&M) stated that order for procurement of energy meters has already been placed.

[Action: CGM (O&M)]

(E) DISCOM Drawal during the month of February'17

The schedule and actual energy drawal by Discoms for the month of **February'17** was reviewed.

Deliberation in the meeting:

It was noticed that CESU had overdrawn **15.838** MU while SOUTHCO had overdrawn **02.586** MU. NESCO Utility and WESCO Utility had under drawn during the month.

[Action: All Distribution Utilities / SLDC]

(F) Energy Generation / import during the month of February'17

Energy generation and exchange during the month of February'17 was reviewed. The total quantum of energy drawn from all the generation sources including Central Sector Share and CGP/IPP support during the month was **1970.24** MU.

Deliberations in the meeting

The energy demand has not increased appreciably due to induction of LED.

(G) Drawal of Machhakund Power during the month of February'17

The drawal of Machhakund power during the month of February'17 was **30.614** MU, against AP drawal of **28.935** MU.

In the 106th PSOC meeting, SGM (Telecom) stated that RVDU is expected to be commissioned by mid of March'17. CGM (O&M) stated that the traction bay at Machhakund PH Switchyard and associated line need to be equipped for evacuation of power from the proposed 2X10 MW Lower Machhakund small hydro station, which is likely to come up in near future.

Deliberations in the meeting:

For the second consecutive month, Odisha drawal has exceeded AP drawal due to continuous effort by SLDC as well as Jayanagar S/S. SGM (Telecom) stated that the installation of RVDU has been delayed due to pending of software clearance from custom department. The RVDU is expected to be commissioned by end of April'17. CGM (O&M) stated that the traction bay at Machhakund PH Switchyard and associated line need to be equipped for evacuation of power from the proposed 2X10 MW Lower Machhakund small hydro station, which is likely to come up within 4 years.

[Action: Sr. GM (O&M)-I / OHPC / Southco / Gridco / SLDC]

(H) Under Frequency relay operation in OPTCL System during the month of February'17.

There is no UF Relay operation occurred during the month of February'17 as the frequency had never gone beyond 48.50 Hz.

(I) Status of Open Access applications during the month of February'2017

Status of Open Access Applications received and disposed by SLDC during the month was reviewed.

PART C – Issues discussed in the 131st OCC meeting of ERPC on 20.03.2017

C.1: Status of projects funded under PSDF schemes

In the PSDF review meeting held on 29.04.16 at N. Delhi, it was advised to RPCs to monitor the status of all the projects funded by PSDF. Therefore, constituents are requested to update the status of projects which are being funded by PSDF in the desired format.

The latest status as updated by OPTCL is as given below:

SI No	Name of Constituent	Name of Project	Date of approval from PSDF	Target Date of Completion	Amount Approved (in Rs.)	Amount Drawn till date (in Rs.)	Status as updated in 129 th meeting
3	OPTCL	Renovation & Up-gradation of protection and control systems of Sub-stations in the State of Odisha in order to rectify protection related deficiencies.	11.05.15	10.05.17	162.5 Cr.	19.53 Cr.	1. Letter of Award detail submitted to PSDF till date: ₹18.70Cr. 2. Letter of Award detail under process for submission to PSDF till date: ₹49.03Cr. 3. Amount received from PSDF: i. ₹4.92Cr. against LOA submitted under item 1 (i.e,- ₹18.70Cr.) ii. 10% of sanctioned amount. ₹14.67Cr.

ERPC advised to submit monthly updated report to RPC secretariat.

In the 103rd PSOC meeting, it was decided that SLDC shall prepare the DPR for implementation of ADMS and submit to CGM (O&M) for inclusion in PSDF.

In the 130th OCC meeting, ERPC advised to furnish the information in the prescribed format (Annexure-B.3 of OCC agenda) by first week of every month on regular basis to Member Convener, PSDF Project Monitoring Group (AGM, NLDC, POSOCO) with a copy to NPC Division. In the 106th PSOC meeting SLDC stated that the DPR for ADMS has already been prepared which will be forwarded to O&M for examination.

After approval in the BoD, the same will be proposed for PSDF funding.

Deliberations in the meeting

SLDC stated that the DPR will be placed in the 85th BoD meeting scheduled to be held on 27.03.2017.

