Odisha Power Transmission Corporation Ltd.
Bhubaneswar.

Agenda
for
108th Power System Operational Coordination Meeting

Date: 24.04.2017
Venue: PTC, Chandaka

Odisha Power Transmission Corporation Ltd. Bhubaneswar.

Agenda for 108th PSOC Meeting to be held on 24.04.2017 at PTC, Chandaka

Item no. 1: Confirmation of the minutes of the 107th PSOC Meeting held on 22.03.2017

The minutes of meeting was circulated vide letter No. SGM (PS)-Pl-15/2016/1377(49) dated 17.04.2017 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'2017
C.1: Status of projects funded under PSDF scheme
C.2: High Voltage Problem in 400 kV Meramundali grid S/S: Regarding
C.3: Operational Load Flow Study for Off-Peak Period (winter lean period)
C.4: Restoration of PLCC system of important lines
C.5: 220 kV inter-connecting lines of OPTCL with 400/220 kV Bolangir (PG), Keonjhar & Pandiabil S/s
C.6: Preparation of crisis management plan for Cyber Security in Power Sector in line with CERT-IN.
C.7: Certification through BIS as per IS 18001:2007 to all generating/ transmission units.
C.8: Tie bay of 125 MVAr bus-reactor & 400kV Indravati –Indravati PG
C.9: Replacement of old RTU in ER for reporting of RTU/SAS to back up control centre
C.10: Implementation of Automatic Demand Management Scheme (ADMS)
C.11: Mock Black start exercise in Eastern Region
C.12: Pollution mapping for Eastern Region
C.13: Tap position optimization at Jeypore

D.1: Non-compliance of drawal schedule by DISCOMs
D.2: Prolonged outage of transmission elements and tentative revival dates
D.3: Communication issues
D.4: Web based drawal / generation scheduling.
D.5: Implementation of Automatic Meter Reading for OPTCL-Discom interface points.
D.6: Software for Deviation charge billing.
D.7: DISCOM Issues

E.1: Commissioning status of New Transmission elements.
E.2: Energy Metering at Hydro Stations.
E.3: Major Events in the month of March'17
E.4: Important Grid Incidences during the month of March'17.
E.5: Outage of major transmission Elements during the month March'17. (above 10 hrs).
E.6: Review of Outage Program of State Generators for the month of May'2017
E.7: Generation Program for the month of May'2017.
E.8: Formation of Working Group (Hydro Generation).
E.9: Compliance of CEA Regulations for Grid Connectivity of Renewable Energy Sources.
E.10: Anticipated power generation and demand for the month of May'2017.

F.2: Date and Venue of the next (109th) PSOC meeting

PART B: GRID PERFORMANCE

Review of Grid Performance for the month of March'17.

(A) Frequency:

Hourly frequency variation for the month of March'17.

Month	% of time frequency remained				
	<49.00	49.00-49.70	49.70-49.90	**49.90-50.05**	>50.05
Jan'17	0.00	0.00	7.89	72.88	19.23
Feb'17	0.00	0.00	7.01	**76.35**	16.65
Mar'17	0.00	0.01	8.20	72.57	19.22

Maximum & Minimum frequency during the month of March'17.

Month	Freq (Hz)	Date	Time
Feb'17	Maximum – 50.15	13.02.17	00:00 Hrs
	Minimum – 49.84	22.02.17	10:15 Hrs
Mar'17	Maximum – 50.16	13.03.17	18:00 Hrs
	Minimum – 49.78	31.03.17	21:00 Hrs

(B) Grid Demand for the month of March'17.

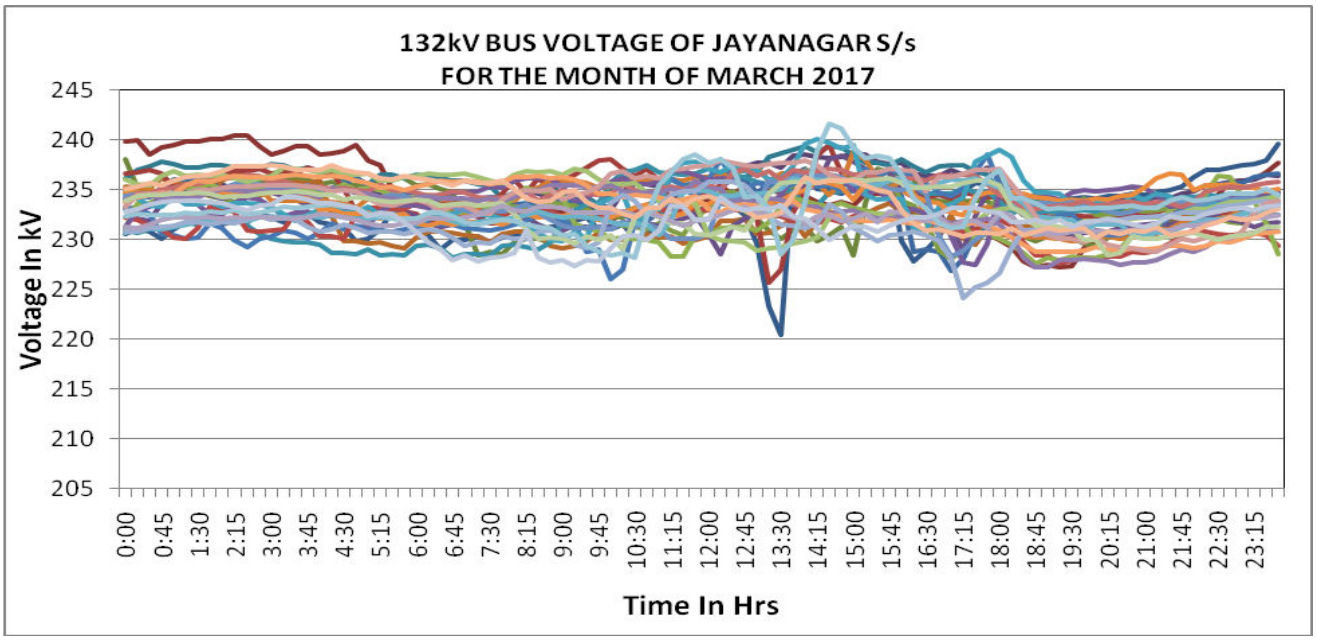
Month	Demand		Maximum Consumption		Maximum Demand			Minimum Demand		
	MU	**Avg. (MW)**	MU	Date	MW	Date	Time	MW	Date	Time
Feb'17	**1970**	**2932**	**76.22**	**25.02.17**	**3845**	**23.02.17**	**20:00**	**2305**	**04.02.17**	**15:00**
Mar'17	**2361**	**3173**	**83.52**	**28.03.17**	**4064**	**29.03.17**	**21:00**	**2301**	**11.03.17**	**04:00**
Mar'16	**2403**	**3230**	**81.85**	**23.03.16**	**4175**	**12.03.16**	**21:00**	**2427**	**28.03.16**	**07:00**

