

Odisha Power Transmission Corporation Ltd.  
Bhubaneswar.



*Agenda*  
*for*  
139<sup>th</sup> Power System Operational Co-ordination Meeting

Date: 22.11.2019

Venue: Power Training Center, Chandaka, Bhubaneswar

**Agenda for 139<sup>th</sup> PSOC Meeting to be held on 22.11.2019 at OPTCL Power Training Center,  
Chandaka, Bhubaneswar**

**A. Confirmation of the minutes of the 138<sup>th</sup> PSOC Meeting held on 25.10.2019**

The minutes of meeting was circulated vide letter No. SGM (PS)-PI-15/2019/3606 <sup>(49)</sup> dated 08.11.2019 to all the members and also uploaded in the SLDC website. Members may offer their comments. If there are no comments, 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 October'2019

C.1: Status of projects funded under PSDF scheme

C.2: Implementation of Automatic Demand Management Scheme.

C.3: 220 kV Inter-connecting lines of OPTCL with 400/220 kV Bolangir (PG), Keonjhar & Pandiabil S/s

C.4: Bypassing arrangement of LILO of 400kV Lines at Angul

C.5: Update on status of telemetry

C.6: Mock Black start exercises in Eastern Region

C.7: Collection of modeling data from Renewable as well as conventional energy generators: ERLDC.

C.8: Implementation of Automatic Generation Control in Eastern Region--ERLDC

C.9: Submission of data in MERIT Order portal--CEA

C.10: Data for preparation Load Generation Balance Report (LGBR) of ER for the year 2020-21

C.11: Monitoring of Next Six-Month New Element Integration in OCC and Its Update on Monthly Basis --ERLDC

C.12: Auxiliary power consumption by Powergrid Substations--GRIDCO

C.13: Review of the PSS Tuning of Generators in Eastern Region --ERLDC

C.14: Long term outage of transmission elements

C.15: Preparation of crisis management plan for Cyber Security in Power Sector in line with CERT-IN.

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

D.2: Compliance of CEA Regulations for Grid Connectivity of Renewable Energy Sources.

D.3: Data communication from newly commissioned RE sources connected at 132 kV- SLDC

D.4: Despatch Scheduling for RE Generation.

D.5: Information regarding RE Sources for RPO Compliance monitoring.

D.6: Implementation of Automatic Meter Reading for OPTCL-Discom interface points.

D.7: Collection of tie-line meter data

D.8: Repair of OPGW, Ground wire and doubling of jumpers & summation meters for 220 kV RSP DC lines. – RSP Agenda

E.1: Commissioning status of New Transmission elements.

E.2: HT metering at DISCOM interface points.-SLDC.

E.3: Major Events in the month of October'19

E.4: Important grid incidences during the month of October'19.

E.5: Outage of major transmission Elements during the month October'19. (above 10 hrs).

E.6: Prolonged outage of Transmission elements

E.7: Review of Outage Program of State Generators for the month of December'2019

E.8: Generation Program for the month of December'2019.

E.9: Anticipated power generation and demand for the month of December'2019.

F.1: Date and Venue of the next (140<sup>th</sup>) PSOC meeting.

## PART B: GRID PERFORMANCE

### B. Review of Grid Performance for the month of October'19.

#### A. Frequency:

##### Hourly frequency variation for the month of October'19.

Month	% of time frequency remained					Average
	<49.00	49.00-49.70	49.70-49.90	<b>49.90-50.05</b>	>50.05	
Aug'19	0.00	0.10	7.29	71.69	20.92	49.99
Sept'19	0.00	0.08	4.56	74.71	20.64	50.00
Oct'19	0.00	0.00	2.97	75.24	21.79	50.00

##### Maximum & Minimum frequency during the month of Sept'19 & Oct'19.

Month	Freq (Hz)	Date	Time
Sept'19	Maximum –50.20	29.09.19	13:30 Hrs
	Minimum – 49.70	18.09.19	18:30 Hrs
Oct'19	Maximum –50.18	26.10.19	13:00 Hrs
	Minimum – 49.74	24.10.19	07:00 Hrs

### B. Grid Demand up to the month of October'19

Month	Max. Consumption		Demand		Maximum Demand			Minimum Demand		
	MU	Date	MU	Avg. (MW)	MW	Date	Time	MW	Date	Time
Apr'19	113.14	05.04.19	2786	3869	5151	04.04.19	20:00	2689	20.04.19	05:00
May'19	102.99	19.05.19	2638	3545	4635	18.05.19	24:00	1720	03.05.19	18:00
June'19	105.24	11.06.19	2653	3684	4790	11.06.19	23:00	2556	13.06.19	06:00
July'19	106.80	15.07.19	2744	3688	4899	15.07.19	21:00	2640	02.07.19	04:00
Aug'19	105.41	21.08.19	2924	3930	4901	16.08.19	21:00	3161	08.08.19	05:00
Sept'19	107.91	19.09.19	2780	3862	4969	18.09.19	20:00	2982	30.09.19	05:00
<b>Oct'19</b>	<b>89.89</b>	<b>12.10.19</b>	<b>2519</b>	<b>3386</b>	<b>4385</b>	<b>20.10.19</b>	<b>19:00</b>	<b>2430</b>	<b>25.10.19</b>	<b>03:00</b>
<b>Oct'18</b>	<b>116.85</b>	<b>05.10.18</b>	<b>3147</b>	<b>4230</b>	<b>5270</b>	<b>02.10.18</b>	<b>19:00</b>	<b>3033</b>	<b>12.10.18</b>	<b>07:00</b>

### C. Voltage Profile of 220 kV Buses in OPTCL system for the month of: October'19

SUBSTATION	MAX VOLTAGE (KV)	DATE	TIME	MIN VOLTAGE (KV)	DATE	TIME
Atri	228.92	24-10-2019	14:00	223.38	04-10-2019	20:15
Balasore	233.71	25-10-2019	02:15	218.93	03-10-2019	18:30
Barkote	231.17	24-10-2019	14:00	225.63	09-10-2019	11:30
Bargarh	228.80	22-10-2019	14:30	215.93	10-10-2019	09:00
Bhadrak	230.48	24-10-2019	15:15	214.89	03-10-2019	18:30
Bhanjanagar	236.25	24-10-2019	04:15	221.07	03-10-2019	18:45
Bidanasi	234.92	25-10-2019	04:00	222.40	03-10-2019	18:00
Bolangir	237.23	25-10-2019	05:00	218.70	16-10-2019	16:15
Budhipadar	231.52	08-10-2019	14:15	226.32	18-10-2019	17:45
Chandaka	232.79	24-10-2019	04:15	215.24	03-10-2019	18:30
Cuttack	233.31	24-10-2019	04:15	215.06	03-10-2019	18:30
Duburi Old	231.34	25-10-2019	02:15	221.76	04-10-2019	18:45
Duburi New	239.66	25-10-2019	02:15	229.50	04-10-2019	18:45
Jayanagar	239.60	26-10-2019	04:15	231.17	15-10-2019	18:15
Joda	235.10	06-10-2019	15:00	223.61	04-10-2019	19:45
Katapalli	229.03	25-10-2019	04:45	222.34	19-10-2019	16:00
Lapanga	232.56	08-10-2019	14:00	228.11	08-10-2019	19:30
Laxmipur	<b>239.83</b>	01-10-2019	14:15	228.40	03-10-2019	18:45
Mendhasal	236.14	24-10-2019	04:15	219.39	03-10-2019	18:45
Meramundali	227.76	25-10-2019	04:00	205.71	03-10-2019	11:45
Narendrapur	234.64	25-10-2019	14:30	215.29	03-10-2019	18:45
Nayagarh	235.62	24-10-2019	04:15	<b>203.92</b>	03-10-2019	12:30
Paradeep	231.11	24-10-2019	06:15	209.17	06-10-2019	13:45
Tarkera	224.42	02-10-2019	15:15	218.58	02-10-2019	19:15
Theruvalli	237.75	23-10-2019	11:15	224.36	01-10-2019	18:45
Rengali	228.92	24-10-2019	14:00	223.38	04-10-2019	20:15

The maximum Voltage of **239.83 kV** occurred at **Laxmipur 220 kV bus.**, while **Nayagarh 220 kV bus** has experienced the minimum Voltage of **203.92 kV**. The 220 kV Voltage profile of Jayanagar and Narendrapur and 400 kV Voltage profile of Mendhasal, Meramundali and New Duburi bus during the month of **Oct'2019** are indicated in System performance presentation.