[Action: SLDC]

C.2: High Voltage problem in 400 kV Meramundali grid S/S: Regarding

GRIDCO vide letter dated 07.01.17 intimated that presently Odisha is going through very high Voltages at 400kV bus of Meramundali, Duburi and Mendhashal grid S/S. The situation is further worsened due to high reactive power flow from Meramundali to Angul pooling sub-station, from Duburi to Meramundali sub-station and from Kuchei to Duburi sub-station. It may be noted that, PGCIL has installed two nos. of 330 MVAR Bus reactors at Angul 765kV substation and two nos. of 125 MVAR Bus reactors at Angul 400kV substation, thus resulting high reactive power flow from Meramundali to Angul & Duburi to Meramundali grid S/S. In view of the above OPTCL suggests the following as short term and long term measures to mitigate the high Voltage issue as well as to improve the high reactive power flow situation.

Short term measure

- OPTCL will install 80 MVAR reactor at Meramundali 400kV S/S.
- The Angul-Meramundali Double circuit ties to be opened at both ends.

Long term measure

- The Meramundali-Angul Double circuit will be terminated at Meramundali (B).

A letter regarding the above change has already been forwarded to CEA and will be placed in the next Standing Committee meeting of CEA. Meramundali (B) will be a new 400kV substation of OPTCL, approved by CEA and the work order to be issued shortly.

In view of the above and as the high voltage situation is menacing, it is requested to grant permission for the short term measures, mentioned above, to get relief from the high voltage issue and high reactive power flow. The system in the above condition will remain stable.

In 130th OCC, ERLDC presented the study results and informed the following:

- The voltage at Meramundali is increasing during winter season due low demand at Meramundali, Duburi and Mendhasal and insufficient reactive power support.
- In the present scenario the 765/400 kV Angul S/s is acting like sink of Reactive power for OPTCL system in around 400kV Meramundali S/s.
- With opening 400kV Angul-Meramundali line the export of reactive power to the ISTS network is reduced drastically but the voltage at 400kV Meramundali S/s is increasing by 4 kV which may affect the sub-station equipment.
- Further due to outage of one ckt of 400 kV Meramundali- Mendhasal the voltage at Meramundali is on higher side. This line may be restored at the earliest.

In 35th TCC, ERLDC informed that VAR is being generated at OPTCL system and the 765/400 kV Angul S/s is acting like sink of Reactive power for OPTCL system in around 400kV Meramundali S/s. The opening of 400kV Angul-Meramundali line will not the solution. Further due to outage of one ckt of 400 kV Meramundali- Mendhasal the voltage at Meramundali is on higher side. This line may be restored at the earliest.

OPTCL informed that 400 kV Meramundali- Mendhasal line will be charged on tomorrow and 315 MVA, 400/220kV ICT will be restored by 15th March, 2017.

Powergrid informed that the flexible LILO scheme as approved in 18th SCM was approved in their Board and it is in final stage and the scheme will be implemented by 2018.

TCC opined that the high voltage issue should be reviewed after restoration of 400 kV Meramundali- Mendhasal line and commissioning of 315 MVA, 400/220kV ICT at Meramundali in OCC meeting.

TCC advised all generators in around 400kV Meramundali S/s to absorb VAR up to maximum extent as per the capability curve. TCC also advised OPTCL to plan for proper reactive power compensation at 400kV Meramundali, New Dubri and Mendhasal S/s.

CE, CEA opined that reactive power compensation is part of grid security and it is eligible for PSDF grant. OPTCL may apply for PSDF.

In the 106th PSOC meeting, CGM (PP) stated that the generators connected to Meramundali should absorb VAR as per their capability and scope to arrest VAR injection by the State at higher Voltage. SLDC shall monitor such activity on real time.

In the 130th OCC it was deliberated that, the Voltage profile at Meramundali will become further high on disconnection of Meramundali-Angul (PG) ckts. However after restoration of Meramundali-Mendhasal line and commissioning of ICT at Meramundali, a trial shall be made for physical verification.

CGM (PP) stated that the generators connected to Meramundali should absorb VAR as per their capability and scope to arrest VAR injection by the State at higher Voltage. SLDC shall monitor such activity on real time.

Deliberations in the meeting

GM (O&M) stated that, the issue was discussed in the meeting convened by CEA on 10.03.2017 at New Delhi. CEA advised to monitor the VAR absorption by the generators connected with Meramundali 400 kV Bus. OPTCL may plan for installation of additional reactor at Meramundali. Isolation of Meramundali-Angul (PG) ckts has very marginal impact on VAR injection. However, after replacement of the ICT at Meramundali by 15th April'2017, the impact of isolation of the above ckts will be monitored.

