# Odisha Power Transmission Corporation Ltd. Bhubaneswar.



Agenda
for
76<sup>th</sup>Power System Operational Coordination Meeting

Date: 16.07.2014

Venue: PTC, Chandaka

#### Odisha Power Transmission Corporation Ltd. Bhubaneswar.

Agenda for 76th PSOC Meeting to be held on 16.07.14 at PTC, Chandaka

#### A1: Confirmation of the minutes of the 75th PSOC Meeting held on 18.06.2014

The minutes of meeting was circulated vide letter No. SGM (PS)-Pl-15/2007(Vol.-VI)-1615<sup>(28)</sup>, dated 03.06.2014 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 B: GRID PERFORMANCE**

#### B1: Review of Grid Performance for the month of May'14 & June'14.

#### (A) Frequency:

#### Hourly frequency variation for the month of May'14 & June'14

Month	% of time frequency remained							
	<49.00	49.00-49.70	49.70-49.90	49.90-50.05	>50.05	49.70-50.05		
May'14	0.00	0.61	16.63	53.45	29.31	70.08		
June'14	0.00	4.33	31.37	45.18	19.12	76.55		

#### Maximum & Minimum frequency during the month of May'14 & June'14

Month	Freq (Hz)	Date	Time					
May'14	Maximum – 50.59	13.05.14	05:12 Hrs					
	Minimum – 49.48	20.05.14	00:05 Hrs					
June'14	Maximum – 50.71	03.06.14	12:59 Hrs					
	Minimum – 49.06	03.06.14	12:38 Hrs					

#### (B) Grid Demand for the month of May'14 & June'14

Month	Demand	Maximum		Maximum Demand			Minimum Demand		
		Consumption							
	MU	MU	Date	MW	Date	Time	MW	Date	Time
May'14	2290	81.92	16.05.14	3755	16.05.14	20:00	2130	26.05.14	05:00
June'14	2190	79.48	05.06.14	3723	05.06.14	21:00	2043	17.06.14	19:00
June'13*	1955	70.43	01.06.13	3436	02.06.13	21:00	1962	12.06.13	16:00

#### Members may please discuss.

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

(C) Voltage Profile of 220 KV Buses in OPTCL system for the month of June'14

Sl.	S/s Name	1	Maximu	m	N	Ainimuı	m
No		kV	Day	Time	kV	Day	Time
1	Jayanagar	252	29	18:00	231	12	13:00
2	Theruvali	249	20	14:00	225	6	20:00
3	Bhanjanagar	233	29	18:00	210	7	19:00
4	Chandaka	228	30	15:00	203	7	15:00
5	Narendrapur	252	8	22:00	198	6	16:00
6	Joda	235	21	13:00	215	7	20:00
7	Tarkera	235	21	6:00	222	5	21:00
8	Bhadrak	245	7	22:00	200	13	16:00
9	Paradeep	238	16	16:00	195	7	21:00
10	Budhipadar	237	21	3:00	223	7	12:00
11	Duburi	237	30	14:00	200	6	15:00
12	Balasore	235	29	18:00	210	1	21:00
13	Meramundali	229	20	5:00	205	7	15:00
14	Bidanasi	229	30	15:00	193	7	21:00
15	Katapalli	235	14	18:00	216	5	21:00
16	Nayagarh	235	29	18:00	206	7	15:00
17	Mendhasal	235	29	18:00	207	7	15:00
18	Bolangir	238	14	18:00	215	7	11:00

The maximum voltage occurred at Jayanagar & Narendrapur Grid Sub-station while Bidanasi 220 kV bus has experienced the minimum Voltage of 193 kV.

#### Members may discuss.

#### (D) Energy Generation / Import during the month of June'14

Source of Power	Energy (MU)
Thermal (TTPS+IB)	518.83
OHPC Stations including Machhkund share	570.38
IPP & CGP Support	543.50
ISGS drawal	556.97
TOTAL	2189.68

#### (E) Drawal of Machhakund Power

The drawal of Machhakund power during the month of June'14 was 20.474 MU against total generation of 42.588 MU (APdrawal: 19.732 MU).