**Members may discuss.**

**D. Loading of 220/ 132 kV Auto at 220 kV S/Ss in OPTCL system for the month of Oct– 2019.**

**AUTO TRANSFORMER LOADING FOR THE MONTH OF OCTOBER'2019**

Name of the 220 kV Sub-Station ( Feeding Sub-stations/Feeders )	Capacity MVA	Drawal details						REMARKS
		Maximum			Minimum			
		MW	Day	Time	MW	Day	Time	
ATRI { Banki, Khurda, Chandpur &	2x160	29.68	27th Oct 2019	21:00	4.36	10th Oct 2019	11:45	
		29.68	27th Oct 2019	21:00	4.32	10th Oct 2019	11:45	
BALASORE 220/132 KV { Balasore, Birla Tyre(I), Ispat Alloy(I), Jaleswar, Jaleswar(T)}	3x160	53.00	24th Oct 2019	00:00	21.12	1st Oct 2019	13:30	
		52.80	24th Oct 2019	00:00	20.96	1st Oct 2019	13:30	
		46.52	24th Oct 2019	17:15	20.24	1st Oct 2019	12:30	
BARGARH 220/132 kV	1x100	9.00	2nd Oct 2019	15:45	0.92	7th Oct 2019	17:00	
	1x160	4.92	2nd Oct 2019	15:45	0.08	7th Oct 2019	17:00	
BHADRAK 220/132 KV {Bargarh, Ghensh}	1x100	20.00	24th Oct 2019	00:30	1.08	23rd Oct 2019	12:45	
	1x160	36.24	24th Oct 2019	00:30	3.32	23rd Oct 2019	12:45	
	1x160	36.36	24th Oct 2019	00:30	2.76	23rd Oct 2019	12:45	
BHANJANAGAR 220/132 KV { Bhanjanagar, Aska, Phulbani,	1x160	22.36	2nd Oct 2019	07:45	2.08	12th Oct 2019	06:30	
	1x160	19.48	2nd Oct 2019	07:45	1.52	12th Oct 2019	06:30	
BIDANASI 220/132 KV {Bidanasi, Khurda }	1x100	5.92	27th Oct 2019	19:30	0.04	9th Oct 2019	04:00	
	1x100	5.92	27th Oct 2019	19:30	0.04	9th Oct 2019	08:00	
	1x160	8.68	27th Oct 2019	19:30	0.04	28th Oct 2019	01:45	
BOLANGIR (SADAIPALLI) 220/132 KV	2x160	96.68	6th Oct 2019	18:15	0.16	1st Oct 2019	09:45	
		101.12	6th Oct 2019	18:15	13.20	22nd Oct 2019	14:30	
BUDHIPADAR 220/132 KV { Jharsuguda, Jharsuguda Tr,	2x160	54.28	18th Oct 2019	08:30	29.72	8th Oct 2019	18:15	
		54.04	18th Oct 2019	08:30	29.40	8th Oct 2019	18:15	
CHANDAKA 220/132 KV { Chandaka, Bhubaneswar, Nimapada, Ransinghpur, Puri,Kesura, Kaipadar Tr. }	1x100	43.76	24th Oct 2019	18:00	27.88	25th Oct 2019	05:30	
	1x160	76.76	24th Oct 2019	18:00	49.52	25th Oct 2019	03:15	
	1x100	47.88	24th Oct 2019	18:00	30.64	25th Oct 2019	05:30	
	1x160	74.28	24th Oct 2019	18:00	47.64	25th Oct 2019	05:30	
CUTTACK	1x160	33.24	23rd Oct 2019	00:00	8.24	26th Oct 2019	01:15	
	1x100	19.68	24th Oct 2019	18:15	5.44	26th Oct 2019	01:15	
DUBURI 220/132 KV {Duburi, Bamnipal(I), BRPL, MESCO, Jajpur Road, Kalarangi,	1x160	28.36	8th Oct 2019	10:00	3.28	6th Oct 2019	13:45	
	1x100	17.76	8th Oct 2019	10:00	1.72	6th Oct 2019	13:45	
	1x100	16.96	8th Oct 2019	10:00	1.68	6th Oct 2019	13:45	
JAYANAGAR 220/132 KV. {Damanjodi(NALCO), Traction	1x160	14.56	26th Oct 2019	18:45	0.04	9th Oct 2019	13:30	
	1x160	14.72	26th Oct 2019	18:45	0.04	12th Oct 2019	17:15	
JODA 220/132 KV { Joda,Tensa, FAP(I), Bolani(I), Nalda Tr.,Polasponga,	3x100	39.88	7th Oct 2019	19:15	0.08	6th Oct 2019	14:45	*** - Alternate P/S from Kuchei.
		41.36	7th Oct 2019	19:15	0.04	6th Oct 2019	15:00	
		41.36	7th Oct 2019	19:15	19.16	7th Oct 2019	03:00	
KATAPALI 220/132 KV {Chipilima,Bargarh, ACC,Sonepur & Katapali area load.}	1x100	8.16	3rd Oct 2019	07:45	0.04	1st Oct 2019	22:30	Supported by Burla & Chipilima power.
	1x100	8.00	3rd Oct 2019	07:30	0.04	1st Oct 2019	11:45	
	1x160	12.12	3rd Oct 2019	07:30	0.04	2nd Oct 2019	21:15	
LAPANGA {Kuchinda, Aryan Viraj, Shyam	2x160	31.24	8th Oct 2019	07:15	6.92	8th Oct 2019	19:45	
		31.12	8th Oct 2019	07:00	6.84	8th Oct 2019	19:45	
		13.04	8th Oct 2019	10:15	0.16	10th Oct 2019	04:45	
MERAMUNDALI 220/132 kV {Meramundali Traction, Dhenkanal, Navchrome(I), Hind	3x100	12.92	8th Oct 2019	10:15	0.08	8th Oct 2019	13:45	
		11.72	8th Oct 2019	10:45	0.16	9th Oct 2019	11:00	
		31.80	24th Oct 2019	09:00	0.60	1st Oct 2019	01:15	
Mendhasal { Part area load of Khurda S/S}	2x100	34.20	24th Oct 2019	09:00	2.40	19th Oct 2019	06:45	
		78.12	11th Oct 2019	07:30	45.60	19th Oct 2019	13:15	
NARENDRAPUR 220/132KV { Narendrapur, NarendrapurTr, Berhampur, Chhatrapur, Ganjam,	2x160	77.44	11th Oct 2019	07:30	45.28	19th Oct 2019	13:00	
	1x100	44.76	11th Oct 2019	07:30	25.92	19th Oct 2019	13:00	
	1x100	35.52	2nd Oct 2019	19:30	5.32	3rd Oct 2019	18:00	
PARDEEP 220/132 KV { Paradeep, Kendrapada, Pattamundai, Chandikhol,	1x160	58.96	24th Oct 2019	19:45	9.40	3rd Oct 2019	18:00	
	1x160	59.88	2nd Oct 2019	19:30	11.92	3rd Oct 2019	18:00	
	4x100	35.84	1st Oct 2019	16:00	7.92	7th Oct 2019	17:00	
TARKERA 220/132 KV { Rourkela, Rourkela Tr.,RSP(I), Chhend , Adhunik Metal, Rajgangpur, OCL(I), Rajgangpur	37.40	27th Oct 2019	06:30	8.36	7th Oct 2019	17:00		
	36.56	27th Oct 2019	06:30	0.08	2nd Oct 2019	13:30		
	36.56	27th Oct 2019	06:30	8.28	7th Oct 2019	17:00		
	25.92	2nd Oct 2019	00:00	7.68	3rd Oct 2019	10:30	Rayagada & Paralakhemundi can be fed from Machhkund system.	
27.00	2nd Oct 2019	00:00	7.36	3rd Oct 2019	10:30			
41.92	2nd Oct 2019	00:00	11.00	3rd Oct 2019	10:30			
TTPS 220/132 KV { Chainpal, FCI (I), Angul, MCL	1x160	74.47	23rd Oct 2019	18:00	7.36	27th Oct 2019	03:15	
	1x160	74.47	23rd Oct 2019	18:00	11.00	27th Oct 2019	03:15	
SAMANGARA { Puri, Nimapara & Konark}	2x160							