[Action: CGM (O&M) /CGM (PP)]

C.3: Restoration of PLCC system of important lines

In 119th OCC, JUSNL informed that the following:

- a) In 220 kV Chandil –Santaldih line auto-reclosure has been enabled and termination done in PLCC panels at Chandil end but due to non-availability of PLCC panels at Santaldih (WBPDCCL) end the A/R and PLCC scheme could not be activated.
- b) 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 Santaldih end) and OPTCL (for Joda end) to complete the PLCC schemes of both the above lines.

In 130th OCC meeting, OPTCL informed that PLCC panels at 220kV Joda end will be commissioned within a week. JUSNL informed that the Ramchandrapur end is ready in all respect for implementation of PLCC.

In 35th TCC, OPTCL informed that PLCC panels at 220kV Joda end will be commissioned by March 2017.

In the 106th PSOC meeting CGM (Telecom) stated that the PLCC will be commissioned by 1st week of March'17.

Deliberations in the meeting

CGM (Telecom) stated that PLCC at Joda end will be commissioned on 27th March'2017.

[Action: CGM (Telecom)]

C.4: 220 kV inter-connecting lines of OPTCL with 400/220 kV Bolangir (PG), Keonjhar & Pandiabil S/s

PGCIL has already commissioned the 2x315MVA 400/220kV Bolangir S/s by LILoing of 400 kV 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.

In 131st OCC of ERPC, SLDC deliberated the completion schedule of inter-connecting system as follows:

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.	Construction of 220 kV Sadeipali-Kesinga portion only is under consideration. Expected by May-17
b.	LILo of one circuit of Katapalli-Sadeipalli 220 kV D/C line at Bolangir S/S.	Charged on 04.05.16
2.	400/220 kV Keonjhar S/S.	
a.	Keonjhar (PG)-Keonjhar (OPTCL) 220 kV D/C line	By 2017
b.	Keonjhar (PG)-Turumunga (OPTCL) 220 kV D/C Line.	By 2019
3.	400/220 kV Pandiabil Grid S/s	
a.	Pratapsasan(OPTCL)-Pandiabil (PG) 220 kV D/C line	December 2017
b.	LILo of one circuit of Atri-Puri (Samangara) 220 kV D/C line at Pandiabil (PG)	May'2017

[Action: CGM (Const)]

C.5: 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.

CESC vide letter dated 22.08.15 had furnished their status of the preparation of Crisis Management Plan (CMP) for Cyber attacks in their system.

In the 106th PSOC meeting, IT stated that the award of work will be placed by 1st week of March'2017

Deliberations in the meeting

CGM (IT) informed that “Crisis management plan” work is awarded to M/s Digital Age Strategies Pvt. Ltd. The said firm has completed the study of Servers and Firewalls at SLDC, Bhubaneswar and back-up SLDC at Meramundali. Presently the data centers of SLDC and GRIDCO are being audited for IT security vulnerability assessment.

SLDC is requested to nominate one officer for attending the Cyber Security training to be held at Bengaluru during 11th to 15th April'2017. Nominations from GRIDCO and OPTCL have since been received. Top management awareness-cum Seminar on the subject shall be organized subsequently.

[Action: SLDC /IT]

C.6: 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 106th PSOC meeting O&M stated that the proposal will be placed before PSC due to single bid.

Deliberations in the meeting

The proposal will be placed before PSC due to single bid.

[Action: CGM (O&M)]

C.7: Implementation of New Web Based Scheduling at ERLDC

As per the deliberation in 130th OCC meeting, a detailed workshop cum interactive Session with all Stakeholders/beneficiaries was arranged during 20-21 February, 2017, where in all eastern region IPPs, NTPC, NHPC, Regional entities and SLDCs except Sikkim SLDC participated. As per the decision taken in the workshop, parallel operation of WBES has been started with effective from 01st March, 2017. In this process all users are uploading their daily operation scheduling related data in new WBES module as well as in the old scheduling software. Depending upon the progress of the parallel operation, ERLDC would migrate to the new WBES software from 01st April, 2017. Till now the progress of parallel operation is satisfactory and we are planning to migrate with effective from 01st April, 2017.

Deliberations in the meeting

It was decided that SLDC may ensure preparedness for implementation of web based scheduling by ERLDC with effect from 01.04.2017.