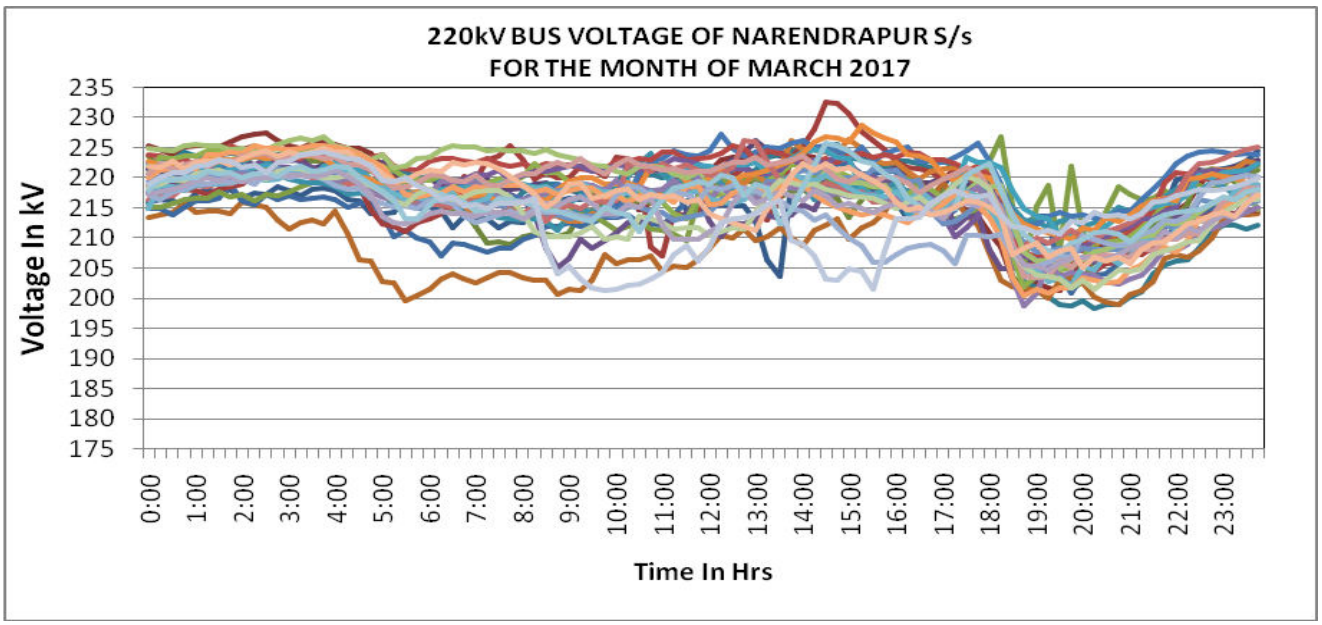
Members may please discuss.

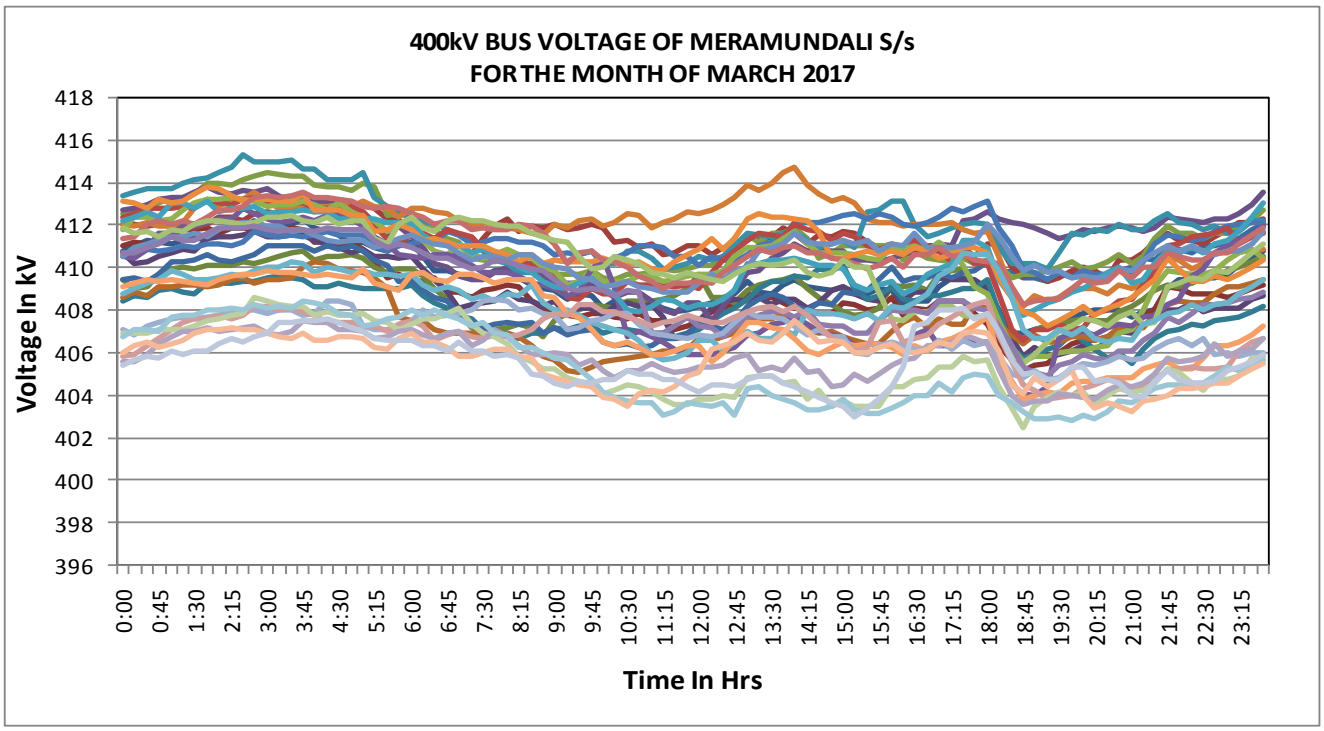
(C) Voltage Profile of 220 kV Buses in OPTCL system for the month of: March'17