### E. DISCOM Drawal up to the month of October'19

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	Apr'19	798	760.542	857.404	18.345	839.059	78.517
	May'19	770.33	664.438	689.035	16.166	672.869	8.431
	June'19	798	758.651	793.853	17.431	776.422	17.771
	July'19	770.33	778.505	798.994	15.847	783.147	4.642
	Aug'19	770.33	745.852	785.057	14.196	770.861	25.009
	Sept'19	798	766.486	755.33	15.336	739.994	-26.492
	<b>Oct'19</b>	770.33	<b>739.392</b>	<b>740.459</b>	<b>16.154</b>	<b>724.305</b>	<b>-15.087</b>
WESCO	Apr'19	635	649.188	856.374	149.999	706.375	57.187
	May'19	604.71	703.036	841.28	100.32	740.96	37.924
	June'19	635	656.64	789.792	110.175	679.617	22.977
	July'19	604.71	670.083	835.876	143.639	692.237	22.154
	Aug'19	604.71	637.41	1043.79	423.111	620.682	-16.728
	Sept'19	635	650.296	908.15	281.184	626.966	-23.33
	<b>Oct'19</b>	604.71	<b>605.866</b>	<b>678.503</b>	<b>71.157</b>	<b>607.346</b>	<b>1.48</b>
NESCO	Apr'19	517	478.905	600.692	99.608	501.084	22.179
	May'19	521.48	508.934	629.852	89.858	539.994	31.06
	June'19	517	490.244	607.403	105.15	502.253	12.009
	July'19	521.48	532.112	660.208	131.831	528.377	-3.735
	Aug'19	521.48	493.554	627.779	128.157	499.622	6.068
	Sept'19	517	451.669	557.042	99.737	457.305	5.636
	<b>Oct'19</b>	521.48	<b>446.652</b>	<b>556.344</b>	<b>105.563</b>	<b>450.781</b>	<b>4.129</b>
SOUTHCO	Apr'19	331	303.576	334.361	0	334.361	30.785
	May'19	310.85	320.055	336.003	0	336.003	15.048
	June'19	331	318.393	324.819	0.116	324.703	6.31
	July'19	310.85	315.891	305.83	0.061	305.769	-10.122
	Aug'19	310.85	291.711	296.609	0	296.609	4.898
	Sept'19	331	298.482	290.17	0.007	290.163	-8.319
	<b>Oct'19</b>	310.85	<b>285.153</b>	<b>283.453</b>	<b>0.263</b>	<b>283.19</b>	<b>-1.963</b>

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 up to the month of October'19

Figures in MU

Month	Thermal (TTPS+IBTSP)	OHPC & MKD	CGP Support	IPP Inj.	RE	ISGS	Total
April'19	588.681	538.473	308.480	263.019	29.852	1057.035	2785.540
May'19	608.185	571.561	290.845	203.850	46.247	916.949	2637.637
June'19	581.856	414.962	329.321	212.683	47.362	1066.419	2652.603
July'19	566.902	407.505	363.839	198.433	46.030	1171.210	2753.919
Aug'19	359.551	836.840	345.534	56.723	46.535	1278.578	2923.761
Sept'19	828.709	808.759	328.938	75.013	44.608	694.453	2780.479
<b>Oct'19</b>	<b>931.846</b>	<b>815.124</b>	<b>201.462</b>	<b>170.221</b>	<b>43.395</b>	<b>357.406</b>	<b>2519.453</b>
<b>Total</b>	<b>4465.728</b>	<b>4393.224</b>	<b>2168.420</b>	<b>1179.942</b>	<b>304.029</b>	<b>6542.050</b>	<b>19053.392</b>

## G. Drawal of Machhakund Power

The drawal of Machhakund power up to the month of **October'19** are as detailed:

Month	Total Generation		Odisha Drawl		AP Drawl	
	MU	Avg (MW)	MU	Avg (MW)	MU	Avg (MW)
Apr'19	53.168	73.84	24.896	34.58	26.401	36.67
May'19	60.577	81.42	26.811	36.04	31.821	42.77
June'19	52.203	72.50	22.395	31.10	30.840	42.84
July'19	59.779	80.35	26.579	35.73	31.116	41.82
Aug'19	53.318	71.66	24.773	33.30	27.139	36.48
Sept'19	52.348	72.706	23.869	33.151	26.276	36.494
<b>Oct'19</b>	<b>51.532</b>	<b>69.263</b>	<b>23.229</b>	<b>31.222</b>	<b>25.936</b>	<b>34.860</b>
Total	<b>382.925</b>		<b>172.552</b>		<b>199.529</b>	

In the 136<sup>th</sup> PSOC meeting Southco stated that Dasmantpur feeder in expected to be charged today i.e on 21.08.2019.

Sr.GM (O&M), Zone –I suggested to explore the following link lines for providing adequate matching load in Machhakund system.

- Connecting Patangi S/S or Proposed Lamtaput S/S with Podagada S/S through 132 kV link.
- Providing Sunabeda S/S area load in Machhakund system
- Modification of Jayanagar S/S to accommodate Jayanagar load

In the 137<sup>th</sup> PSOC meeting, SOUTHCO stated that 33 kV Dasmantpur feeder did not stand after charging. Insulators are being changed by the contractor. Sr. GM (Const) stated that 132 kV Patangi-Podagada line is under construction and expected by March'2010. He also suggested to utilize 132 kV NALCO-Sunabeda line to feed Sunabeda area load from Machhakund system by bus splitting.

In the 138<sup>th</sup> PSOC meeting, SOUTHCO stated that insulator changing of Dasmantpur feeder is under progress. It was suggested that GRIDCO may convene a meeting with PMU for early restoration of the feeder, so that, more matching load can be provided in Machhakund system.

**GRIDCO / O&M/SLDC/SOUTHCO may deliberate.**

## H. Under Frequency Relay operation in OPTCL System during the month of October'19.

Since, the frequency had never gone beyond the lowest setting of UFR, there was no UF Relay operation occurred during the month of **October'19**.

## I. Status of Open Access applications up to the month of October'2019

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	MU
		Intra - State	Inter-State		Total	Intra - State	Inter-State		Total				
			Bilateral				PXI	Bilateral					
			ST	MT/LT				ST		MT/LT			
1	April'19	48	100	0	24	172	48	100	0	24	172	0	522.98
2	May'19	21	92	0	29	142	21	92	0	29	142	0	487.30
3	June'19	49	106	0	32	187	49	106	0	32	187	0	641.01
4	July'19	94	60	0	28	182	94	60	0	28	182	0	726.36
5	Aug'19	114	132	0	38	284	110	132	0	38	284	4	904.48
<b>6</b>	<b>Sept'19</b>	66	122	0	58	246	66	122	0	58	246	1	576.64
<b>7</b>	<b>Oct'19</b>	42	43	0	34	119	42	43	0	34	119	0	360.33
	<b>Total</b>	<b>392</b>	<b>612</b>	<b>0</b>	<b>209</b>	<b>1213</b>	<b>392</b>	<b>612</b>	<b>0</b>	<b>209</b>	<b>1213</b>	<b>5</b>	<b>4219.10</b>

**PART C – Issues discussed in the 163<sup>rd</sup> OCC meeting of ERPC on 15.11.2019**

**C.1: Status of projects funded under PSDF schemes**

In the PSDF review meeting, 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 / OHPC is as given below:

Sl No	Name of Constituent	Name of Project	Date of approval from PSDF	Target Date of Completion	PSDF grant Approved (in Rs.)	Amount Drawn till date (in Rs.)	Status as updated in 129 <sup>th</sup> meeting
4	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	31.03.20	162.5 Cr. Total expenditure may not exceed Rs. 68 Cr.	38.09 Cr. Received Rs. 8.00 Cr on 28.03.19	<i>Work almost completed.</i>
7		Implementation of OPGW based reliable communication at 132kV and above substations	15.11.2017		51.22 Cr	2.56 Cr received as 10 % DPR. Claimed for 20 %.	Order placed. Expected by Nov'19. Inspection under process.
13	OHPC	Renovation & up-gradation of protection & control system of 4 nos. OHPC sub-stations		U.Kolab-March 19 Balimela-Feb 2019 U.Indravati-Jan 19 Burla-Nov18 Chiplima Dec 2018	22.35 Cr.	2.674 Cr	<i>Placed work order for Balimela. PO for other units amounting Rs. 12.79 Crs placed. Order under process.</i>
<b>Projects under process of approval:</b>							
	OPTCL	Installation of 125 MVAR Bus Reactor along with construction of associated bay each at 400kV Grid S/S of Mendhasal, Meramundali & New Duburi for VAR control & stabilisation of system voltage	27-07-18		31.94 Cr Estd. Cost. Approved amount 30.26 Cr. Grant amount 27.23 Cr.	Rs.2.72 Cr received as 10% of DPR. Retendering under process.	Agreement signed and sent to NLDC for signature. Retendering under process.
<b>Projects recently submitted:</b>							
	OPTCL	Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha	22-12-17	Date of submission	3.26 Cr Estt cost. 2.93 Cr recommended by Appraisal committee.		CERC approval received. Tendering under process.
	OPTCL	Protection up gradation and installation of SAS for seven numbers of 220/132/33kV Grid substations (Balasore, Bidanasi, Budhipadar, Katapalli, Narendrapur, New-Bolangir & Paradeep).	12.03.2018	Date of submission	41.1 Cr Estt cost	10% of DPR to be asked.	Project approved. Tender to be floated after revision of specification. Agreement will be sent to NLDC after signature of Govt.

**CGM (Const)/CGM (O&M) / OHPC may deliberate**

## C.2: Implementation of Automatic Demand Management Scheme

The latest status along with proposed logic as follows:

Sl. No	State /Utility	Logic for ADMS operation	Implementation status/target	Proposed logic (if different from under implementation logic)
1	Odisha	1. System Frequency < 49.9 Hz 2. Odisha over-drawl > 150 MW 3. DISCOM over-drawl > (40 MW)	10 Months Sent for PSDF approval	Logic 2 and 3 is AND or OR, in case it is AND then ADMS may not operate when DISCOMs are in schedule but GRIDCO is over drawing due to less generation at State embedded generators.