[Action: SLDC]

C.8.Tie bay of 125MVAR Bus reactor and 400kV Indravati-Indravati and Indravati(PG):

Under outage wef 18/03/16 due to R-Ph pole bursting of Tie CB. Due to non-availability of the tie bay, the Buses are coupled only via the tie bay of 400kV Rengali-Indravati and 400kVIndravati-Jeypore at Indravati and any outage of the lines would result in decoupling of the Buses.

In 125th OCC, Powergrid informed that main CB has some problem which will be taken care by OHPC/OPTCL.

In 129th OCC, OPTCL informed that the CB has reached at the site. The installation work will be completed by February, 2017.

In 130th OCC, OPTCL informed that the work will be completed by February, 2017.

In the 106th PSOC meeting CGM (O&M) stated that the work will be completed by end of March'2017.

Deliberations in the meeting

SGM (O&M)-I stated that breaker erection has already started from today i.e 22.03.2017.

[Action: SGM (O&M)-I, Narendrapur]

C.9: 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.

A team of officers had visited Gujarat SLDC on 30.08.2016 to observe the implementation of ADMS in their State. It was found that a separate type of RTU known as "Client RTU" has to be installed in the grid sub-stations where the pre identified 33kV feeders (to be isolated under ADMS) are located. These are in addition to the existing RTUs. One ADMS server shall be installed at SLDC which will acquire data from SCADA server to compare the over drawal of the State and Discoms and send the signal to the client RTU for isolation of the pre identified 33kV feeders. Since, all these activities are related to SCADA & communication, Telecom wing need to be involved for implementation of the scheme. A team is to be constituted with Telecommunication, SLDC & OPTCL Engineers for this purpose.

One presentation was made by M/s Kirti Telnet, Ahemedabad, the agency provided ADMS solution to Gujarat on 17.10.16 in the Conference Hall of GRIDCO. SLDC shall float tender for this purpose.

In the 106th PSOC meeting SLDC stated that the DPR has already been prepared which will be forwarded to O&M for examination.

Deliberations in the meeting

SLDC stated that the DPR will be placed in the 85th BoD meeting scheduled to be held on 27.03.2017.

[Action: SLDC]

C.10: Mock Black start exercises in Eastern Region

Schedule of Mock black start exercise for State Hydro Stations are as tabled.

Sl.	Name of HEP	Completed on	Scheduled
1	Balimela	29.11.16	January'2017
2	Upper Indravati	16.07.16	February'2017
3	Burla	28.07.16	February 2017

Deliberations in the meeting

SLDC stated that the mock black start exercise for Upper Indravati and Balimela HEPs is scheduled to be conducted on 24th and 25th March'2017 respectively in presence of SLDC officers at site.

[Action: OHPC / SLDC]

C.11: Pollution mapping for Eastern Region

Powergrid updated the latest status as follows:

	Scope (no. of locations)	Installed Locations	Number of locations where the results for 1st set of Measurements submitted	No. of locations where the results for 2nd set of Measurements submitted	Number of locations where the results for 3rd set of Measurements submitted	Number of locations where the results for 4 th set of Measurements submitted
OPTCL	164	102	100	90	79	1

Powergrid informed that most of scheduled measurements till fourth set have not been completed yet, it is requested to complete the measurements and submit the results at the earliest.

Powergrid added that they prepared an online format to submit the details of measurements.

Powergrid requested to fill the Google form (<https://goo.gl/6375HJ>) for onward submission of measurements for better analysis of results.

OCC advised all the constituents to complete the measurements as per the schedule.

Deliberations in the meeting

O&M stated that the results of 4th set of measurements submitted for 76 Nos of locations.

[Action: SLDC]

C.12: Tap Position Optimization at Jeypore

Current Tap position at Jeypore ICT is 14. From scatter plot of 400/220 kV Jeypore S/S for the month February it is seen that 80% of time it is remaining in 1st quadrant and 20 % of time in 2nd quadrant. This means most of the time voltage at both 400 and 220 KV level remains above their nominal value and occasionally 400 kV side voltage going below nominal value. But 220 kV side voltage always remaining on the higher side. Also it is seen that although 80% of time scatter plot is staying in 1st quadrant but Max voltage is within 420 kV. So if we reduce the Tap position then it will help to reduce 220 kV voltage and further increase 400 kV side voltage which is remaining below 400 kV for 20% of time and within 400 to 420 kV for 80 % of time. So even after tap change 400 kV side voltage will stay mostly within 420 kV and may occasionally cross 420 kV by a very small margin. We also have reactors at Jeypore and Indravati for controlling high voltage at 400 kV. It is proposed that Tap may set to 12 from 14.