Sl. No	S/s Name	Maximum			Minimum		
		kV	Day	Time	kV	Day	Time
1	Balasore	237.86	20	03:00	213.50	29	19:45
2	Barkote	234.28	11	2:30	225.39	29	19:45
3	Bhadrak	236.88	20	03:00	212.34	29	19:45
4	Bhanjanagar	237.51	01	03:45	220.25	02	19:15
5	Bidanasi	235.90	13	15:30	213.32	05	19:00
6	Bolangir	227.82	10	14:45	209.05	25	07:15
7	Budhipadar	232.84	10	14:00	221.35	30	19:30
8	Chandaka	231.80	11	02:30	209.17	29	11:30
9	Duburi(O)	233.65	11	02:45	218.41	29	20:15
10	Duburi (N)	218.35	11	02:30	203.86	29	20:15
11	Jayanagar	**241.67**	29	14:30	220.48	01	13:30
12	Joda	236.92	10	14:30	221.57	29	19:45
13	Katapalli	232.26	10	13:30	201.32	10	12:15
14	Laxmipur	239.13	29	14:30	218.46	01	13:30
15	Mendhasal	234.80	11	02:30	212.52	31	19:15
16	Meramundali	229.84	11	02:30	219.85	30	10:30
17	Narendrapur	232.55	08	14:30	**198.26**	05	20:15
18	Nayagarh	239.07	29	14:30	216.38	15	18:45
19	Paradeep	232.61	11	03:30	210.03	25	21:00
20	Tarkera	235.21	12	14:00	223.95	30	19:45
21	Theruvali	231.51	24	13:30	208.94	01	13:30

The maximum Voltage of **241.67** kV occurred at Jaynagar 220 kV bus while Narendrapur, 220 kV bus has experienced the minimum Voltage of **198.26** kV. Bus Voltages at Samgara and Lapanga could not be incorporated due to non availability of energy meter in those S/Ss. 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 March 2017 is shown.







Members may discuss.

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

AUTO TRANSFORMER LOADING FOR THE MONTH OF MARCH'2017

Name of the 220 kV Sub-Station (Feeding Sub-stations/Feeders)	Capacity	Drawal details						REMARKS
		Maximum			Minimum			
	MVA	MW	Day	Time	MW	Day	Time	
BALASORE 220/132 KV *{ Balasore, Birla Tyre(I), Ispat Alloy(I), Jaleswar, Jaleswar(T)}*	2x160	130.56	4	18:30	36.84	19	18:30	
		130.56	4	18:30	36.80	19	18:30	
BHADRAK 220/132 KV {Bhadrak area load, Bhadrak(T),Soro, FACOR (I), Dhamra Port}	3x100	75.08	4	19:00	24.20	8	9:30	
		71.72	4	19:00	23.20	8	9:30	
		METER NOT CONNECTED						
BHANJANAGAR 220/132 KV *{ Bhanjanagar, Aska, Phulbani, Ganjam, Chatrapur}*	1x160	98.36	7	19:00	20.12	31	13:40	
	1x160	89.76	29	15:30	17.48	31	13:15	
BIDANASI 220/132 KV *{Bidanasi, Khurda }*	1x160	NOT AVAILABLE						
	1x100	46.12	28	20:00	9.24	25	17:15	
	1x100	46.20	28	20:45	9.24	25	17:45	
BOLANGIR (SADAIPALLI) 220/132 KV { Bolangir, Patnagarh, Sonepur, Saintala, Khariar, Barpalli }	2x160	143.88	30.00	5:30	14.36	6	11:15	
		NOT AVAILABLE						
BUDHIPADAR 220/132 KV *{ Jharsuguda, Jharsuguda Tr, Cemco(I), MCL, Sundergarh,Brajarajnagar, Rajgangpur}*	2x160	80.52	29	19:30	19.08	31	9:15	
		100.60	31	18:30	30.84	10	14:30	
CHANDAKA 220/132 KV *{ Chandaka, Bhubaneswar, Nimapada, Ransinghpur, Puri,Kesura, Kaipadar Tr. }*	1x100	69.68	27	15:00	16.64	11	2:30	*Auto-III under shutdown.*
	1x160	122.28	27	15:00	29.56	11	2:30	
	1x100	UNDER SHUT DOWN						
	1x160	117.92	27	15:00	28.40	11	2:30	
DUBURI 220/132 KV *{Duburi, Bamnipal(I), BRPL, MESCO, Jajpur Road, Kalarangi, Jajpur Town}*	3x100	76.16	27	16:00	11.12	7	15:30	*Auto-II under shutdown.*
		UNDER SHUT DOWN						
		73.84	27	16:00	10.84	7	15:30	
JAYANAGAR 220/132 KV. *[Damanjodi(NALCO), Traction S/Ss, Tentulikhunti, Sunabeda, Jayanagar]*	1x160	64.96	3	20:00	23.96	10	21:30	
	1x100	64.48	3	20:00	23.72	10	21:30	
JODA 220/132 KV *{ Joda,Tensa, FAP(I), Bolani(I), Nalda Tr.,Polasponga, *Rairangpur, Bhalulata traction}*	3x100	METER NOT INSTALLED						*"*" - Alternate P/S from Kuchei.*
		METER NOT INSTALLED						
		METER NOT INSTALLED						
KATAPALI 220/132 KV {Chipilima,Bargarh, ACC,Sonepur & Katapali area load.}	1x100	72.68	11	17:15	16.04	9	9:00	*Supported by Burla & Chipilima power.*
	1x100	73.00	11	17:15	16.08	9	9:00	
	1x160	METER NOT INSTALLED						
Lapanga	1x160	NOT AVAILABLE						
	1x160	NOT AVAILABLE						
MERAMUNDALI 220/132 kV *{Meramundali Traction, Dhenkanal, Navchrome(I), Hind Metal, Aarti,BRG}*	3x100	43.64	6	19:45	9.08	30	4:15	
		42.92	6	19:45	9.04	30	4:15	
		42	6	19:45	8.24	30	4:15	
Mendhasal	1x100	NOT AVAILABLE						
NARENDRAPUR 220/132KV *{ Narendrapur, NarendrapurTr, Berhampur, Chhatrapur, Ganjam, Balugaon, Digapahandi, Mohana.}*	2x160	113.52	5	19:15	10	9	18:00	
		113.12	5	19:30	20.72	9	18:00	
	1x100	NOT AVAILABLE						
PARDEEP 220/132 KV { Paradeep, Kendrapada, Pattamundai, Chandikhol, Cuttack, Jagatsinghpur, Phulnakhara}	1x160	102.04	24	19:15	21.04	11	3:30	
	1x100	62.28	24	19:15	12.64	11	3:30	
	1x50	METER NOT AVAILABLE						
TARKERA 220/132 KV *[Rourkela, Rourkela Tr.,RSP(I), Chhend , Adhunik Metal, Rajgangpur, OCL(I), Rajgangpur Tr.]*	4x100	59.52	31	18:45	22.04	17	19:30	
		60.68	31	18:45	22.80	17	19:30	
		59.60	31	18:45	22.00	17	19:30	
		59.20	31	18:45	22.24	17	19:30	
THERUVALLI 220/132 KV. *{Theruvali, IMFAL(I), JK(I), Junagarh, Kesinga,Powmex(I), Rayagada, }*	2x100	91.04	9	14:45	22.84	10	14:30	*Rayagada & Paralakhemundi can be fed from Machhkund system.*
		78.76	9	19:30	8.84	23	15:30	
TTPS 220/132 KV *{ Chainpal, FCI (I), Angul, MCL Nandira(I), Rairakhole,Boinda,Kamakhyanagar, Kalarangi,Nuapatna, Choudwar }*	1x160							*Data not received*
	1x160							
Samangara	1x100	NOT AVAILABLE						