In the 116<sup>th</sup> PSOC meeting, CGM (O&M) stated that since considerable time has already been lapsed SLDC may prepare the EoI without waiting for CPC.

In the 123<sup>rd</sup> PSOC meeting SLDC stated that since the estimated cost has increased due to inclusive of SCADA integration, the revised estimate is placed in the BoD for approval.

In the 133<sup>rd</sup> PSOC meeting a committee was constituted with representatives of DISCOM, Telecom, IT & SLDC.

A meeting of the Committee was held on Dt. 06.07.2019. SLDC made a presentation on the logic and methodology to be adopted for the ADMS. The technical specifications prepared by SLDC were shared among the concern wings of OPTCL for their views. The specification will be finalized on receipt of the same. The DISCOMs were requested to update the list of feeders and group considering the present network configuration. On finalization of the above, the tendering process will be taken up by CPC wing of OPTCL as already approved by CMD, OPTCL.

The Technical & Commercial specification have been approved by the committee and forwarded to CPC for processing the Tender.

In the 137<sup>th</sup> PSOC meeting, it was suggested by CGM (Telecom) that BoQ & SoQ in different formats need to be matched and technical sanction shall be made by SLDC and forwarded to CPC for necessary action.

In the 138<sup>th</sup> PSOC meeting SLDC stated that technical sanction has been done and forwarded to CPC for tendering.

**SLDC may deliberate**

## C.3: 220 kV Inter-connecting lines of OPTCL with 400/220 kV Bolangir(PG), Keonjhar & Pandiabil S/s

PGCIL has already commissioned the 2 X 315MVA 400/220kV Bolangir S/s by LILoing of 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 138<sup>th</sup> PSOC meeting the status has been updated as follows:

Sl.	Name of the transmission line	Completion schedule
<b>1.</b>	<b>2 X 315MVA 400/220kV Bolangir S/s</b>	
a.	LILo of one circuit of Sadeipalli-Kesinga 220 kV D/C line at Bolangir (PG) S/S.	Construction of 220 kV Sadeipali- Kesinga line has started. 220 kV Sadeipali-Bolangir (PG) portion of the line is expected by March'20.
<b>2.</b>	<b>400/220 kV Keonjhar S/S.</b>	
a.	Keonjhar (PG)-Keonjhar (220/33 kV) & 220 kV D/C line	220 kV S.C line and Keonjhar S/S (220/33 kV), 2x20 MVA charged on 31.12.2018. 2 <sup>nd</sup> ckt; charged on 03.08.2019.
b.	Keonjhar (PG)-Turumunga (220/132 kV) & 220 kV D/C Line.	By 2021. Order placed.
<b>3.</b>	<b>400/220 kV Pandiabil Grid S/s</b>	
a.	Pratapsasan(OPTCL)-Pandiabil (PG) 220 kV D/C	December'2019

**C.GM (Cont) / CGM (Telecom) may update.**



#### **C.4: Bypassing arrangement of LILO of 400kV Lines at Angul**

LILO of Meramundali-Bolangir/Jeypore 400 kV S/C line and LILO of one Ckt of Talcher-Meramundali 400 kV D/C line has been done at Angul 765/400kV Sub-station. The bypass arrangement for these circuits is under implementation at Angul by Powergrid.

In 158th OCC, Powergrid informed that bypass arrangement would be completed by August 2019. OPTCL informed that 2<sup>nd</sup> circuit of 400 kV Meramundali-Mendhasal line would be commissioned by 1<sup>st</sup> week of August 2019.

OPTCL informed that 2<sup>nd</sup> circuit of 400kV Meramundali-Mendhasal line would be commissioned by end of August 2019.

As per POWERGRID email dated 16th September, the anticipated date for commissioning of the LILO by-pass arrangements at Angul SS is by end of Oct'2019.

OCC advised POWERGRID to take urgent steps for commissioning of the bypass arrangement. Delay in implementation of the arrangement is causing loss of operational flexibility besides subjecting the grid to the risk of high fault current.

In the 137<sup>th</sup> PSOC meeting, DGM (Const) stated that 3<sup>rd</sup> ICT at Mendhasal in under testing. O&M stated that tree clearance has already been completed. After commissioning of the ICT, 400 kV Mendhasal-Meramundali 2<sup>nd</sup> ckt will be charged.

Const. wing stated that a committee has been formed to examine the oil sample test result for charging of the 3<sup>rd</sup> ICT at Mendhasal. A decision shall be taken after receiving the views of the Committee.

Powergrid informed that the bypassing arrangement would be completed by November'2019

**O&M may update.**

#### **C.5: Update on status of telemetry**

CERC vide order dated 28.02.2016 on Petition No. 007/SN/2014 directed NLDC and respective RLDCs to update the status of telemetry every month at their respective websites and take up the issue of persistent non-availability of data from Generating Stations/substations at RPC meetings for appropriate action. Major issues are given below:

xxxxxxx

##### **Issues relating OPTCL Network:**

##### **Narsingpur data:**

In the 132<sup>nd</sup> PSOC meeting CGM (Telecom) stated that survey work for Meramundali-Bhanjanagar line is under process. OPGW will be reached at site after completion of survey and preparation of drum schedule.

In the 134<sup>th</sup> meeting CGM (Telecom) stated that delivery of OPGW has already been started.

In the 135<sup>th</sup> PSOC meeting DGM (Telecom) stated that replacement of earth wire by OPGW in 220 kV Bhanjanagar-Meramundali is expected by December'2019

**NALCO data:** DGM (Telecom) stated that the vender list and rate will be provided to NALCO for placement of order by them.

In the 137<sup>th</sup> PSOC meeting, NALCO stated that the estimate has already been received from OPTCL (Telecom). Approval from higher authority in under process.

**Telecom / NALCO may deliberate the status**

### C.6: Mock Black start exercises in Eastern Region – ERLDC

Schedule and tentative date for conducting mock black start exercise in OHPC stations is as tabled.

Sl.	Name of Hydro Station	Schedule	Tentative Date	Schedule	Tentative Date
		Test-I		Test-II	
1	Upper Kolab	Last week of May-2019	Done on 19 <sup>th</sup> July19	Last week of January 2020	
3	Rengali	2nd week of June 2019	Done on June'19	Last week of November 2019	
4	U.Indravati	3rd week of June 2019	Done on June'19	2nd week of February 2020	
6	Balimela	3rd week of October 2019	Done on 17 <sup>th</sup> July19	1st week of March 2020	Dec'2019
9	Burla	Last week of June 2019	Done on 20 <sup>th</sup> July' 2019	Last week of February 2020	Dec'2019

In the 136<sup>th</sup> PSOC meeting, SLDC stated that while conducting mock Black start exercise for Upper Kolab and Upper Indravati HEPs Muniguda Traction feeder is getting interrupted. In view of the above, feeding of Muniguda Traction S/S from Theruvali S/S through a separate dedicate line may be examined.

In the 137<sup>th</sup> PSOC meeting, Sr. G.M (O&M), Zone-1 suggested to put Rayagada area load on Indravati for black start exercise. SLDC may develop the procedure accordingly.

The mock black start exercise for Indravati HEP was done on 7<sup>th</sup> November by extending Upper Indravati generation up to Aska through 220 kV Theruvali & Bhanjanagar bus section and 220 kV Theruvali-Bhanjanagar-Aska line.

**SLDC / O&M/ OHPC may deliberate**

### C.7: Collection of modeling data from Renewable as well as conventional energy generators: ERLDC

As a National Grid operator, POSOCO is continuously working for ensuring reliability and security of the Grid. With penetration of more and more renewable energy source the task is becoming complicated day by day. An accurate dynamic modeling of the National Grid needs modeling of conventional as well as renewable / distributed generation sources. World Bank has engaged Digsilent as consultant for assisting POSOCO for building dynamic model of the Grid. A guideline for dynamic data collection has been developed in consultation with Digsilent Pacific team. All the utilities are requested to collect data from the grid scale renewable power plants as well as from conventional power plants under their jurisdiction and submit the same to ERLDC/ERPC as early as possible.

In the 157<sup>th</sup> OCC advised all the SLDCs to submit the details to ERPC and ERLDC Format along with an explanation for collection of Wind and Solar Data had been shared by ERLDC with all SLDCs.

Bihar/ West Bengal and Orissa are having Solar Plant with more than 5 MW capacity. However, details have not yet been received in terms of modeling data.

In the 132<sup>nd</sup> PSOC meeting, all generators as well as RE sources were requested to furnish data to SLDC for onward transmission to ERPC.

In the 137<sup>th</sup> PSOC meeting, SLDC stated that the format has been forwarded to all entities and GRIDCO. It was requested that GRIDCO may pursue to all RE generators to submit the data.

In the 138<sup>th</sup> PSOC meeting, GRIDCO stated that they have received some of the Solar plant data, which will be forwarded to SLDC. SLDC requested GRIDCO to forward all the PPAs made with the Solar projects of the State.

SLDC has forwarded data for 5 Nos of Solar projects of the State namely: 1.Sadipali, Aftab, Jyoti, Dakhin Odisha and Vento Power at Kesinga to ERLDC. GRIDCO may explore for collection of the remaining plants data.

**GRIDCO / SLDC may update**

### **C.8: Implementation of Automatic Generation Control in Eastern Region--ERLDC**

In compliance to CERC's direction in order dated 06/12/2017 in petition no 79/RC/2017, AGC was commissioned in NTPC Barh on 01st August 2019 and operationalized since 23rd August, 2019.

Vide order dated 28th August 2019, CERC in Petition No.: 319/RC/2018 directed that all the ISGS stations whose tariff is determined or adopted by CERC shall be AGC-enabled and the ancillary services including secondary control through AGC be implemented as per the following direction:

I. All thermal ISGS stations with installed capacity of 200 MW and above and all hydro stations having capacity exceeding 25 MW excluding the Run-of-River Hydro Projects irrespective of size of the generating station and whose tariff is determined or adopted by CERC are directed to install equipment at the unit control rooms for transferring the required data for AGC as per the requirement to be notified by NLDC. NLDC shall notify the said requirements within one month of this order.

II. All such ISGS stations whose tariff is determined or adopted by CERC shall have communication from the nearest wide band node to the RTU in the unit control room.

XXXXXXXXXX

IX. All new thermal ISGS stations with installed capacity of 200 MW and above and hydro stations having capacity exceeding 25 MW excluding the Run-of-River Hydro Projects irrespective of size of the generating station and whose tariff is determined or adopted by CERC shall mandatorily have the capability to provide AGC support.

In 161st OCC, all the ISGS stations were advised to implement the AGC within 6 months as per the above CERC order.

In the 162<sup>nd</sup> OCC, it was clarified that AGC signal for intra-state generating stations would be generated by the concerned SLDC and the relevant communication path is to be established between SLDC to plant. For ISGS stations, the AGC signal would be sent from NLDC.

OPGC and SLDC, Odisha agreed to submit their plan by 1st week of November 2019.

All concerned plants may please ensure taking necessary action for arranging the communication (through redundant and alternate paths) from the existing nearest wideband communication node to their unit control rooms through two fiber optic cables, in coordination with CTU. It may please be noted that all the ISGS stations whose tariff is determined by or adopted by CERC should be AGC-enabled before 28th February 2020, as per order of CERC.

In the 138<sup>th</sup> PSOC meeting SLDC stated that since the total capacity of State generators has been tied up with GRIDCO, AGC for State generators may not be required. SLDC may write a letter to ERPC for clarification also may deliberate in the next OCC.

OCC suggested that even though the total capacity is tied up with GRIDCO, depending the area control error during low/high frequency scenario, the generation can be increased / decreased up to 5% by sending AGC signal from SLDC. Member Secretary advised OPGC to submit their action plan within 7 days for implementation of AGC. Further OPGC may depute their officers to visit Barh NTPC station to study the mechanism they have adopted for AGC. SLDC may interact with NLDC in this regard.

**SLDC/OPGC may discuss**

### **C.9: Submission of data in MERIT Order portal--CEA**

CEA vide mail dated 9th July 2019 informed that the MERIT Order portal had been launched on 23rd June, 2017 by Honourable Minister of Power. One of the most important advantages of “Merit” Portal is Transparent information dissemination pertaining to marginal variable cost and source wise purchase of electricity and indication of supply side reliability, adequacy, and cost of power procurement.

However, it has been observed that many of the states are not filling the data regularly and sometimes the data filled varies widely from the data available on the respective RLDCs daily reports.

It is requested that the states may be advised to fill the data regularly and check that correct data is filled on the MERIT Portal.

In 159th OCC, all the SLDCs were advised to fill the correct data in MERIT portal on regular basis.

In the 138<sup>th</sup> PSOC meeting SLDC stated that SLDC is complying the decision of OCC.

**SLDC may deliberate**

### **C.10: Data for preparation Load Generation Balance Report (LGBR) of ER for the year 2020-21**

As per the IEGC, RPC Secretariat is responsible for finalization of the Annual Load Generation Balance Report (LGBR) for Peak as well as Off-peak scenarios and the annual outage plan for the respective region To facilitate the preparation of LGBR of Eastern Region by ERPC Secretariat within the schedule period, the following data/information for the year **2020-21** in respect of the constituents/utilities of Eastern Region is urgently required:

- i) The unit wise and station wise monthly energy generation proposed from existing units during 2020-21 (thermal/hydro/RES).
- ii) Annual maintenance programme for each of the generating units (thermal and hydro both).
- iii) Generating units under R&M / long outage indicating date of outage and reasons of outage and expected date of return (thermal and hydro both).
- iv) Partial and forced outage figures (in %) of generating units for the last 3 years.
- v) Month wise peak demand (MW) – restricted and unrestricted peak demand.
- vi) Month wise off-peak demand (MW).
- vii) Month wise energy requirement (in MU).
- viii) Month wise & source wise power (both MU & MW) purchase and/or sale plan.
- ix) Schedule of commissioning of new generating units during 2020-21 and unit-wise monthly generation programme (in MU).
- x) Allocation of power from new generating units.
- xi) Month wise and annual planned outage of transmission system (Transmission lines 220kV and above / ICTs / Reactors/ other elements).

Information may please also be submitted in the form of soft copy through email (mail ID: **mserpcpower@nic.in / erpcjha@yahoo.co.in**).

The data is yet to be received from following constituents:

- BSPHCL
- OPTCL
- NTPC: FSTPP, KhSTPS, TSTPS, TTPS, MTPS-II, BRBCL, NSTPS and Darlipalli □  
APNRL
- JITPL
- Sikkim
- DVC: Details of demand
- Mangdichu HPS, Bhutan

The LGBR Meeting for preparation of draft LGBR for 2020-21 is scheduled to be held at 11:00 hrs on 19th December 2019.

SLDC stated in the OCC that the required data to ERPC has already been forwarded to ERPC.  
**SLDC may deliberate**

**C.11: Monitoring of Next Six-Month New Element Integration in OCC and Its Update on Monthly Basis --ERLDC**

It has been observed that many elements are getting interconnected into the system and beforehand details are not available with the system operator resulting in difficulty in carrying our operational planning activity. In view of this, as a regular agenda all ISTS and ISGS/IPP to update the OCC regarding any new elements at 220 kV and above which will be integrated in next six month with the grid. For State Grid, SLDC will be submitting the details on behalf of its intrastate Generation and transmission system. The format is given below:

Transmission Elements	Agency/ Owner	Scheme (ERSS/ TBCB/ Standing Committee/State	Schedule Completion	Projected Month for Completion	Issue Being Faced

In previous several OCC, Transmission licensees and SLDCs are requested to submit RLDC/RPC following details on monthly basis

- List of transmission element /generators of State and ISTS licensees synchronised in the last month.
- List of transmission element /generators expected to be synchronised during next month or in near future

Some SLDCs are submitting the list of intrastate and interstate line on regular basis, however transmission element /generators expected to be synchronised during next month or in near future is not submitted by any SLSC/Transmission licensee to RLDC/RPC.

In the 138<sup>th</sup> PSOC meeting AGM (Const.) assured to furnish the information sought to ERPC. OCC stated that none of the constituents has furnished the information

**CGM (O&M) may deliberate**

**C.12: Auxiliary power consumption by Powergrid Substations--GRIDCO**

As per decision of Special meeting on this issue held at ERPC on 10.07.2018, drawal of auxiliary power through tertiary winding by Powergrid substations shall be treated as drawal by Powergrid from the DISCOM (s). For this, Powergrid shall approach the concerned DISCOM(s) and shall complete all the necessary formalities to become a consumer of the concerned DISCOM.

Powergrid is not becoming the consumer of DISCOM Utility as a result of which, GRIDCO/DISCOM(s) are unable to realize the revenue from Powergrid, whereas GRIDCO is paying for the said quantum of energy consumed by Powergrid since October, 2017.

This issue has already been discussed in the monthly Power System Operational Co- ordination Committee (PSOC) meeting convened by SLDC, Odisha several times. Powergrid did not attend these meetings. DISCOMs stated that that they are not receiving proper response from the Powergrid to regularize the consumer issue.

In 161st OCC, Powergrid informed that Odisha DISCOMs are charging for registration and security fees. Powergrid observed that these fees are not payable by Powergrid as Discoms don't have to construct any infrastructure for this power. In other states, Powergrid had not paid these charges.

GRIDCO informed that DISCOMs were raising the bills as per the OERC regulations.

After detailed deliberation, it was decided that the issue would be discussed with DISCOMs in Odisha in November 2019 OCC meeting wherein the Discoms of Odisha would be invited to attend.

In the OCC DISCOMs stated that as per the OERC Supply Code provision, POWERGRID has to apply for making them a consumer of the respective DISCOMs indicating their Contract Demand by paying the security deposit. After deliberations from DISCOMs and POWERGRID, Members Secretary advised POWERGRID to apply for consumer and file a Petition before the OERC for exemption of security deposit and demand charges for them.

**All DISCOMS/ POWERGRID may deliberate.**

**C.13: Review of the PSS Tuning of Generators in Eastern Region --ERLDC**

On 31st January 2019, PSS Tuning Meeting was held at ERPC. All generating utilities were advised to complete the PSS tuning of their plant at earliest for improvement of damping in the grid during transients. In addition, the tuning reports have also to be submitted to ERLDC/ERPC for their validation.

In line with this ERLDC has communicated to following utilities in view of the recent oscillation observed during various events:

<b>Generating Power Plant</b>	<b>Remarks</b>	<b>Status of Action Plan to be informed to OCC</b>
All Units of OPGC and OHPC,	PSS are tuned long back and in many units PSS have not been tuned but are in service.	No Details on PSS tuning Plan shared.
GMR	Was done in 2013 and retuning is required with change in the network at Angul.	Plan not yet submitted
Sterlite 4 X 600 MW	Due to network changes.	Plan not yet submitted (Orissa SLDC)

In the OCC meeting, OHPC agreed to forward their action plan. GMR stated that they have planned for PSS tuning during shutdown of their unit. OPGC stated to do PSS tuning during Ferruary'19 while shutdown of the unit. Sterlite (Vedanta) was not present to deliberate.

**OHPC/ GMR / OPGC / Vedanta may deliberate.**

**C.14: Long term outage of transmission elements**

400 kV main bay at Indravati (PG) is out of service since last 2 years for breaker problem at Indravati (PG). Line is charged through main bay of 125 MVA B/R breaker on bus-II. As decided in the meeting between POWERGRID and OPTCL, the breaker has to be replaced by OPTCL. OPTCL may expedite the work for operational flexibility.

In the 16<sup>th</sup> GCC meeting Sr.G.M (O&M) Zone – I stated that the breaker was transferred to the site. Removal of old breaker foundation is under progress. The delay was due to difficulty in breaking the foundation.

OPTCL stated in the OCC meeting that the breaker commission work is expected to be completed by end of November'19

**O&M may update the status**

**C.15: 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 on the same to Chief Engineer, Distribution Planning & Development Division, CEA.

In 142nd OCC, ERLDC informed that, in line with Enquiry Committee Recommendation, cyber security audit is being conducted on regular basis for SCADA system installed at ERLDC and SLDC as well but cyber security audit for telecom infrastructure installed in Eastern Region is not being carried out.

OCC advised all the constituents to conduct the cyber security audit on telecom infrastructure installed in Eastern Region. It is further advised that compliance / mitigation of the points observed during the audit should also be completed for improvement of the telecom infrastructure in ER.

As suggested by CEA, a format has been circulated among ER constituents for furnishing the information of the respective systems for discussion in OCC Meeting. The format is enclosed at Annexure-E1.

OCC advised all the constituents to submit the information to ERPC as per Annexure-E1. OPTCL has submitted the required data

In the 136<sup>th</sup> PSOC meeting, IT wing was requested to submit the quarterly report for the quarter ending September'2019.

In the 137<sup>th</sup> PSOC meeting, IT stated that after completion of the audit, the quarterly report will be submitted. Further, Telecom may intimate the details of their infrastructures to be incorporated in Cyber Security audit.

In the 138<sup>th</sup> PSOC meeting, IT stated that they will furnish the data after completion of Audit.

**Sr. G.M (IT) /Telecom may update**

#### **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 **Oct'19**:

<b>Sl. No</b>	<b>Name of Discom</b>	<b>No. of message issued</b>	<b>Over drawal (MU)</b>	<b>Deviation (%)</b>
1	CESU	0	-15.087	2.04
2	WESCO	0	+1.48	0.24
3	NESCO	0	+4.129	0.92
4	SOUTHCO	0	-1.963	0.69
	<b>Total</b>	<b>0</b>	<b>(-)11.441</b>	

It is noticed that CESU & SOUTHCO had underdrawn while WESCO & NESCO had overdrawn during the month. **CESU** has deviated **2.04%** followed by NESCO 0.92% from the scheduled energy while **SOUTHCO & WESCO** have deviated **0.69 % & 0.24 %** respectively. DISCOMs may forecast their drawal in realistic approach to minimise deviation. Daily drawal profile of all DISCOMs is as indicated in the presentation.

**SLDC/ Discoms may please deliberate.**

##### **D.2: Compliance of CEA Regulations for Grid Connectivity of Renewable Energy Sources.**

As per CEA (Technical Standards for connectivity to Grid) Regulations, 2007, dated 21<sup>st</sup> 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.

SLDC has already forwarded the Regulations & a letter received from DoE, Govt. of Odisha to the Distribution Licensees.

A meeting has been convened by Gridco in this regard with the RE generators, OPTCL, Telecom & SLDC. In the meeting, two nos of agencies presented their data acquisition logic from the RE sources. It was decided that each agency will take up a pilot project for data communication from one RE source to SLDC. On completion of the above project next course of application shall be decided.

In the 125<sup>th</sup> PSOC meeting GRIDCO have agreed to write a letter to M/s Chemtrol. It was decided that a committee shall be constituted with representatives of GRIDCO, O&M, Telecom & SLDC to take a decision.

In the 134<sup>th</sup> PSOC meeting, GRIDCO stated that M/s Camptrol has successfully completed the pilot project i.e real time data communication for MGM Solar at Tangi.

A committee has been constituted with representatives of GRIDCO, O&M, Telecom & SLDC. This issue was also discussed in the 16<sup>th</sup> GCC meeting held on 09.08.2019. GRIDCO assured to make a demo of data communication from MGM Solar at Tangi to SLDC by end of August'19.

In the 137<sup>th</sup> PSOC meeting, DGM (Telecom) stated that M/S Chemtrol has made a Demo but GRIDCO was not present to witness. However' Chemtrol has agreed to show a Demo in last week of Sept'2019 with prior intimation to GRIDCO.

In the 138<sup>th</sup> PSOC meeting, it was decided that GRIDCO may fix a dead line for Chemtrol to make the Demo data communication. GRIDCO may convene a meeting to discuss the communication issue.

**GRIDCO may deliberate the status.**

### **D.3: Data communication from newly commissioned RE sources connected at 132 kV- SLDC**

There are as many 8 Nos. of Solar projects with installed capacity of 272.5 MW have connected with OPTCL network through 132 kV lines. The real time data of these plants are yet to be received at SLDC control room. Since the generation quantum is quite substantial (to the tune of 0.6 MU during a day), this has an impact on real time generation monitoring.

In the 132<sup>nd</sup> PSOC meeting it was decided that SLDC shall convene a meeting with the defaulting Solar units and Telecom to discuss the issue.

In the 133<sup>rd</sup> PSOC meeting CGM (Telecom) stated that Vinto Solar data can be integrated only after laying of optical fiber, which has been proposed for PSDF funding

In the 134<sup>th</sup> PSOC meeting, CGM (Tel) stated that release of optical fiber has already processed. This issue was discussed in the 16<sup>th</sup> GCC meeting held on 09.08.2019, where Director (Commercial) suggested to prioritize data communication from Solar plants.

In the 137<sup>th</sup> PSOC meeting CGM (Telecom) stated that laying of optical fiber is expected to be completed by December'2019. DGM (Telecom) suggested that SLDC may write a letter to Vento Power (Solar) at Kesinga to explore the data communication, since all communication equipment are available with them. Data communication can be made through after visit of the service Engineer of the company.

In the 138<sup>th</sup> PSOC meeting, it was suggested that Telecom may ensure establishment of data communication facility before recommending for connectivity for any Solar Plant.

**SLDC /Telecom may deliberate the status.**



#### **D.4: Despatch Scheduling for RE Generation.**

At present about 19 Nos of RE generating plants having 340 MW installed capacity operating in the State. None of the plants are furnishing day ahead schedule except 2-3 Nos. In absence of day ahead Declared injection Schedule, there is a substantial mismatch of day ahead generation planning. Also SLDC is not aware of the PPA made by GRIDCO with the Solar plants. As such, it is requested that GRIDCO may forward the copy PPA made with the Solar plants and insist the plants to submit day ahead DC in respect of their plants to SLDC in 15 minute blocks.

**GRIDCO may discuss.**

#### **D.5: Information regarding RE Sources for RPO Compliance monitoring.**

MNRE, Govt. of India has asked to provide information regarding source wise contracted capacity and power drawl from Solar/ Non Solar and large Hydro generators on monthly basis for RPO Compliance monitoring. GRIDCO has forwarded the information up to the month of September 2019, which was submitted to MNRE. It is requested that GRIDCO may furnish the information to SLDC by end of 1<sup>st</sup> week of each month, so that the same shall be submitted to MNRE by 10th day of each month. The letter of MNRE and format is enclosed as Annexure-1.

**GRICO may discuss.**

#### **D.6: Implementation of Automatic Meter Reading for OPTCL-Discom interface points.**

In the 116<sup>th</sup> PSOC meeting, IT stated that out of 840 nos. of meters integrated, around data from 750 nos. of meters will be received each month. Data from the remaining 90 meters are to be collected manually.

In the 117<sup>th</sup> PSOC meeting IT stated that out of 840 nos. of meters integrated, data from 717 nos. of meters have been extracted for the month of December'17. Data could not be collected from 63 Nos. of meters, which were replaced, as the information was received by IT one day before. CGM (O&M) may instruct Secure meters Ltd to inform the replacement of meters to IT immediately.

In the 118<sup>th</sup> PSOC meeting, IT stated that out of 840 nos. of meters integrated, data from 754 nos. of meters have been extracted for the month of January'18. The extracted data will be compared with the M cubed meter reading. If found satisfactory, the project will be made go live.

In the 133<sup>rd</sup> PSOC meeting, DGM (IT) stated that Paralakhemundi and Balasore S/S meter data has been tested. The software fetching data for other S/Ss will be tested

In the 136<sup>th</sup> PSOC meeting, IT stated that the meter data has been checked and presentation done on 2<sup>nd</sup> August'2019. The same has been forwarded to SLDC.

In the 137<sup>th</sup> PSOC meeting IT stated that, the software developed by M/S TCS has been tested for DLMS -2 energy meters. This has to be developed for DLMS-3 type energy meters. TCS has asked for one month time for the same.

In the 138<sup>th</sup> PSOC meeting IT stated that software development is under progress and expected to be completed for CESU area energy meters.

**IT / SLDC may update the status**

#### **D.7: Collection of tie-line meter data**

The inter-state tie-line meter data are being collected by the concerned officers of the respective grid S/Ss on weekly basis and mailed to SLDC through different mail ID for onward transmission to ERLDC. To streamline the process, it is requested that all such data may be forwarded to SLDC in the Mail ID as mentioned below.

- [emsldcorissa@gmail.com](mailto:emsldcorissa@gmail.com)
- [emsldcorissa@sldcorissa.org.in](mailto:emsldcorissa@sldcorissa.org.in).

O&M may issue necessary instruction to all the executives entrusted for the mater data collection.

**CGM (O&M) may note**

**D.8: Repair of OPGW, Groung wire and doubling of jumpers & summation meters for 220 kV RSP DC lines. – RSP Agenda**

1. Repair of OPGW at Tower-33 &34 zone of 220 kV RSP-Tarkera DC line, which was defective on 2<sup>nd</sup> Sept'19 due to disturbance.
2. Restoration of fallen ground wire at diamond crossing with PGCIL line.
3. Doubling of all jumpers in 220 kV RSP-Tarkera ckt-1&2, damaged due to over loading.
4. Summation meters for all 4 Nos 220 kV RSP-Tarkera lines.

**RSP 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 last meeting is as follows:

Sl. No	Transmission element details	Present Status
1	220 kV Jayanagar-Jeypore(PG) 2nd DC line	December'2019
2	400 kV Meramundali-Mendhasal 2nd ckt.	December'2019
3	132 kV Kesinga-Junagarh line	December'2019
4	220 kV Pandiabili-Pratapsasan line	March'20
5	132 kV Pratapsasan-Phulnakhara line	February'20
6	220/132/33 kV, Pratapsasan S/S	March'20
7	220/33 kV, Deogarh S/S	March'20
8	132/33 kV, Maneswar S/S	March'20
9	132/33 kV, Boriguma S/S	Feb'20
10	220/33 kV, 2x20 MVA Baliguda S/S	Forest clearance awaited
11	220/33 kV, 2x20 MVA Kalimela S/S	Forest clearance awaited
12	220/132/33 kV, Goda Chhak S/S (320 MVA)	March'20
13	220/132 kV Kesinga S/S	Mar'20
14	132/33 kV R.Udyagiri S/S	Mar'20
16	220/33 kV Laxmipur S/S 2nd 20 MVA Tfr	Nov'19
18	132/33 kV, Mancheswar GIS	Dec'19
19	132/33 kV, Satasankha S/S	February'19

In the 138 PSOC meeting, All the Discoms stated that the contractors have failed to execute the HT infrastructure work awarded to them. O&M stated that the DISCOMs shall intimate the name of contractor/ Agency/Scheme to OPTCL for necessary action.

The status of 33 kV bays and takeoff arrangement by DIDCOMs are as tabled

SI No.	Name of Project	DISCOM	Voltage	Date of Charging	Bays Available	Bays utilised
1	Atri	CESU	220/132/33	2/24/2016	4	NIL
2	Chandaka - B	CESU	220/132/33	3/28/2017	4	NIL
3	Muniguda	Southco	132/33	11/29/2017	4	NIL
4	Baragarh New	Wesco	220/132/33	3/21/2018	1	NIL
5	Aska New	Southco	220/132/33	3/31/2019	5	NIL
6	Betanati	Nesco	132/33	4/19/2019	3	NIL

7	Kasipur	Southco	220/33	6/30/2019	2	NIL
8	Jayapatana	Southco	220/132/33	7/11/2019	4	NIL
9	Agarpada	Nesco	132/33	8/30/2019	5	NIL
10	Patangi	Southco	132/33	9/15/2019	4	NIL
11	Konark	CESU	132/33	6/29/2015	4	1
12	Mania	CESU	132/33	3/31/2016	5	1
13	Bangiriposi	Nesco	132/33	10/3/2016	4	1
14	Infocity-II	CESU	220/33	12/23/2016	4	1
15	Bhogarai	Nesco	132/33	3/28/2017	4	1
16	Tirtol	CESU	132/33	1/5/2018	5	1
17	Chandbali	Nesco	132/33	2/20/2019	4	1
18	Unit-8	CESU	132/33	4/1/2019	5	1
19	Samagara	CESU	220/132/33	7/14/2015	5	2
20	Marshaghai	CESU	132/33	10/16/2015	5	2
21	Malkangiri	Southco	220/33	3/27/2017	4	2
22	Khajuriakata	CESU	132/33	3/28/2017	5	2
23	Podagada	Southco	132/33	2/9/2018	4	2
24	Kantabanji	Wesco	132/33	2/28/2018	5	2
25	Ghens	Wesco	132/33	4/13/2018	4	2
26	Khuntuni	CESU	132/33	5/31/2018	5	2
27	Narasinghpur	CESU	220/33	8/24/2018	5	2
28	Udala	Nesco	132/33	9/16/2018	5	2
29	Keonjhar	Nesco	220/33	12/31/2018	5	2
30	Chikiti	Southco	132/33	2/25/2019	4	2

**CGM (Construction) / DISCOMs may deliberate**

**E.2: HT metering at DISCOM interface points.-SLDC.**

As per the Central Electricity Authority (Installation and Operation of Meters) Amendment Regulations, 2010, the interface meters shall be installed at the High Voltage side of the Inter Connecting Transformer. Accordingly POWERGRID has implemented the amended Regulation. GRIDCO / OPTCL may examine for metering in the High Voltage side of the ICT, which is done in the Low Voltage side at present.

In the 134<sup>th</sup> PSOC meeting, SLDC stated that Gridco may convene a meeting with DISCOMs and OPTCL to implement CEA Regulation to reduce the loss level of State system and increase revenue of GRIDCO. Further OERC vide order dated 29.03.2019 in case No. 71/2018 in the matter of ARR and Transmission tariff of OPTCL at Para 181 directed OPTCL to take necessary steps for reduction of transmission loss by avoiding over loading as well as other innovative action.

This issue was also discussed in the 16<sup>th</sup> GCC meeting, where the DISCOMs highlighted the PPA provision for receiving power at 33 kV Voltage level by them. Director (Commercial) agreed to convene a meeting between DISCOMs, O&M & SLDC to discuss the issue. If required, GRIDCO shall approach the Hon'ble OERC for amendment of the PPA/ Supply Code if required to comply CEA Regulation.

In the 137<sup>th</sup> PSOC meeting it was requested that GRIDCO may convene a meeting to discuss the issue

In the 138<sup>th</sup> PSOC meeting GRIDCO stated that a meeting will be convened in the month of November'19 to discuss the issue

**OPTCL / GRIDCO may deliberate**

### E.3: Major Events in the month of October'19

1. On Dt. 30.10.19 at 13:17 Hrs - 220 kV Tarkera – RSP (SAIL) ckt III charged.
2. On Dt. 30.10.19 at 13:19 Hrs - 220 kV Tarkera – RSP (SAIL) ckt IV charged.

Members may note

### E.4: Important Grid Incidences during the month of October'19.

1. On dt.08-10-19 at 19.26 hrs, due to snapping of R-Ph wave trap at 220kV Budhipadar-Tarkera ckt-1, Bus-Bar protection relay of Bus-2 operated which led to tripping of all feeders emanating from bus -2.
2. On dt.25-10-2019 at 04:44 hrs, due to detachment of drop jumper from SI clamp of B-Phase Main bus-II of 220kV Bargarh (N)-Bolangir(N) ckt, heavy spark noticed. The said ckt tripped from Bargarh(N) end but did not trip from Bolangir end. The breaker also could not be tripped remotely from Bolangir(New) end. To avoid any damage to equipment, 160MVA Auto-I & II at Bolangir (N) hand tripped. As the fault still persisted, with continuous fire, 220kV Bolangir(PG)-Bolangir (N) ckt hand tripped resulting total power failure at Grid S/S, Bolangir (New).

O&M may discuss

### E.5: Outage of major transmission Elements during the month of September'19. (above 10 hrs).

Sl No	Transmission line / element	Tripping Dt/time	Restoration Dt/time	Reason
1	132 kV Lapanga- Burla ckt -II	04.10.19/ 13:46 hrs	05.10.19 /16:37 hrs	Snapping of line conductor
2	400 kV Lapanga –OPGC ckt -I	06.10.19/ 00:49 hr.	08.10.19/ 17:57 hrs.	Snapping of line conductor
3	220 kV Rengali (SY) – Barkote ckt	06.10.19 /16:10 hrs	09.10.19 / 13:22 hrs	R- Ph line Conductor snapped at Loc -217
4	220 kV Budhipadar- Tarkera ckt -I	08.10.19 / 19:26Hrs	09.10.19 / 15:03 hrs	Conductor snapped at Grid S/S, Budhipadar
5	220 kV Budhipadar – Korba ckt -III	08.10.19 / 19:03hr	09.10.19 / 19:14	Charged after patrolling
6	132 kV Jayanagar – Sunabeda ckt	12.10.19 /16:48 hrs	13.10.19 /19:22	R-Ph CT failure
7	220 kV Budhiapadar –Raigarh ckt	18.10.19 / 14:37 hrs	19.10.19 /16:08 hrs	DP relay operated. Zone - 1, L2-E, 3.18 kA, 35.5 kM
8	132 kV Atri – Argul ckt -II	21.10.19 / 16:09 hrs	22.10.19 / 11:11 hrs	Snapping of Line conductor
9	132 kV Bhanjanagar – Aska ckt -I	29.10.19 / 18:46 hrs	30.10.19 / 21:02 hrs	B-ph CT failure at Aska S/S

O&M may discuss

### E.6: Prolonged outage of Transmission elements

Sl No	Transmission line / element	Date of outage	Reason	Expected date of restoration
1	220 kV Samangara – Pandiavil ckt – I& II	03.05.19	Tower collapsed during the severe cyclonic storm FANI.	

O&M may discuss

**E.7: Review of Outage Program of State Generators for the month of December'19:**Tentative Outage programme for State Generators for the month of **December'2019**

Sl.	Station	Unit	Period	Remarks
1	Burla	# 1	14.03.18 to continue	T&G coupling cover water leakage Annual Maintenance Under R,M & U Under R, M & U
		# 4	01.12.19 to 31.12.19	
		# 5	25.10.16 to continue	
		# 6	16.10.15 to continue	
2	Chipilima	# 1	15.12.19 to 14.01.20	Annual Maintenance
3	Balimela	# 1	05.08.16 to continue	Under R,M work
		# 2	20.11.17 to continue	Under R,M work
4	Rengali	# 3	01.12.19 to 31.12.19	Annual Maintenance & PSDF work
5	U. Indravati	# 1	17.12.19 to 16.01.20	Annual Maintenance
		# 3	15.11.19 to 13.12.19	Annual Maintenance

**OHPC may deliberate****E.8: Generation Program for the month of December'19.**

Generation schedule for the month of December'19 furnished by OHPC are given below.

Name of Hydro Gen. Station	Generation Program (MW)		Reservoir Level as on 01.11.19	Reservoir Level as on 01.11.18	MDDL	High Flood Reservoir Level
	Dec'19 (1 <sup>st</sup> fortnight)	Dec'19 (2 <sup>nd</sup> fortnight)				
HPS-I, Burla	40	40	629.89 ft.	627.10 ft.	590 ft.	630 ft.
HPS-II, Chiplima	25	25	-	-	-	-
Balimela	90	90	1515.30 ft.	1511.50 ft.	1440 ft.	1516 ft.
Rengali	40	40	124.03 mtr.	118.70 mtr.	109.72 mtr	123.5 mtr.
U.Kolab	30	30	857.29 mts.	855.93 mtr.	844 mtr	858 mtr.
U. Indravati	65	65	641.02 mtr.	640.83 mtr.	639.40 mtr	642 mtr
MKD (O/D)	30	30	2748.40 ft.	2746.80 ft.	2685 ft.	2750 ft.
<b>TOTAL</b>	<b>320</b>	<b>320</b>				

Generation schedule may change depending on inflow &amp; availability of machine.

**SLDC / OHPC may deliberate****E.9: Anticipated power generation and demand for the month of December'2019.**

Sl. No	Discom	Average	Peak
1	CESU	1000	1200
2	WESCO	950	1000
3	NESCO	800	900
4	SOUTHCO	400	450
<b>5</b>	<b>Total Discom</b>	<b>3150</b>	<b>3550</b>
	<b>System Loss &amp; others</b>	<b>150</b>	<b>200</b>
	<b>Total Demand</b>	<b>3300</b>	<b>3750</b>
<b>Availability</b>			
1	Hydro	320	800
2	State Thermal	1400	1400
3	IPP, small hydro &RE	350	300
4	ISGS share (including OA& purchase)	950	1000
5	CGP support (OA)	300	250
6	<b>Total availability</b>	<b>3320</b>	<b>3750</b>
7	<b>Surplus / Deficit</b>	<b>20</b>	<b>0</b>

Members may discuss.

**PART F: OTHER ISSUES****F.1: Date and Venue of the next (140<sup>th</sup>) PSOC meeting.**



Dr. P C Maithani  
Adviser, MNRE

Fax : 011-24361298

Telegram : RENEWABLE

भारत सरकार  
नवीन और नवीकरणीय ऊर्जा मंत्रालय

Government of India

MINISTRY OF NEW AND RENEWABLE ENERGY

ब्लॉक नं. 14, केन्द्रीय कार्यालय परिसर, लोदी रोड़, नई दिल्ली - 110003  
BLOCK NO. 14, C.G.O. COMPLEX, LODI ROAD, NEW DELHI - 110 003

D. O. No.

7/10/2017-EFM

Dated .....

9 September 2019

Renewable Purchase Obligation (RPO) compliance monitoring is crucial to ensure adequate progress against the National and State targets for renewable energy deployment. Accordingly, Ministry of New and Renewable Energy, vide letter of even number dated 22 May 2018 has constituted the RPO Compliance Cell to coordinate on matters relating to RPO Compliance with States, SERCs and CERC. So far, State level RPO compliance has been measured based on the renewable energy generated in the State. However, considering that the share of inter-state sale of renewable power is progressively increasing, it is imperative that the information on energy consumed (solar, non-solar & large hydro) and the associated contracted capacity is captured for the State as a whole.

2. State Load Dispatch Centres (SLDCs), by virtue of coordinating all electricity transactions in the area of their jurisdiction, are in the best position to compile the data necessary for computation of RPO compliance at State level. SLDCs are therefore requested to provide the requisite information regarding source-wise contracted capacity and power consumption to this Ministry on a monthly basis in the prescribed format (Annexure).

3. SLDCs are also requested to designate an officer at an appropriate level for coordination of the activity. The name of designated officer and information may be sent to Shri Tarun Singh, Scientist-C, Nodal Officer, RPO Compliance Cell (Address: Block 14, CGO Complex, Lodhi Road, New Delhi - 110003; Ph: 011-24360707 Extn-2022; Mobile: 9560269009; E-mail: tarun.singh@nic.in).

Yours Sincerely,

(P C Maithani)

To

-as per list attached-

Copy to:

1. Principal Secretary for Power/Energy (All States/UTs)
2. Chairman/MD, State Nodal Agency for Renewable Energy (All States/UTs)
3. Chairman & MD, National Load Dispatch Centre
4. Executive Director, Regional Load Dispatch Centre (Northern, Eastern, North-Eastern, Western And Southern)

Format for providing information on energy consumed (solar, non-solar & large hydro) and contracted capacity

Period	Solar Energy		Non-Solar Renewables		Large Hydro (> 25 MW capacity)	
	Energy Consumption in the State (in MU)	Contracted Capacity* by Obligated Entities in the State (in MW)	Energy Consumption in the State (in MU)	Contracted Capacity* by Obligated Entities in the State (in MW)	Energy Consumption in the State (in MU)	Contracted Capacity* by Obligated Entities in the State (in MW)
F.Y. 2018-19						
April-2019						
May-2019						
June-2019						
July-2019						
August-2019						
September-2019						
October-2019						
November-2019						
December-2019						
January-2020						
February-2020						
March-2020						

\* Contracted Capacity: Capacity contracted by Obligated entities for purchase during the period