Deliberations in the meeting

All Members have agreed for the proposal.

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 **February'17** was reviewed.

Deliberations in the meeting.

It was noticed that CESU had overdrawn **15.838 MU** while SOUTHCO Utility have over drawn **2.586 MU**. WESCO Utility and NESCO Utility had under drawn 7.613 MU and 12.314 MU respectively.

NESCO Utility stated that the Open Access schedule of embedded customers is retrospectively revised by SLDC which leads to problem on monitoring their drawal schedule. SOUTHCO Utility stated that actual drawal of Bhanjanagar Auto is not matching with SCADA data. All Distribution Utilities were advised to predict their day ahead drawal accurately to avoid overdraw.

[Action: SLDC /Telecom / All Discoms]

D.2: 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	400kV Meramundali-Mendhasal ckt.	Tower Collapse	Charged on 25.02.17
2	400/220kV, 315 MVA ICT-I at Meramundali	Burnt	April-2017
3	220 kV Meramundali-Bhanjanagar ckt-I	Conductor replacement	March-2017
4	220 /132 kV, 100 MVA, Auto-3 at Chandaka.	Breaker replacement	March'2017
5	220/132 kV, 100 MVA, Auto- 2 at Duburi	Oil leakage since 24 th October'2016	April'2017
6	132 kV Sunabeda-Damanjodi line	For conversion to DC	June'2017

CGM (O&M) may update the progress.

D.3: 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.	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 Ferrotech	PLCC established and inspection by Telecom Engineers completed. Database has already been prepared by OPTCL.
5	BPSL	No kV
6	CONCAST	No kV/Hz.
7	BSL	No Hz & status data.
8	JSL	No Bus kV / Hz (for Bus-2)
9	TSIL	No data
10	VISA	CB & Status data are not available
11	Paradeep	Data not available at ERLDC
12	Bolangir (New)	Data not available at ERLDC

It was also 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.

In the 105th PSOC meeting GCC stated that OERC have asked to submit the status of data communication through SCADA by the Users by 28th February'17. A separate meeting to discuss the issue will be convened for discussion

GCC has convened a meeting with all the CGP and EHT consumers on 21st February'2017 to discuss the communication issues. In the 106th PSOC, SGM (Telecom) stated that data from Paradeep S/S will be obtained after availing shutdown of 220 kV Duburi-Paradeep DC line for OPGW stringing.

Deliberations in the meeting

GCC stated that the CGPs and EHT consumers have assured to establish communication system within a specified time limit. In case they fail to do so the matter will be placed before the OERC.

[Action: RT&C / GCC]

D.4: 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.

SLDC had organized training on web based scheduling on 11.05.2016 for all the CGPs connected with OPTCL network. The feedback of the CGPs has been forwarded to IT wing.

IT wing presented a demo before SLDC on 19th December 2016.

SLDC organized a demo on 27th December'2016 for all the CGPs. As reported by the CGPs, they are facing some problems while using the application. The feedback of CGPs has been forwarded to IT wing for necessary action.

In the 105th PSOC meeting CGM (IT) stated that they have resolved the issues which are minor. Scheduling through the software may be done from 1st April'17. SLDC stated that the Discom and generation scheduling may also be included by March'17.

In the 106th PSOC CGM (IT) stated that SLDC may coordinate with Discoms and all generators and intimate to IT.

Deliberations in the meeting

CGM (IT) informed that Generators web based scheduling work is completed except for generation of report covering "Final Generation Schedule" for which SLDC shall furnish the requisite format. / SLDC may deliberate. SLDC was requested for a report to ascertain the submission of schedule by the CGPs.

It was decided to take a backup of the past web scheduling submissions by the generators and preserve them off line.

It is proposed to Go-Live for Generators web based scheduling w.e.f 1st April'2017. SLDC may issue necessary order.

[Action: SLDC / IT]

D.5: 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.

It was deliberated that that from 1st March onwards the AMR shall be made "Go live". Data will be available after one hour lapses of time.