In the last PSOC meeting, it was decided that Southco shall propose construction of new 33 kV line in their CAPEX plan, so that drawal from Machhakund PH can be optimized. As decided in the last PSOC meeting, a meeting at Jayanagar with SOUTHCO, OPTCL, OHPC and GRIDCO is yet to be convened by Sr. G.M. (PS) to examine the feasibility of maximize Machhakund drawal considering the ground realities.

#### (F) DISCOM Drawal up to the month of June'14

Name of	MONTH	Approved Energy	Scheduled	Actual	Open Access	Net Energy	Overdraw
DISCOM		Drawal Prorated	Energy	Energy	Import	Drawal	(MU)
		for the month	(MU)	Drawal	Schedule	(MU)	
		(MU)		(MU)	(MU)		
		1	2	3	4	5=(3-4)	6=(5-2)
CESU	Mar'14	674.250	608.558	698.592	2.305	696.287	87.729
	Apr'14	743.014	761.656	765.241	2.347	762.894	1.238
	May'14	767.781	762.550	789.927	2.340	787.587	25.037
	June'14	743.014	723.533	757.041	2.368	754.673	31.14
WESCO	Mar'14	565.130	568.751	606.220	5.193	601.027	32.276
	Apr'14	560.548	597.757	631.236	17.912	613.324	15.567
	May'14	579.233	636.485	649.787	21.920	627.867	-8.618
	June'14	560.548	582.247	630.606	9.702	620.904	38.657
NESCO	Mar'14	447.640	405.581	460.172	32.732	427.44	21.859
	Apr'14	438.082	425.340	464.947	23.735	441.212	15.872
	May'14	452.685	414.293	475.678	19.668	456.01	41.717
	Jine'14	438.082	391.799	458.494	33.207	425.287	33.488
SOUTHCO	Mar'14	270.630	285.364	277.406	0.000	277.406	-7.958
	Apr'14	274.521	286.062	275.008	0.000	275.008	-11.054
	May'14	283.671	291.135	278.532	0.000	278.532	-12.603
	June'14	274.521	264.148	269.739	0.000	269.739	5.591

<sup>\*</sup>The above figures are as per EBC data. Energy drawal by SOUTHCO are excluding of energy consumed by NALCO at Damanjodi and IMFA at Theruvali.

#### PART C – issues raised in the OCC meeting of ERPC

#### C1: Compliance of decisions of 97th OCC meeting of ERPC held on 15.05.2014

#### Item no. B.7.4: Depletion in OPTCL network due to impact of cyclone "Phailin"

In 96th OCC OPTCL informed that, the 220 kV Narendrapur-Mendasal line will be brought into service tentatively by July, 14.

In the last PSOC meeting, CGM (O&M) stated that 220 kV Narendrapur-Mendhasal lines, are expected to be charged through normal tower by June, 2014. One ckt. at 220kV & the other circuit at 132kV are charged up to location 144.

In the last PSOC meeting, CGM (O&M) also stated that 220kV Meramundali-Kaniha ckt.-I, under prolonged shutdown shall be brought into service after replacement of CT at Meramundali.

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

## Item no. B.24: Hearing at CERC on petition No SM/005/2014 regarding non-compliance of IEGC 5.4.2 (d) Regulation-regarding implementation of automatic demand management scheme

SLDC has filed its reply before CERC on 28.06.2014 enclosing the feedback received from CESU and NESCO, which has been mailed to all the DISCOMs & OPTCL.

OPTCL / Discoms may please discuss.

#### **PART-D – Operational Issues**

#### D1: Non-compliance of drawal schedule by DISCOMs

Due to low hydro potential and multiple outages of thermal units, State's power availability has been reduced substantially resulting reduction of DISCOM's drawal schedule. The DISCOMs are supposed to comply with their respective drawal schedule. It is noticed that CESU & WESCO are overdrawing most of the times even at adverse frequency condition in spite of repeated instructions issued by SLDC. Such overdraw by DISCOMs reflects in the State's drawal from grid for which ERLDC is issuing messages frequently. Also, GRIDCO is forced to pay the deviation charges to the tune of Rs 10/- to Rs.16/- per unit for the overdrawal as per CERC Regulation.