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

TTPS is not submitting the data even after being reminded by SLDC.

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

(E) DISCOM Drawal up to the month of March'17

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'16	704.384	745.175	785.466	7.945	777.521	32.346
	May'16	727.863	754.537	769.277	14.893	754.384	-0.153
	June'16	704.384	728.317	760.387	12.791	747.596	19.279
	July'16	727.863	736.383	752.465	13.163	739.302	2.919
	Aug'16	727.863	731.392	749.383	16.214	733.169	1.777
	Sept'16	704.384	692.808	727.251	16.844	710.407	17.599
	Oct'16	727.863	684.054	719.475	19.376	700.099	16.045
	Nov'16	704.384	575.946	599.494	16.815	582.679	6.733
	Dec'16	727.863	558.481	583.79	19.407	564.383	5.902
	Jan'17	727.863	548.731	585.232	19.72	565.512	16.781
	Feb'17	657.425	540.62	574.37	17.912	556.458	15.838
	Mar'17	727.863	**699.889**	**726.216**	**19.776**	**706.44**	**6.551**
WESCO	April'16	579.452	617.311	657.095	18.777	638.318	21.007
	May'16	598.767	634.558	673.883	25.441	648.442	13.884
	June'16	579.452	643.125	653.857	23.867	629.99	-13.135
	July'16	598.767	629.509	676.116	31.735	644.381	14.872
	Aug'16	598.767	607.205	660.37	43.023	617.347	10.142
	Sept'16	579.452	570.415	581.59	31.785	549.805	-20.61
	Oct'16	598.767	562.624	588.127	30.95	557.177	-5.447
	Nov'16	579.452	513.055	560.503	33.899	526.604	13.549
	Dec'16	598.767	531.741	575.543	56.568	518.975	-12.766
	Jan'17	598.767	541.877	634.49	99.262	535.228	-6.649
	Feb'17	540.822	493.257	534.199	48.555	485.644	-7.613
	Mar'17	598.767	**573.281**	**660.676**	**67.241**	**593.435**	**20.154**
NESCO	April'16	447.945	472.674	544.157	70.768	473.389	0.715
	May'16	462.877	447.214	545.786	90.686	455.1	7.886
	June'16	447.945	453.173	568.294	93.911	474.383	21.21
	July'16	462.877	464.223	637.112	160.664	476.448	12.225
	Aug'16	462.877	464.344	565.592	106.664	458.928	-5.416
	Sept'16	447.945	466.494	549.786	88.571	461.215	-5.279
	Oct'16	462.877	477.866	573.397	106.136	467.261	-10.605
	Nov'16	447.945	401.377	511.69	107.966	403.724	2.347
	Dec'16	462.877	388.36	503.864	114.956	388.908	0.548
	Jan'17	462.877	428.609	523.455	106.925	416.53	-12.079
	Feb'17	418.082	401.54	501.457	112.279	389.178	-12.362
	Mar'17	462.877	**479.867**	**567.207**	**102.657**	**464.55**	**-15.317**
SOUTHCO	April'16	285.205	285.017	284.863	0.007	284.856	-0.161
	May'16	294.712	287.919	279.859	1.193	278.666	-9.253
	June'16	285.205	269.339	273.405	0.696	272.709	3.37
	July'16	294.712	275.04	285.042	0.196	284.846	9.806
	Aug'16	294.712	281.303	290.572	5.995	284.577	3.274
	Sept'16	285.205	278.812	280.399	2.821	277.578	-1.234
	Oct'16	294.712	277.521	279.892	4.25	275.642	-1.879
	Nov'16	285.205	248.696	258.424	3.396	255.028	6.332
	Dec'16	294.712	260.868	264.555	3.685	260.87	0.002
	Jan'17	294.712	260.179	268.099	3.716	264.383	4.204
	Feb'17	266.191	250.208	255.937	3.143	252.794	2.586
	Mar'17	294.712	**297.131**	**301.742**	**1.670**	**300.072**	**2.941**

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

Members may please discuss.

(F) Energy Generation / Import during the month of March'17

Source of Power	Energy (MU)
Thermal (TTPS+IB)	586.47
OHPC Stations including Machhkund share	506.46
CGP Support	230.14
IPP Support	414.09
SOLAR POWER	18.34
ISGS drawal	605.44
TOTAL	**2360.94**

(G) (i) Drawal of Machhakund Power

The drawal of Machhakund power up to the month of **March'17** are as detailed**:**

Month	Total Generation		Odisha Drawal		AP Drawal	
	MU	MW	MU	MW	MU	MW
April'16	42.784	59.42	19.714	27.380	21.032	29.21
May'16	54.998	73.92	19.860	26.690	33.100	44.48
June'16	52.601	73.06	22.143	30.750	28.162	39.11
July'16	61.250	82.32	27.531	37.000	31.460	42.28
August'16	65.386	87.88	30.816	41.420	31.871	42.84
September'16	66.248	92.01	31.835	44.210	31.739	44.08
October'16	67.765	91.081	31.269	42.028	33.822	45.459
November'16	66.324	92.116	30.673	42.600	32.982	45.808
December'16	68.371	91.896	32.236	43.327	33.356	44.833
January'17	68.975	92.708	33.356	44.833	32.627	43.853
February'17	62.077	92.376	30.614	45.556	28.935	43.058
March'17	**68.688**	**92.323**	**33.507**	**45.036**	**32.381**	**43.523**
TOTAL	**745.467**		**343.554**		**371.467**	

In the 107th PSOC meeting, 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.

(ii) Replacement of Multi Functional Meter (MFM) at Machhakund Power House

The unit wise generation data in respect of #1, #2 & #6 of Machhakund PH are not available on the VPS in the SLDC control Room. This requires replacement of MFM at Machhakund PH. To carry-out the replacement work, shutdown on the above said units is required for half an hour each.
Unit Head of Kolab PH may take up the matter with Machhakund Authority regarding issue of shutdown.

SLDC/ Sr. GM (O&M) -I / CGM (Tel) / OHPC/ Southco Utility may deliberate the status.

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

Since, the frequency had never gone beyond the lowest setting of UFR, there was no UF Relay operation occurred during the month of **March'17.**

(I) Status of Open Access applications up to the month of March'2017

The status of different types of Open Access applications received and disposed by SLDC is as tabled.

Sl. No	Month	No of Applications received					No of Applications Disposed					No of App. Rejected
		Intra-State	Inter-State			Total	Intra-State	Inter-State			Total	
			Bilateral		PXI			Bilateral		PXI		
			ST	MT/ LT				ST	MT/ LT			
1	April'16	7	124	0	25	156	6	124	0	25	155	1
2	May'16	6	67	2	16	91	5	67	2	12	86	5
3	June'16	4	79	0	39	122	3	79	0	26	108	14
4	July'16	4	118	0	35	157	3	118	0	30	151	6
5	Aug'16	8	127	0	23	158	7	127	0	21	155	3
6	Sept'16	5	86	1	35	127	5	86	1	33	125	2
7	Oct'16	7	78	0	38	123	6	78	0	38	122	1
8	Nov'16	10	70	0	40	120	8	69	0	30	107	13
9	Dec'16	14	47	0	60	121	14	47	0	57	118	3
10	Jan'17	29	73	0	46	148	26	73	0	42	141	7
11	Feb'17	22	96	0	40	158	20	96	0	34	150	8
12	Mar-17	27	78	0	52	157	25	78	0	52	155	2
	Total	**143**	**1043**	**3**	**449**	**1638**	**128**	**1042**	**3**	**400**	**1573**	**65**

PART C – Issues discussed in the 132nd OCC meeting of ERPC on 21.04.2017

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:

Sl 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 129th 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.	***Total contract awarded for Rs. 67.73 Cr*** *Erection work for received equipment is in progress.*

ERPC advised to submit monthly updated report to RPC secretariat.

In the 131st OCC meeting, ERPC advised to furnish the information in the prescribed format (Annexure-B.3 (ii) 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.

CGM (O&M) / SLDC may please deliberate.

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. Meremundali (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, Dubri 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 107th PSOC 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.

CGM (O&M) / CGM (PP) / SLDC may update the status.

C.3: Operational Load Flow Study for Off-Peak Period (Winter Lean Period)

In 128th OCC< for lean off-peak load flow study, OCC finalized the date and time as follows
- 13.00 Hrs of 28th December, 2016.
- 02:00 Hrs of 29th December, 2016

In 130th OCC, PRDC informed that they will submit the report by end of March, 2017.
The report is available at ERPC website (www.erpc.gov.in)
Further OCC advised PRDC to carry out another load flow study in the first week of May, 2017 tentatively for 4th and 5th May, 2017 for 19:00 and 20:00 Hrs. Therefore, all utilities have to record data for four instances.

C.4: Restoration of PLCC system of important 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 131st OCC, WBPDCL informed that shutdown was proposed on 31st March, 2017 to complete the work. OPTCL informed that PLCC panels will be commissioned by March 2017.

In the 107th PSOC meeting CGM (Telecom) stated that PLCC at Joda end will be commissioned on 27th March'2017.

CGM (Telecom) may please update the status.

C.5: 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 130th 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

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

C.6: 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 107th PSOC 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.

CGM (IT) may please deliberate the status.

C.7: 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 104th OCC, WBPDCL informed that Bandel TPS is certified with IS 18001.
OPTCL vide letter No. TB-SO-MISC-9/2010/1914 dated 20.12.2014 had proposed to go for IS 18001:2007 certification as per direction of CEA.

In the 107th PSOC meeting O&M stated that the proposal will be placed before PSC due to single bid.

CGM (O&M) may deliberate the status.

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 131st OCC, OPTCL informed that the work will be completed by end of March, 2017.

In the 107th PSOC meeting, SGM (O&M)-I stated that breaker erection has already started from 22.03.2017.

CGM (O&M) may update the progress.

C.9: Replacement of old RTU in Eastern Region for reporting of RTU / SAS to back-up control centre

The matter for replacement of old RTU in Eastern Region for reporting to back up control centre has been discussed in a special project review meeting held on 14th February 2017 at ERPC & also on 35th TCC/ERPC meeting held on 24th / 25th February 2017, It was also mentioned that there would not be any service support for the old RTUs from POWERGRID after 15 years of operation period. It was accordingly advised to ERLDC to form a committee with POWERGRID as a nodal agency for assessment of such old RTUs vis-a-vis further action plan on replacement.
It was also advised to submit a report in the next TCC/ERPC meeting.
The matter for replacement of old RTU in Eastern Region for reporting to back up control centre has been discussed again in 19th SCADA O&M meeting held at ERLDC, Kolkata on 07th April 2017, wherein nomination of nodal person name from OPTCL, WBSETCL, DVC, BSPTCL,

JUSNL, POWERGRID ERTS-1, POWERGRID ERTS-2, ERLDC, MPL & Jorethang has been collected.

Nomination from NTPC all stations including Nabinagar, NHPC all stations, Dikchu, Teesta-III, Chuzachen, JITPL, GMR, Ind Bharat & APNRL are yet to be provided. ERLDC has already issued letter ref no: ERLDC / SCADA O&M / 2017/ dated 11.04.2017 for the same. It is requested to provide the nomination from these stations.

CGM (Telecom) may deliberate.

C.10: 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.

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A team of officers had visited Gujurat 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 Gujurat on 17.10.16 in the Conference Hall of GRIDCO. SLDC shall float tender for this purpose.

The DPR for ADMS has already been approved by BoD, OPTCL. SLDC shall submit the proposal for funding by PSDF for ADMS to O&M wing of OPTCL for further action.

Members may discuss. Discoms / CGM (Telecom) / SLDC may deliberate.