In the 100th PSOC meeting CGM (IT) stated that by end of August'2016 testing of all meters of CESU control area will be completed for billing purpose. SLDC may check August data from both the meters.

In the 104th PSOC meeting, DGM (IT) stated that, data from 90 Nos of S/Ss will be provided by January'2017. Gridco stated that the events such as PT failure, CT polarity reversal, meter power failure, MD reset, time synchronization etc. are not being incorporated the AMR. It was decided that IT, SLDC and GRIDCO may have a separate meeting to resolve the issue.

In the 105th PSOC meeting DGM (IT) stated that, data from 100 Nos of S/Ss will be provided by February'17. The issues raised by Gridco will be addressed except Time synchronization and MD reset.

In the 106th PSOC, DGM (IT) stated that, data for 105 numbers of meters are made available to SLDC. By 1st of March'17 all 125 Nos of S/S data will be provided to SLDC for checking.

Deliberations in the meeting

CGM (IT) stated that AMI-UAT open points viz., (a) "Status Flag" for events and (b) Phaser Diagram issues are resolved by TCS. SLDC and GRIDCO were requested to spare their officers on

24th and 25th March'17 for a final testing and Sign-off. Further if any non-fatal cosmetic issues remain, the same shall be resolved by TCS during support service period. Accordingly, an undertaking shall be obtained by IT from TCS. Hence it is proposed to go for parallel run with effect from 1st April'2017 for a period of six months after testing the software by the UAT team, before going Live. Out of 125 Grid S/Ss 101 S/Ss reported 100 % data during March 2017.

[Action: SLDC / CGM (IT)]

D.6: 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 106th PSOC meeting CGM (IT) stated that the work will be awarded to TCS after notification of Deviation Mechanism Regulations by OERC. SLDC stated that OERC may not allow time for implementation of the DSM Regulations. As such action may be taken for placing Order.

Deliberations in the meeting

SLDC stated that IT may take necessary steps for placing order for the DSM software.

[Action: CGM (IT) / SLDC]

D.7.DISCOM Issues

CESU

There is a wide variation between actual drawal data and SCADA drawal data. The actual drawal of CESU excluding open access is 556.21 MU against 540.296 MU as per the SCADA data.

Deliberations in the meeting

SLDC stated that CESU may develop the demand estimation logic without depending fully on SCADA data. Both data may be compared to ascertain the error correction factor. The SCADA display data is for monitoring purpose only, which may not match exactly with the meter data.

[Action: CESU/ CGM (Telecom)]

SOUTHCO Utility

- (i) In case of grid disturbance, revision of the schedule is to be made with immediate effect.
- (ii) Facility for downloading of past drawal data from RVDU.
- (iii) Forwarding of open access import schedule of consumers by 4PM.
- (iv) Providing of AMR data.
- (v) Resolving low voltage issue at Narendrapur

Deliberations in the meeting

SLDC is following the Regulations for revision of Schedule. Open Access import schedule is being forwarded as soon as received, However the Discoms can see these schedules from ERLDC / Exchange site also. AMR data is under process. Narendrapur low Voltage issue shall be resolved after connecting Atri S/S.

[Action: SOUTHCO / SLDC]

PART E: OPERATIONAL PLANNING

E.1: Commissioning status of New Transmission elements.

The status of commissioning of new transmission elements deliberated in the meeting 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' 2017.
2	Commissioning of 400 kV Meramundali-Mendhasal 2 nd 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. Expected by June'2017.
3	Commissioning of 220 kV Bidanasi-Cuttack line	Idle Charged on 29.11.2016
4	Commissioning of 220/132 kV Cuttack S/S	Work in progress and expected to be completed by March' 2017.
5	Commissioning of 132 kV Baripada (PG)-Jaleswar line	Work has already been started, which will be completed by May 2017. Stringing started.
6	Commissioning of 220/132 kV Kesinga S/S	Work under progress. Expected by December' 2017.

The list of Grid S/Ss already charged earlier and scheduled to be charged during FY 2016-17 has been placed in the meeting. The Discoms were requested to take necessary action for availing power supply through 33 kV feeders.