## D2: Availability of data of real time power flow of feeders covered under Under-frequency Load shedding scheme (UFLS) and lower relief expected to obtained in real time system operation

In the last PSOC meeting, A.G.M. (Telecom) stated that project report has already been prepared for collection of data from those 33kV feeders covered under UFR and approved by BoD. The detail estimate has been sanctioned & BOQ has been sent to CPC for procurement action. The work is expected to be completed by October 2014.

G.M. (Telecom) / Sr. G.M. (CPC) may please update the status.

#### **D3:** Communication issues

Discoms may please note.

#### (I) Installation of communication equipment by CGPs / Industries.

The status of data communication from CGPs as follows

A	N. COR	
Sl. No	Name of CGP	Present status
1	M/s FACOR Power Limited	Overhead line is yet to be charged.
2	M/s Shree Ganesh Metalicks Ltd.	CVT, WT are installed at OPTCL switching sub-station,
		Kuanrmunda. RTU procured but PLCC equipments are yet to be
		procured.
3	M/s SEL, Jharsuguda	Data invoked from ERLDC & displayed at SLDC as RTU is
		reporting to ERLDC.
4	M/s Shalivahan Green Energy Ltd.	Penalty is imposed by OERC.
5	M/s IFFCO, Paradeep	PO issued by CPC for procurement of PLCC / SCADA Inspection
		of PLCC / SCADA is completed.
6	M/s MSP Mettalicks	RTU is commissioned. Database has been prepared and will be
		integrated within June 2014.
7	M/s Narbheram	BOQ issued on 06.07.12. At present the CGP is connected through
		33 kV line.
8	M/s NINL, Duburi	Yet to be established. Matter has been intimated to GCC.
9	M/s Balasore Alloys	Procurement action for PLCC / SCADA is going on.
10	M/s Adhunik Metallics	Database preparation could not be initiated due to non-submission
		of SLD. PLCC is not commissioned. RTU is not installed.
11	M/s Rohit Ferrotech	Not procured.
12	M/s NALCO	Commissioning of PLCC / SCADA is yet to be done.

It was decided in the last meeting that GM (Telecom) may forward the list of defaulting CGP / Industries to the Member Secretary, GCC to take up the matter with OERC.

#### GM (Telecom) may update the status

#### D4: Availability of real time data (through SCADA) in SLDC control room.

Frequent data suspect is being noticed in the SLDC control room causing problem in real time operation.

GM (Telecom) may deliberate.

#### D5: Extension of Power Supply to Sunabeda Grid Sub-station from NALCO, Damanjodi.

Extension of power supply to Sunabeda grid sub-station, in view of the prolonged shutdown of Jayanagar-Sunabeda 132 kV line for converting into D/C line / in case of breakdown of 132kV Jaynagar-Sunabeda ckt.

In the last meeting, it was decided to convene a meeting with NALCO management to finalize the issue.

CGM (O&M) may please deliberate.

#### **D6: DISCOM Issues.**

#### (1) NESCO

#### **ABT Related Issue**

- a. Displaying deviation charges in the ABT Dashboard.
- b. Displaying of historical data.
- c. Non-providing of "day ahead schedule" by intra state OA Customers.

#### **Operation Related Issue.**

#### d. Up-gradation of Duburi, Basta, Barbil, Karanjia and Anandapur substation.

As discussed in the earlier meeting, necessary steps may be taken for up-gradation of Duburi substation to 40MVA and others i.e. Basta, Barbil, Karanjia and Anandapur from 12.5MVA to 20MVA to meet demands.

- e. Low voltage at Chandikhole Grid.
- f. Badbil 12.5MVA charged but load could not be drawn till date due to OPTCL operational problem as discussed on 27th June in GCC meeting.
- g. Joda-Palaspanga 132KV single circuit is over loaded.