C.11: Mock Black start exercises in Eastern Region

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

Sl.	Name of HEP	Test-I Completed on	Test-II Completed on
1	Balimela	29.11.16	25.03.2017
2	Upper Indravati	16.07.16	24.03.2017
3	Burla	28.07.16	-

The **tentative schedule of black-start exercises for F.Y 2017-18 given by OCC is as follows**

Sl no	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	U.Kolab	Last week of May, 2017		Last Week of January2018	
3	Rengali	2ndweek of June 2017		Last week of November 2017	
4	U. Indarvati	3rdweek ofJune 2017		2ndweek of February2018	
6	Balimela	3rdweek of October 2017		1stweek of March 2018	
9	Burla	Last Week of June 2017		Last week of February2018	

OHPC / SLDC may deliberate.

C.12: Pollution mapping for Eastern Region

Powergrid updated the latest status as follows:

	Scope (no. of location s)	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 4th set of Measurements submitted
OPTCL	164	102	100	90	79	1

Powergrid informed that most of scheduled measurements till fourth set has 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.

CGM (O&M) may update the progress.

C.13: 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 tme 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 kVside voltage going below nominal value. But, 220 kV side voltage is 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 kVvoltage 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.

131st OCC advised Powergrid to do the tap changing from 12 to 14.

Powergrid agreed to do the tap changing in off load condition.

Members may give their views.

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'17**:

Sl. No	Name of Discom	No. of message issued	Over drawal (MU)	Deviation (%)
1	CESU	2	6.551	0.936
2	WESCO	1	20.154	3.515
3	NESCO	0	-15.317	3.192
4	SOUTHCO	2	2.941	0.989
	Total	**5**	**14.329**	

It is noticed that WESCO had overdrawn substantial quantum to the tune of **20.154** MU.

SLDC/ Discoms may please deliberate.

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	of transmission element	Reason of outage	Probable date of revival
1	400/220kV, 315 MVA ICT-I at Meramundali	Burnt	April-2017
2	220 kV Meramundali-Bhanjanagar ckt-I	Conductor replacement	Charged on 12.04.17
3	220 /132 kV, 100 MVA, Auto-3 at Chandaka.	Breaker replacement	March'2017
4	220/132 kV, 100 MVA, Auto- 2 at Duburi	Oil leakage since 24th October'2016	April'2017
5	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. CVT already replaced. Data will be integrated after restoration of OPGW between New Duburi & Paradeep.
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	CONCAST	No kV/Hz. (Industry is under lock up)
6	VISA	CB & Status data are not available
7	Paradeep	Data not available at ERLDC (Transducers need replacement)

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.

In the 107th PSOC 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.

CGM (Telecom) / GCC / RT&C may update the status

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 meeting, CGM (IT) stated that SLDC may coordinate with Discoms and all generators and intimate to IT.

In the 107th PSOC 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.

Due to non-availability of sorting function for Date & Name of CGP under Accept / Edit Generator DC, difficulty is being faced by SLDC to find out the data of a particular CGP for a particular date. Further, the link for final schedule preparation has not been updated in the Web Based Scheduling application. Further, it is suggested by SLDC to take suitable back up of all the old records i.e. the DCs sent by the CGPs previously and clean the application database up to 31st March 2017.

CGM (IT) / SLDC may deliberate.

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 107th PSOC 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.

SLDC / CGM (IT) may deliberate.

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.

In the 107th PSOC meeting, SLDC stated that IT may take necessary steps for placing order for the DSM software.

CGM (IT) / SLDC may deliberate the status.

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 699.889 MU against 703.282 MU as per the SCADA data. Some of major deviations noticed are given below:

Date	Time	Actual Drawal (MW)	SCADA Data (MW)	Difference
02.03.2017	16:15 Hrs	843.41	1034.42	-191
03.03.2017	02:30 Hrs	833.02	744.11	88.91
05.03.2017	18:45 Hrs	1098.42	1030.36	68.08
06.03.2017	16:45 Hrs	656.35	767.10	-110.75
08.03.2017	08:00 Hrs	657.16	739.72	-82.56
09.03.2017	04:15 Hrs	773.19	831.30	-58.11
09.03.2017	19:00 Hrs	1082.95	1095.02	-12.07
10.03.2017	09:00 Hrs	1013.84	1090.88	-77.04
11.03.2017	03:15 Hrs	538.97	617.08	-78.11
12.03.2017	16:00 Hrs	750.06	821.24	-71.19
15.03.2017	17:45 Hrs	869.18	806.36	62.82
16.03.2017	01:15 Hrs	816.54	758.47	58.06

Such types of drawal pattern attract a lot of amount in deviation bill for CESU. CESU requested to take action for correctness of SCADA data.

CGM (Telecom) / SLDC / CESU may deliberate.

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 2nd DC line	Work has already been started. Expected to be completed by June' 2017.
2	Commissioning of 400 kV Meramundali-Mendhasal 2nd ckt.	Line is ready and shall be charged after commissioning of 3rd 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	Commissioned on 27.03.2017
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 is as tabled. The Discoms may take necessary action for availing power supply through 33 kV feeders.

Sl. No	Name of S/S	Date of Charging	No of Bays	Name of bays
132/33kV Grids charged during 2014-15				
1	Argul	06.05.14	4	1.IIT
				2.IIT
				3.NISER
				4.NISER
2	Barbil	02.08.14	5	1.Barbil
				2.Bhadrasahi
				3.Vacant
				4.Vacant
				5.Vacant
3	Kuchinda	24.11.14	5	1.Kuchinda
				2.Laikera
				3.Laida(Proposed)
				4.Jamankira(proposed)
				5.Kusumi(proposed)
4	Nuapada	27.12.14	5	1.Bishra
				2.Khariar Road
				3.Vacant
				4.Vacant
				5.Vacant
5	Boud	28.01.15	5	1.Purnacuttack
				2.Boud
				3.Badhiapada
				4.Chatrang(proposed)
				5.Jampalaka(proposed)
6	Sarasmal	13.03.15	4	1.Industrial
				2.Kolabira
				3.ODSSP(proposed)
				4.Vacant
7	Banki	26.03.15	4	1.Banki
				2.Sunadei
				3.Vacant
				4.Vacant

132/33kV Grids charged during 2015-16				
8	Dabugaon	10.04.15	4	1.Dabugaon
				2.Papdahandi
				3.Medina
				4.Kosamguda
9	Umerkote	10.04.15	4	1.Umerkote
				2.Adhikariguda
				3.Beheda
				4.Vacant
10	Konark	29.06.15	4	1.Gop
				2.Konark
				3.ODSSP(proposed)
				4.ODSSP(proposed)
11	Lapanga	11.08.15	4	1.Vacant
				2.Vacant
				3.Vacant
				4.Vacant
12	Kalunga	07.09.15	5	1.IDC
				2.Industrial
				3.Kalunga
				4.Mahaveer Ferro
13	Marshaghai	16.10.15	5	5.Luna
				6.Mahakalpada
				7.Lift irrigation(proposed)
				8Vacant
				9.Vacant
14	Somnathpur	11.12.15	4	1.HIL
				2.Vacant
				3.Vacant
				4.Vacant
14	Atri	24.02.16	4	5.Vacant
				6.Vacant
				7.Vacant
				8.Vacant
15	Padampur	24.02.16	5	1.Padampur
				2.Gaisilat(proposed)
				3.Paikmal(proposed)
				4.Melchamunda(prop)
				5.Vacant
16	Mania	31.03.16	5	1.Vacant
				2.Vacant
				3.Vacant
				4.Vacant
				5.Vacant

132 kV Grid S/S charged during FY 2016-17 (till 01.11.16)				
	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	February'17	5	
7	Podagada	March'17	5	
8	Bonei	March'17	5	
9	Kasipur	March'17	5	
10	Bhogorai	March'17	5	
11	R.Udayagiri	March'17	5	
12	Tusara	March'17	5	

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

In the 103rd PSOC meeting CGM (O&M) suggested to adopt required protection standards may be at New Duburi sub-station if not already done. Independent approach to Argul sub-station may also be explored.

AO, WESCO had suggested the Discoms to estimated the cost involved in the take off arrangement & sent to Government for funding after due approval of District Committee.
In the 104th PSOC meeting, AO, WESCO stated that funding arrangement has been done for Lapanga takeoff arrangement.

In the 105th PSOC meeting SOUTHCO stated that they have taken similar step for Govt. funding. Other Discoms were requested to take necessary action.

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

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 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.

GRIDCO / OHPC / O&M / SLDC may please deliberate.

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

i) 21.03.2017: 4th 40MVA, 132/33kV Transformer commissioned at Khurdha sub-station.
ii) 24.03.2017: 220kV Balimela (OPTCL) –Malkanagiri feeder charged.
iii) 27.03.2017: 220/132kV, 1 X 160MVA Cuttack sub-station commissioned.
iv) 27.03.2017: 2nd 40MVA, 132/33kV Transformer commissioned at Jharsuguda Sub-station.
v) 28.03.2017: 220/33kV Malkanagiri sub-station commissioned.
vi) 28.03.2017: 132/33kV Khajuriakota sub-station bus charged.(LILO of Meramundali Aarti)
vii) 29.03.2017: 1X40MVA, 132/33kV Bhograi sub-station commissioned. Charged from Jaleswar end.
viii) 30.03.2017: 132kV Pattamundai- Olaver ckt. charged.
ix) 31.03.2017: 220/132/33kV, 2X160MVA (auto transformer) / 2X40MVA, Chandaka-B GIS sub-station commissioned (LILO of Mendhasal-Chandaka ckt.-IV).

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

On 17.03.2017 at 10:22 hrs 400 kV Vedanta-Rourkela PG feeder tripped at Vedanta end on D/P, Zn-I, 'Y' ph to E/F, dist-8.16 km, fault current 18.665 kA. Subsequently 400 kV Meramundali-Vedanta Ckt-I tripped at Meramundali S/S only on 'Y' ph to E/F, dist-336.5 km. All the three 400 kV Vedanta-Internal Smelter feeders tripped on E/F. Power flow in 400 kV Vedanta-Raigarh Ckt raised to the tune of 1393 MW.
On investigation it was found that 'Y' ph jumper of 400 kV Vedanta-Rourkela PG feeder snapped at Loc. No-88/0**.**

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

Outage of major transmission elements above 10 hours is as detailed.

Sl No	Transmission lines	Tripping Dt/time	Restoration Dt/time	Reason
1	132KV Mendhasal-Khurda line	06.03.17 16:17	07.03.17 10:07	R-Ph Insulator string damaged at Loc No.-86
2	132 KV Solari Traction Feeder	09.03.17 17:52	10.03.17 07:43	Line patrolling was done but no fault found.
3	220 KV Atri-Samagara ckt-I	10.03.17 08:55	11.03.17 13:14	B-Ph jumper snapped at Loc No.-82
4	220 KV Atri-Samagara ckt-I	11.03.17 20:10	12.03.17 13:22	B-Ph jumper snapped at Loc No.-142

Major outages are due to jumper snapping.

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

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

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

Sl.	Station	Unit	Period	Remarks
1	Burla	# 2	22.07.16 to 07.05.17	Capital Maintenance
		# 5	25.10.16 to continue	Under R,M & U
		# 6	16.10.15 to continue	Under R, M & U
		# 7	21.02.17 to continue	GT problem
2	Chiplima	# 1	15.05.17 to 16.06.17	Annual Maintenance & bush replacement
		# 3	15.10.15 to continue	Under R,M & U
3	Balimela	# 1	05.08.16 to continue	Under R,M & U
		# 7	16.04.17 to continue	Generator Stator problem
4	Rengali	# 5	21.03.17 to 20.04.17	Annual Maintenance
5	Upper Kolab	# 4	05.05.17 to continue	Capital Maintenance
6	Upper Indravati	# 3	15.05.17 to 15.06.17	Annual Maintenance
7	TTPS	# 2	10.04.16 to 24.04.16	Boiler overhaul

OHPC / TTPS / SLDC may deliberate.

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

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

Name of Hydro Gen. Station	Generation Programme (MW)		Reservoir Level as on 01.04.16	Reservoir Level as on 01.04.17	MDDL	High Flood Reservoir Level
	May'17 (1st fortnight)	May'17 (2nd fortnight)				
HPS-I, Burla	40	40	615.32ft	617.45 ft	590 ft.	630 ft.
HPS-II, Chipilima	20	20	-	-	-	-
Balimela	250	250	1479.90 ft	1485.90 ft	1440 ft.	1516 ft.
Rengali	100	100	116.10 mt	121.04 mt	109.72m	123.5 mtr.
U.Kolab	110	110	851.64 mt	853.32 mt	844 mtr	858 mtr.
U. Indravati	250	250	632.98 mt	635.00 mt	625mtr	642 mtr
MKD (O/D)	40	40	2730.10 ft	2722.90 ft	2685 ft.	2750 ft.
TOTAL	**810**	**810**				

OHPC may deliberate & Members may discuss.

E.8: Formation of Working Group (Hydro Generation).

In the 18th meeting of Forum of Load Despatchers (FOLD) held on 21st November 2016 at CBIP, New Delhi decision was taken regarding formation of Working Group on Hydro for studying the various aspects of Hydro stations.

The extract of the MOM is reproduced below:

"CEO, POSOCO suggested that a FOLD working group on hydro may be formed to study various aspects like utilizing available hydro stations as flexible resources, irrigation constraints etc. All members agreed on the suggestion to form a WG on hydro. The Terms of Reference for the Working Group would be

- To study the existing capability of hydro stations in States and Interstate level
- To study the existing tariff and operating norms for hydro stations
- To study the prevailing practices for scheduling and utilization of available capabilities of hydro stations and the existing constraints/issues withholding full utilization.
- To study the operating constraints in respect of inflows, hydrology, water releases, rate of reservoir depletion, machine capabilities etc.
- To explore the possibilities for utilizing available hydro stations as a flexible resource for primary response, secondary control (AGC), load following, peaking, pumped storage, reactive energy, Black-start etc.
- To explore the possibilities of integrated operation of tandem hydro stations or stations on same river basin
- To study the availability of existing communication facility between station and control centre
- To suggest possible mechanisms and regulatory interventions for optimizing / enhance utilisation of existing hydra capabilities without violating the identified constraints.
- Any other related matter"

All hydro power stations are requested to furnish the data in the prescribed format to SLDC.

SLDC may deliberate

E.9: Compliance of CEA Regulations for Grid Connectivity of Renewable Energy Sources.

As per CEA (Technical Standards for connectivity to Grid) Regulations, 2007, dated 21st February 2007, the pertinent clauses 6 (iii) & 6 (iv) (b) of general Connectivity Conditions shall be applicable to all the Generating Projects including the renewable, which are getting connected to the Grid at voltage level of 33kV & above. Subsequently, CEA have notified the CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013 dated 30.09.2013. These Regulations are applicable for "Distributed Generation Resources", which means a Generating Station feeding electricity into the System at voltage level below 33kV. Needless to mention that these Regulations also cover the renewable projects connected to the Distribution Licensee's System at voltage level of below 33kV. The letter received from CEA is annexed herewith.

All the Distribution / Transmission Licensee may please indicate the status in this regard and the action plan with definite time frame to ensure real time data telemetry from all the grid connected renewable Generators / Plants to SLDC.

All Distribution Licensees / OPTCL to note

E.10: Anticipated power generation and demand for the month of May'2017.

Sl. No	Discom	Average	Peak
1	CESU	1100	1300
2	WESCO	1000	1150
3	NESCO	800	1050
4	SOUTHCO	450	550
6	**Total Discom**	**3350**	**4050**
	System Loss	**150**	**180**
		3500	**4230**
Availability			
1	Hydro	810	1400
2	State Thermal	750	750
3	IPP, small hydro &RE	850	850
4	ISGS share (including OA)	1000	1000
5	CGP support (OA)	200	250
6	**Total availability**	**3510**	**4250**
7	**Surplus / Deficit**	**110**	**20**

Members may discuss.

PART F: OTHER ISSUES

F.1: Date and Venue of the next (109th) PSOC meeting.

ANNEXURE

भारत सरकार
Government of India
केंद्रीय विद्युत प्राधिकरण
Central Electricity Authority
नवीकरणीय ऊर्जा उद्भव विकास प्रभाग
R E S Development Division
दूसरी मंजिल, सेवा भवन, आर.के.पुरम, नई दिल्ली-110066 (ISO: 9001-200
2nd Floor, Sewa Bhawan, R.K. Puram, New Delhi – 110066
Fax No. 011-26715402 Email: ceaopmwind@gmail.com

No. CEA/PLG/RES-7/2017/ 125-159. Dated: 12.04.2017

To,

Senior General Manager,
Grid Corporation of India Ltd,
4th floor, Vidyut Bhavan,
Shaheed Nagar Orissa ,
Bhubaneswar -751017.

Subject: **Compliance of CEA Regulations for Grid connectivity of Renewable Energy Sources** – reg.

Sir,

You may be kindly aware that Central Electricity Authority (CEA) had in exercise of its power conferred by Section 7 and clause (b) of Section 73 read with Sub-section (2) of Section 177 of Electricity Act, 2003, notified the Central Electricity Authority (Technical Standards for Connectivity to Grid) Regulations 2007 on 21st Feb, 2007. These Regulations are inter-alia applicable to all the generating projects including the renewables, which are getting connected to the grid at voltage level of 33 kV and above. The pertinent **Clauses 6(3)** and **6(4)(b)** of **General Connectivity Conditions** of the said Regulations are reproduced below for ease of reference:

" ***6(3)*** – *The requester and user shall provide necessary facilities for voice and data communication and transfer of on-line operational data, such as voltage, frequency, line flows, and status of breaker and isolator position and other parameters as prescribed by the Appropriate Load Despatch Centre.*

6(4) – *The requester and user shall cooperate with the Regional Power Committee, and Appropriate Load Despatch Centres in respect of the matters listed below, but not limited to : -*
(b) *agree to maintain meters and communication system in its jurisdiction in good condition;* "

2. Subsequently, CEA had also notified the Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 on 30th Sept, 2013. These Regulations are applicable for "distributed generation resource" which means a generating station feeding electricity into the system at voltage level of below 33 kV. Needless to mention that these Regulations also cover the renewable projects connected to the distribution licensee system at voltage level of below 33 kV. The relevant **Clause 4(4)** of **General Connectivity Conditions** of the said CEA Regulations is reproduced below for ready reference :

" ***4(4)*** – *The applicant and the user shall provide necessary facilities in the distributed generation resource for communication and storage of data and other parameters as may be stipulated by the appropriate licensee in a non-discriminatory manner."*

3. In view of the relevant Clauses of the CEA Regulations cited above, it is obligatory for all the grid connected renewable generators to provide necessary facilities for data-communication and data-storage and other parameters as may be stipulated. The said CEA Regulations also places onus on the generating plants including renewables to co-ordinate with appropriate licensee on issues including but not limited to protection safety and metering.

4. With the above perspective as emerging from the CEA Regulations in force, the SLDCs are requested to take up the matter with all the renewable generators to ensure transfer of data to the appropriate Load Despatch Centre, so that the real time generation data is available with them for centralized monitoring.

Please indicate the present status in this regard and the action plan with definite time frame to ensure real time data telemetry from all the grid connected Renewable Generators/Plants to the SLDCs.

Yours faithfully,

12/4/2017

(Hemant Jain)
Chief Engineer (RES Dev.)