132 kV Grid S/S charged during FY 2016-17 (till 01.11.16)

Sl.No	Name of S/S	Date of charging	No. of bays	Name
1	Puri (Samangara)	30.05.2016	5	1.Sriramnagar
				2.Sriramnagar
				3.Gabakunda
				4.Vacant
				5.Vacant
2	Bangiriposi	03.10.2016	4	1.Bangiriposi under progress
				2.Vacant
				3.Vacant
				4.Vacant

132 kV Grid S/S expected to be charged during November'16 to March'17

1	Infocity-II	23.12.2016	5	
2	Khajuriakata	March'17	5	33/11 kV S/S under Dindayal Scheme.
3	Chandaka-B	March'17	5	33/11 kV Chandaka S/S under ODSSP.
4	Malkangiri	March'17	5	Govindapali & Padia S/S const. in progress under ODSSP
5	Olaver	March'17	5	
6	Patangi	May'17	5	
7	Podagada	May'17	5	
8	Bonei	March'17	5	
9	Kasipur	May'17	5	
10	Bhogorai	March'17	5	
11	R.Udayagiri	May'17	5	
12	Tusara	May'17	5	

Distribution Utilities have to provide their action plan for take-off arrangement from these S/Ss.

Discoms were advised to take necessary action for drawal of power from the S/Ss already charged.

[Action: All DISCOMS]

E.2: Energy Metering at Hydro stations.

Energy meters have already been installed at all hydro stations. Billing for all OHPC stations is being done from the newly installed energy meters.

On completion of the above energy accounting for hydro stations will be taken up by SLDC. In the 101st PSOC meeting OHPC stated that TTPS feeder meter at Rengali PH is yet to be changed. Sr. G.M. Indravati PH stated that ICT-II meter at Indravati is not recording correctly. O&M may take necessary action for rectification of the meters at those hydro stations, so that energy accounting for hydro stations will be taken up by SLDC.

In the 106th PSOC meeting Sr. G.M (Indravati) stated that CVT problem has already been rectified. Meter data may be considered for energy accounting as well as billing purpose w.e.f 1st April'2017.

Deliberations in the meeting

OHPC stated that there is wide variation in OHPC and OPTCL meter recordings. OPTCL meters need to be tested. CGM (PP) stated that all main meters may be tested in the first phase. After completion, the check meters may be tested.

[Action: OPTCL / OHPC]

E.3: Major Events in the month of February'17

No report in respect of major events in OPTCL network during the month has been received.

E.4: Important Grid Incidences during the month of February'17.

Important Grid incidents during the month were reviewed. O&M may analyze the incidents for deliberation in the OCC meeting of ERPC.

[Action: O&M]

E.5: Outage of major transmission Elements during the month of February'17. (above 10 hrs).

Outage of major transmission elements above 10 hours during the month was reviewed. The outages are due to insulator damage, LA bursting.

[Action: O&M]

E.6: Review of Outage Program of State Generators / Transmission elements for the month of April'17:

Tentative Outage programme for State Generators for the month of April'2017 are as follows:

Sl.	Station	Unit	Period	Remarks
1	Burla	# 2	22.07.16 to 31.03.17	Capital Maintenance
		# 4	10.03.17 to 07.04.17	Annual Maintenance
		# 5	25.10.16 to continue	Under R,M & U
		# 6	16.10.15 to continue	Under R, M & U
2	Chiplima	# 3	15.10.15 to continue	Under R,M & U
3	Balimela	# 1	05.08.16 to continue	Under R,M & U
		# 4	15.04.17 to 15.05.17	IDV problem
		# 8	07.11.16 to 15.03.17	Annual Maintenance
4	Rengali	# 5	16.03.17 to 17.03.17	Annual Maintenance
5	Upper Indravati	# 4	15.03.17 to 15.04.17	Annual Maintenance
6	TTPS	# 2	10.04.16 to 24.04.16	Boiler overhaul

[Action: OHPC / TTPS / SLDC]

E.7: Generation Program for the month of April'17.

Generation schedule for the month of April'17 furnished by OHPC are given below.

Name of Hydro Gen. Station	Generation Programme (MW)		Reservoir Level as on 01.03.16	Reservoir Level as on 01.03.17	MDDL	High Flood Reservoir Level
	Apr'17 (1 st fortnight)	Apr'17 (2 nd fortnight)				
HPS-I, Burla	40	40	619.58ft	622.04 ft	590 ft.	630 ft.
HPS-II, Chipilima	30	30	-	-	-	-
Balimela	300	300	1487.30 ft	1496.40 ft	1440 ft.	1516 ft.
Rengali	100	100	117.46 mt	121.74 mt	109.72m	123.5 mtr.
U.Kolab	120	120	853.58 mt	854.93 mt	844 mtr	858 mtr.
U. Indravati	250	250	633.87 mt	636.88 mt	625mtr	642 mtr
MKD (O/D)	40	40	2735.00 ft	2729.65 ft	2685 ft.	2750 ft.
TOTAL	880	880				

[Action: OHPC / SLDC]

E.8: Anticipated power generation and demand for the month of April'2017.

Sl. No	Discom	Average	Peak
1	CESU	950	1250
2	WESCO	850	1150
3	NESCO	800	1050
4	SOUTHCO	400	550
6	Total Discom	3000	4000
	System Loss	120	150
		3020	4150
Availability			
1	Hydro	880	1500
2	State Thermal	700	700
3	IPP, small hydro &RE	700	700
4	ISGS share (including OA)	800	1000
5	CGP support (OA)	150	250
6	Total availability	3230	4150
7	Surplus / Deficit	210	00

Members may discuss.

PART F: OTHER ISSUES**F.1: Over loading of Inter-State tie line – Load thrown up by SEZ**

On 17.03.2017 at 10:23 hrs it was noticed that power flow through Vedanta-Raigarh S/C line was suddenly shoot up to the tune of 1400 MW. On investigation it was noticed that:

- i. One ckt of 400 kV Meramundali-Vedanta was under shutdown.
- ii. 400 kV Vedanta-Rourkela line tripped due to jumper snapping at Vedanta end.
- iii. All 400 kV SEZ lines tripped on Directional E/F relay operation (67-N) causing load thrown up to the tune of 820 MW.
- iv. 400 kV Meramundali-Vedanta 2nd ckt tripped at Meramundali end on D/P relay operation (Zone-II).
- v. Power flow through Vedanta-Raigarh line shoot up to 1300 MW.

Subsequently the power flow was reduced on restoration of SEZ load.

This issue was discussed in the 131st OCC meeting of ERPC on 20.03.2017. ERPC expressed their concern for such increase of power flow, which would have led to a partial system collapse.

It is learnt that the Special Protection Scheme (SPS) existing at Vedanta is being triggered in case of outage of any one pole of Kaniha-Kolar D/C.

Since Vedanta CGP (SEZ-smelter) has become a State embedded entity, a new scheme can be thought of in addition to the existing Special Protection Scheme, which shall reduce CGP generation as soon as the power flow through any of the 400 kV lines emanating from Vedanta bus exceeds its thermal loading limit. It is requested that Vedanta may examine the relay configurations at their Switchyard.

Deliberations in the meeting

It was decided to constitute a committee headed by Er. L. Nayak, G.M (O&M) comprising of members from OPTCL [(O&M), (E&MR) & Telecom], Gridco, SLDC and Vedanta to review the protection system. The report may be placed in the next PSOC meeting.

[Action: O&M / SLDC / Vedanta Ltd.]

F.2: Agenda by TTPS (NTPC)

a. Review of Monthly Joint Energy Metering system at TTPS.

At present, the practice of taking monthly joint energy metering reading is still continuing which is not relevant after adoption of feeder meter reading.

Deliberations in the meeting

It was decided not to take joint meter reading. GRIDCO may consider the energy accounting prepared by SLDC for billing purpose. If required, the PPA may be modified accordingly.

[Action: GRIDCO / TTPS]

b. Overloading of Auto transformers at TTPS.

In stormy weather condition, it has been observed that 132kV side load is reducing drastically for which it is difficult to manage the 132kV Generation at TTPS end and there is always threats to unit generation due to the overloading of AT-1 & 2.

Deliberations in the meeting

SLDC stated that the present Auto Transformers (320 MVA capacity) is adequate enough to cater the power flow from Generators connected to 132kV bus. However, CESU was advised not to isolate their feeders fully.

[Action: CESU / TTPS]

F.3: Date and Venue of the next (108th) PSOC meeting.

The date and venue of 108th PSOC meeting will be intimated to all the members.

All members expressed their gratitude to Er. Manoranjan Mohanty, CGM (SLDC), OPTCL and Er. Mahendra Kumar Das, Sr. G.M. (OHPC) who are going to retire from service on superannuation by end of this month for their guidance and advice. PSOC will remember their valuable advices and the foot prints they have left for all times with deep regard.

10th Power System Operational Co-ordination Committee Meeting
[At 11:00 A.M. on 22.03.2017]
[At TTPS (NTPC), Talcher]

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