#### (2) SOUTHCO:

- 1. SOUTHCO has raised certain bilateral issues like installation of PT at Jaynagar, up-gradation of CT for 33kV Khalikote feeder at Balugaon and repeated the old issues which have already been discussed in earlier meetings.
- 2. Construction of sub-station at Borigumma and Buguda, up-gradation of sub-station capacity at Purushottampur, construction of 2<sup>nd</sup> 132kV circuit for Ganjam grid sub-station

#### Members may please discuss.

#### **PART E: OPERATIONAL PLANNING**

#### E1: Commissioning status of New Transmission elements.

As deliberated in the last meeting the status of commissioning of new transmission elements is as follows:

Sl. No	Details of transmission element	Present Status
1	Commissioning of 220 kV Jayanagar- Jeypore 2 <sup>nd</sup> DC line	Work has already been started. Expected to be completed by June 2015.
2	Commissioning of 400 kV Meramundali-Mendhasal 2nd ckt	Line is ready and shall be charged after commissioning of 3 <sup>rd</sup> ICT at Mendhasal for work order / PO issued.
3	Commissioning of 400 kV Ib-Meramundali D/C line.	400kV Lapanga-Meramundali line to be charged by July 2014. 400kV Ib-Lapanga line is expected to be commissioned by December'14.
4	Commissioning of 220 kV Bidanasi- Cuttack line	Work in progress and expected to be completed by June 2015.
5	Commissioning of 220/132 kV Cuttack S/S	Work in progress and expected to be completed by August 2014.
6	Commissioning of 132 kV Baripada (PG)-Jaleswar line	Work has already been started, which will be completed by December 2015.
7	Commissioning of 220/132 kV Kesinga S/S	Work under progress. Expected by September 2015.
8	Connectivity to Keonjhar PG	Proposal to connect by LILO of 220 kV Joda-TTPS through Nayagarh 220 kV (ESSAR) S/S. Expected to be completed by June 2015.
9	Commissioning of Bolangir New-Bolangir(PG) line	220 kV Burla - Bolangir D/C line will be made LILO at Bolangir (PG).
10	LILO of 220 kV Burla - Bolangir line at Bolangir(PG)	Work awarded. Expected to be completed by Nov, 2014
11	220 kV Bolangir (PG) –Kesinga S/C line through LILO of 220 kV Bolangir-Kesinga line.	220kV Bolangir – Kesinga D/C line is under construction. It is proposed to connect Bolangir (PG) through LILO arrangement on completion of the line.

#### CGM (Const.) may update the status

In the last meeting OPTCL intimated the list of S/Ss already commissioned and likely to be commissioned in near future as tabled.

Sl.	Name of the sub-station	Probable month of	Name of DISCOM
No		commissioning	
1	132/33kV IIT, Argul sub-station	Commissioned on 06.05.14	CESU
2	132/33kV Banki sub-station	June-14	CESU
3	132/33kV Konark sub-station	Oct-14	CESU
4	132/33kV Samuka beach sub-station	Oct-14	CESU
5	132/33kV Khajuriakota sub-station	Dec-14	CESU
6	132/33kV Sarasmal sub-station	July-14	WESCO
7	132/33kV Kalunga sub-station	Oct-14	WESCO
8	220/33kV Banei sub-station	Dec-14	WESCO
9	132/33kV Boud sub-station	Aug-14	SOUTHCO
10	132/33kV Dabugaon sub-station	Dec-14	SOUTHCO
11	132/33kV Umerkote sub-station	Dec-14	SOUTHCO
12	132/33kV Nuapada sub-station	July-14	WESCO
13	132/33kV Padmapur sub-station	July-14	WESCO
14	132/33kV Udala sub-station	Dec-14	NESCO
15	132/33kV Somanathpur sub-station	Oct-14	NESCO
	(Near Balasore)		

All Discoms were requested to intimate their action plan for development of 33 kV infrastructure for power drawal from those S/Ss.

#### Discoms may deliberate

#### E2: Metering issues.

Installation of energy meters already released by CGM (O&M) for Hydro Stations, traction substations, Joy Iron Steel Limited, REHPL (solar) and feeders emanating from Burla power house may be expedited as the same has been delayed considerably.

#### GRIDCO / O&M may deliberate the commissioning status

#### E3: Metering issue of TTPS.

In the last meeting, SLDC stated that visit to TTPS site during July has been planned along with O&M & GRIDCO.

SLDC may deliberate.

#### E7: Major Events in the month of June'14.

13.06.2014: 220/33 kV, 20 MVA transformer at Mendhasal S/S Commissioned

#### E8: Under Frequency Relay operation in OPTCL System during the month of June'14.

There is no UF Relay operation occurred during the month of June'14.

#### E9: Important Grid Incidences during the month of June'14

- (I)On 07.06.14 at 19:30 hrs 220 kV Jaynagar-Jeypore PG Ckt-I& II tripped along with 220 kV Jaynagar-Laxmipur Ckt-II at Jaynagar end.
- (II)On 12.06.14 at 09:54 hrs, 220 kV Jaynagar-Jeypore PG Ckt- II tripped at Jaynagar end on O/C, E/F and pole discrepancy relay. The 'B' ph limb of main breaker of above feeder did not open though the tie breaker tripped. On observation it was found that the trip coil of main breaker burnt.
- (III)On 08.06.14 at 19:24 hrs, 132 kV Baripada PG-Rairangpur-Karanjia feeder tripped at Baripada PG on D/P, dist-54.76 km. On investigation it was found that there was DC failure in 33 kV panel and non-isolation of fault in 33 kV Bahalada feeder damaged the 'R' and 'Y' ph CT and post insulator of 'Y' ph isolator of the same feeder. Simultaneously 33kV side bushing of 132/33 kV 20 MVA Transformer-I burnt, its 33kV 'Y' and 'B' ph CT jumper snapped and all the three phase 33 kV side CTs burst. On investigation it was found that 'B' ph jumper from wavetrap to line isolator of 400 kV Meramundali-GMR Ckt snapped at Meramundali end. On investigation it was found that 'B' ph jumper from wavetrap to line isolator of 400 kV Meramundali end.
- (IV) On 10.06.14 at 12:25 hrs, all the 220 kV feeders emanating from Theruvali S/S tripped. On investigation it was found that due to transient fault in 220 kV Theruvali-U. Kolab line D/P relay at Theruvali end operated indicating a distance of 51.97 km. Due to delay in tripping of Theruvali-U. Kolab line at Theruvali end all 220 kV lines pulled out.

- (V) On 20.06.2014, 12:37 hrs At 12:37 hrs, 400 kV Meramundali-GMR-Kaniha Ckt tripped at Meamundali on 'B' ph, E/F, dist-4.9 km. 400 kV Meramundali-JSPL ckt- II tripped at Meramundali end on 'B' ph E/F, Zn-I, dist-2.7 km relay indication. 400 kV Meramundali-Mendhasal Ckt tripped at both ends. 400 kV Meramundali-Angul-Kaniha Ckt tripped at Angul end on 'B'ph, E/F, Zn-I relay indication. 220 kV Meramundali-Bhanjanagar Ckt-I tripped at Meramundali on D/P relay indication.
- (VI) On 27.06.14 at 05:23 hrs, all the 220 kV feeders emanating from Theruvali S/S tripped with operation of bus bar relay. On investigation it was found that 'R' ph post insulator used for bypassing bus-I main breaker (defunct) of 220 kV Theruvali-U. Kolab line burst at Theruvali S/S causing bus fault. 220 kV Theruvali-Indravati Ckt-III & IV were under S/D.

A meeting was convened by O&M wing on dated 14.07.2014 to analyze the incidents. The concerned officers of EHT (O&M) and E&MR had deliberated the reasons of disturbance. It was also decided to take remedial measures to avoid reoccurrence of such incident in future.

#### CGM (O&M) may please deliberate.

E10: Outage of major transmission Lines / Elements during the month of June'14 (above 10 hrs).

Sl	Transmission lines	Tripping	Restoration	Reason
No		Dt/time	Dt/time	
1	220 kV Theruvali-Indravati	01.06.14	02.06.14	'Rope fell on line at loc. No
	Ckt-I	12:06	18:24	263
2	132 kV Meramundali-Arati	01.06.14	02.06.14	'Y' ph jumper snapped at
	ckt	19:44	07:45	Loc. No-39
3	220 kV Rengali PH-TTPS ckt.	08.06.14	09.06.14	At Loc-167, bottom
		17:50	18:50	conductor snapped.
4	132 kV Baripada PG-	08.06.14	09.06.14	33kV bushing burnt, 'Y' and
	Rairangpur-Karanjia ckt.I	19:24	12:31	'B' ph jumper snapped and
				all 3phases CT burnt
5	220 kV Theruvali-U.Kolab	10.06.14	11.06.14	Trip coil burnt, Breaker did
	Ckt.	12:25	12:26	not trip at Theruvali.
6	220 kV Theruvali-Indravati	13.06.14	15.06.14	At loc-27, jumper snapped.
	Ckt-IV	09:25	14:34	
7	220 kV Paradeep-IOCL Ckt.	16.06.14	17.06.14	At loc-21, cross arm bent &
		13:36	10:21	tripped on E/F.
8	132 kV Paradeep-PPL Ckt-II	16.06.14	17.06.14	At Paradeep gantry end R ph
		14:40	20:15	LA burnt & conductor
				snapped.

Most of the incidents are due to insulator failure, LA failure and jumper / conductor snapping.

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

### E11: Review of Outage Program of State Generators / Transmission elements for the month of July & August'14:

Tentative Outage programme for State Generators for the month of May & June'14 are as follows:

Sl.	Station	Unit	Period	Remarks
1	Burla	# 1	17.02.14 to 30.06.14	Feedback sensor problem
		# 3	19.03.14 to 15.07.14	Guide vane problem
		# 6	17.02.14 to 31.08.14	Shaft seal heavy leakage
2	Chiplima	#2	13.05.14 to 15.06.14	Annual Maintenance
		#3	15.02.14 to 31.08.14	TGB Problem
3	Balimela	# 1	31.01.13 to 30.06.14	Thrust bearing problem
		#2	10.12.13 to 30.06.14	Thrust bearing problem
		#8	20.05.14 to 19.06.14	Annual Maintenance
4	Rengali	# 1	12.05.14 to 30.06.14	Annual Maintenance
5	TTPS	# 5	25.06.14 to 16.07.14	Boiler OH + retrofit ESP OH +
		# 6	10.07.14 to 19.07.14	CW duct dish end replacement.
6	IbTPS	# 2	Deferred	Annual Overhauling

It is observed that more numbers of OHPC units are under prolonged shutdown even if the monsoon is at the doorstep. It is also noticed that two numbers of units of Chiplima PH are under shutdown resulting spillage of the water due to power generation at Burla. OHPC could have planned earlier to avoid such wastage of water.

OHPC may deliberate.

#### E12: Generation Program for the month of June & July'14.

Generation schedule for the month of July'14 furnished by OHPC are given below.

Name of	Generation		Reservoir	Reservoir	MDDL	High Flood
Hydro Gen.	Program	me (MW)	Level as	Level as		Reservoir
Station	June'14	July'14	on	on		Level
	06.06.14 to 30.06.14		01.07.14	14.07.14		
HPS, Burla	70+40	25+20	599.47	597.58	590 ft.	630 ft.
Balimela	150	150	1482.20	1480.30	1440 ft.	1516 ft.
Rengali	130	50	110.87	110.24	109.72mtr	123.5 mtr.
U.Kolab	80	20	847.82	847.85	844 mtr	858 mtr.
U.Indravati	400	100	628.00	627.86	625mtr	642 mtr
MKD	30	30	2720.70	2718.10	2685 ft.	2750 ft.
TOTAL	900	395				

OHPC may update.

#### E13: Issues raised by Ib TPS

- a. Implementation islanding scheme at Ib-Budhipadar command area.

  The relay as specified has already been handed over to OPTCL. Commissioning may done early.
- b. Bus-bar protection at Budhipadar sub-station

  The bus-bar protection scheme may be made functional to avoid unwanted tripping of Ib units.

CGM (O&M) may please deliberate.

#### E14: Providing protection system in terms of IEGC & CEA Regulations:

CERC, vide RoP of hearing on 05.06.2014 in Petition No.-59/MP/2014 filed by ERLDC directed OPTCL to submit a compliance report of earlier audit carried out by ERPC, on affidavit, by 18.07.2014. Further, CERC directed to conduct engage an independent third party preferably CPRI to undertake afresh a complete audit of OPTCL transmission system as per check list specified by report of task force on power system analysis under contingency, which is available on CEA website and submit a report within three months of issue of the RoP.

CGM (O&M) may please deliberate.

#### **PART F: OTHER ISSUES**

Item No: F1 Members may raise issues if any.

Item No: F2 Date and Venue of the next (77th) PSOC meeting: