

Additional Agenda for 156th OCC meeting

AA1. Mis-match of SEM and SCADA Data -Undue financial liabilities to PSPCL. (Agenda by PSPCL)

It is mentioned that Punjab SCADA data remains suspected / Non-Available during regular intervals. Without regular & accurate SCADA data, it is very difficult to run the system and grid security remains endangered. Further, PSPCL has to bear commercial loss in terms of UI deviations charges. Also over drawal/under drawal violations cannot be ruled in absence of telemetry data. This office is in regular touch with Punjab SLDC, PGCIL and NRLDC authorities through messages/emails & memos for provision of regular and reliable telemetry data. But the issue has not been resolved. In the year 2016-17, PSPCL had to bear commercial loss of 18.33 crores on account of UI Deviations, even after that situation has not improved, rather it has become deteriorated & in the year 2017-18, PSPCL again had to bear commercial loss of 85.62 crores without its fault. Similarly, for the year 2018-19, the situation is still worse and Month-wise, detail of SCADA/SEM deviations for the year 2016-17, 17-18, April-18 to December-18 is enclosed herewith as Annexure-1. On the perusal of Annexure-1, it can be observed that Punjab SLDC and PGCIL failed to provide regular and reliable SCADA data, compelling PSPCL to bear huge financial loss during last three years without any fault.

Now DSM Regulation (4th Amendment) w.e.f. 01.01.2019 has been implemented, which is much more stringent. It is pertinent to mention here that UI account pertaining to period 01.01.2019 to 06.01.2019, 07.01.2019 to 13.01.2019 & 14.01.2019 to 15.01.2019 have been received in this office, wherein huge liabilities of Rs. 12.68 Crore, 15.49 Crore and 12.65 Crore respectively have been imposed on PSPCL on account of UI charges especially zero crossing violations.

Details of UI deviations and zero crossing pertaining to period first three weeks of 2019 (01.01.2019 to 20.01.2019) are as below:-

Punjab Zero crossing Violations (Numbers)		
Date	As per Punjab SCADA	As per SEM
01-01-19	3	8
02-01-19	3	9
03-01-19	4	7
04-01-19	2	7
05-01-19	2	10
06-01-19	3	10
07-01-19	3	8
08-01-19	2	9
09-01-19	0	11
10-01-19	1	6
11-01-19	1	10
12-01-19	3	10
13-01-19	0	9
14-01-19	1	8
15-01-19	0	9

16-01-19	1	7
17-01-19	3	13
18-01-19	1	7
19-01-19	1	5
20-01-19	1	4
TOTAL	35	167

Date	UI as per SEM (LUs)	UI as per SCADA (LUs)	%age error
01-01-19	16.32883	-4.35	126.64
02-01-19	14.86781	-8.03	154.009
03-01-19	16.13114	-6.25	138.745
04-01-19	19.09439	-1.73	109.06
05-01-19	18.3767	-0.58	103.156
06-01-19	23.01698	2.64	88.5302
07-01-19	21.34382	-0.312	101.462
08-01-19	21.49816	-1.01	104.698
09-01-19	23.67434	3.66	84.5402
10-01-19	16.79796	-5.51	132.802
11-01-19	8.57013	-2.94	134.305
12-01-19	17.56332	-2.87	116.341
13-01-19	21.52842	3.12	85.5075
14-01-19	19.17996	1.61	91.6058
15-01-19	19.70282	3.68	81.3225
16-01-19	22.3116	-2.19	109.816
17-01-19	42.20615	-2.71	106.421
18-01-19	11.3696	-3.36	129.552
19-01-19	13.25292	-2.1	115.846
20-01-19	-1.08125	-3.5	-223.699
Total	365.7338	-32.732	108.95

From the perusal of the data, it has been noticed that there are only 35 nos. zero crossing violations as per Punjab SCADA data but as per SEM data (from 01.01.2019 to 20.01.2019), it actually turned out to be 167 in Nos, which implies that there is total mismatch between SEM & Punjab SCADA data. Further according to the UI account for 3 weeks, for a net deviation of 365.7338 LUs, the total financial implication is to the tune of Rs. 40.82 crore to PSPCL for first 3 weeks of 2019. Although as per Punjab SCADA data, PSPCL has surrendered 32.732 LUs energy for above said period (against 365.7338 LUs of overdrawl as per SEM) of 3 weeks . Such huge difference in actual data is also threat to grid security and stability as all operations of load/generation management are being done on the basis of SCADA data, which is not as per real system data.

Further NRLDC revises Punjab schedule with retrospective effect, number of times in a day causing mismatch of real time SCADA and SEM data leading to mismatch of zero crossing and UI deviations of Discom. Details of retrospective rescheduling of power by NRLDC from 14.01.2019 to 20.01.2019 is attached herewith as Annexure-2. For instance on 03.02.2019 Punjab schedule was increased by 100 MW

(from 00:00 Hrs) with retrospective effect at 09:14 hrs vide revision no. 42 on 03.02.2019 as STOA details showed export of 100 MW to Tamil Nadu, which was actually non-existent.

Limitations and difficulties of Discom :-

1. From the above, it is well established that there is a gross mismatch between SEM and SCADA data leading to undue financial loss to PSPCL
2. In real time utility is forced to overdraw at low frequency and under-draw at high frequency for sign reversal leading to financial loss and also endanger us grid security and stability.
3. For deviation sign reversal, the generation of IPPs is regulated (up/down), while the IPPs are contending that they also have to do sign reversal and sometimes they are in the process of over-injection while the requirement of the buyer is for under-injection and vice versa. In view of such conflicting requirement, implementation of sign reversal needs to be reviewed.

Proposals:-

1. Punjab SLDC and PGCIL have failed to provide reliable and accurate SCADA data even after the long persuasions and follow ups and their failure to fulfill their obligations is leading to recurring commercial loss of PSPCL. Therefore, it is suggested that UI deviation liabilities incurred by PSPCL due to implementation of CERC's fourth amendment of DSM be shared by Punjab SLDC and PGCIL else PSPCL will be constrained to stop payment of UI charges raised against these violations due to non fulfillment of obligations by PBSLDC and PGCIL.
2. NRLDC should take prompt action to avoid any change in implementation of schedule so that zero crossing and UI deviations may be minimized in real time operation. Further retrospective implemented schedule should not be taken into consideration while preparing final UI account of utility.
3. The sign reversal requirements of CERC's 4th amendment to DSM needs to be suspended till the time accurate/ live SEM data is made available for operation by the System Operator. It is not justified to impose violation penalties on this account, as even a minor inaccuracy between SEM and SCADA data (SCADA data is invariably not matching with SEM data) shall lead to violation even though the System Operator has made sign reversal based on available SCADA data.

Members may deliberate.

AA. 2 Augmentation of Transformation capacity at Tanakpur (agenda based on letter from PSPA-II)

Chief Engineer, PSPA-II, CEA vide letter dated 07.02.2019 has intimated that in the 6th Meeting of the Joint Steering Committee (JSC) on Nepal - India Cooperation in Power Sector held on 24th January, 2019 in Pokhara, Nepal, the issue of augmentation of 50 MVA, 220/132kV transformer at Tanakpur with 220/132 kV transformer was discussed and the following was agreed

“Indian side stated that the existing 50 MVA transformer would be replaced with 100 MVA transformer by NHPC and the charges of the same would be recovered from NEA as per CERC Regulations. It was also agreed that available spare 220/132 kV, 100 MVA transformer in the Northern Region of India could be installed at Tanakpur by the end of March, 2019 as an interim arrangement. Necessary action in this regard would be taken by CEA and POWERGRID.”

3. POWERGRID had informed that a spare transformer is available at 220kV Sitarganj sub-station of POWERGRID with the following details

Rating: 220/132kV, 100MVA 3 Phase

Year of Manufacturing: 2006

Year of commissioning at Raebareli: 2007

Presently available at Sitarganj

Condition of the transformer: Good

4. Since, the spare transformer is meant for the Northern Region constituents, the consent of the Northern Region constituents for installing available spare 220/132kV, 100MVA transformer from Sitarganj sub-station to Tanakpur sub-station as an interim arrangement is necessary. POWERGRID may brief about conditions if any, for such shifting.

POWERGRID to intimate and members may deliberate.

DIFFERENCE BETWEEN SCADA UI AND SEM UI DUE TO NON AVAILABILITY OF TELEMETRY DATA FOR YEAR 2016-2017					
MONTH	SCADA UI	SCADA UI CHARGES	SEM UI	SEM UI CHARGES	SCADA-SEM UI VARIATION %
	(LU)	(IN CRORES)	(LU)	(IN CRORES)	
Apr-16	-160.55	-2.02	-223.23	4.38	39.04
May-16	57.66	2.69	-848.41	-6.14	1571.40
Jun-16	-64.11	-0.45	-607.59	3.28	847.73
Jul-16	-243.41	0.03	-32.02	12.55	86.84
Aug-16	-44.47	-1.26	-136.98	0.50	208.03
Sep-16	104.05	1.53	56.68	14.58	45.53
Oct-16	-4.03	0.54	-462.78	1.25	11383.33
Nov-16	107.67	4.20	-661.97	-0.35	714.82
Dec-16	18.10	2.86	-994.43	-5.35	5594.07
Jan-17	189.50	5.22	-539.21	-2.50	384.55
Feb-17	115.02	3.22	-136.76	4.22	218.91
Mar-17	7.21	0.79	-790.64	-8.10	11065.89
SUM	82.64	17.34	-5377.34	18.33	
DIFFERENCE BETWEEN SCADA UI AND SEM UI DUE TO NON AVAILABILITY OF TELEMETRY DATA FOR YEAR 2017-2018					
MONTH	SCADA UI	SCADA UI CHARGES	SEM UI	SEM UI CHARGES	SCADA-SEM UI VARIATION %
	(LU)	(IN CRORES)	(LU)	(IN CRORES)	
Apr-17	-83.23	1.04	-530.09	3.58	536.90
May-17	-18.59	1.98	78.90	8.74	524.42
Jun-17	-266.88	-0.37	-383.00	11.02	43.51
Jul-17	-110.90	-0.66	210.00	17.26	289.36
Aug-17	-31.86	-0.83	40.00	3.61	225.55
Sep-17	-16.26	-0.25	31.55	7.69	294.04
Oct-17	-78.03	-0.23	262.08373	10.28	435.88
Nov-17	-84.89	-1.56	-81.64019	1.23	3.83
Dec-17	-29.35	-0.01	60.48762	6.27	306.09
Jan-18	-64.58	-0.98	-48.13178	9	25.47
Feb-18	-10.34	1.62	-174.57	0.68	1588.3
Mar-18	-88.35	-0.34	33.87	6.26	138.34
SUM	-883.26	-0.59	-500.54	85.62	
DIFFERENCE BETWEEN SCADA UI AND SEM UI DUE TO NON AVAILABILITY OF TELEMETRY DATA FOR YEAR 2018-2019					
MONTH	SCADA UI	SCADA UI CHARGES	SEM UI	SEM UI CHARGES	SCADA-SEM UI VARIATION %
	(LU)	(IN CRORES)	(LU)	(IN CRORES)	
Apr-18	-118.37	-1.36	64.35	5.45	154.37
May-18	-349.54	-5.87	1.55	6.52	100.44
Jun-18	-456.65	-2.16	-538.86	-1.64	18
Jul-18	-419.06	-3.76	-283.99	-0.52	32.23
Aug-18	-188.2	-2.34	-188.12	-2.04	0.04
Sep-18	-290.95	-3.47	-172.10914	-0.65	40.85
Oct-18	-143.37	-0.85	186.82	8.07	230
Nov-18	-62.75	0.51	-8.77	4.83	86
Dec-18	-85.2	0.27	82.83	5.24	197
SUM	-2114.09	-19.03	-856.31	25.26	

Difference in schedule

TIME	14.01.2019			15.01.2019			16.01.2019			17.01.2019			18.01.2019			19.01.2019			20.01.2019		
	Central schedule from Director's sheet	Schedule as per NR/LDC last Rev-82, Dated-28-01-2019 at 11:34	Difference	Central schedule from Director's sheet	Schedule as per NR/LDC last Rev-87, Dated-28-01-2019 at 16:09	Difference	Central schedule from Director's sheet	Schedule as per NR/LDC last Rev-81, Dated-28-01-2019 at 16:10	Difference	Central schedule from Director's sheet	Schedule as per NR/LDC last Rev-90, Dated-28-01-2019 at 16:13	Difference	Central schedule from Director's sheet	Schedule as per NR/LDC last Rev-82, Dated-28-01-2019 at 16:13	Difference	Central schedule from Director's sheet	Schedule as per NR/LDC last Rev-81, Dated-28-01-2019 at 16:15	Difference	Central schedule from Director's sheet	Schedule as per NR/LDC last Rev-76, Dated-28-01-2019 at 16:39	Difference
0000-0015	1029	912	117	1151	1152	-1	1168	1174	-6	1074	1074	0	1098	1103	-5	1509	1509	0	1380	1380	0
0015-0030	967	909	58	1151	1152	-1	1168	1174	-6	1063	1063	0	1098	1102	-4	1510	1510	0	1378	1378	0
0030-0045	908	909	-1	1150	1150	0	1116	1121	-5	1069	1069	0	1084	1089	-5	1162	1440	-278	1378	1378	0
0045-0100	908	909	-1	1169	1170	-1	1116	1121	-5	1061	1061	0	1107	1111	-4	1162	1441	-279	1393	1393	0
0100-0115	905	906	-1	1118	1118	0	1115	1121	-6	1065	1065	0	1111	1116	-5	1040	1115	-75	1243	1243	0
0115-0130	964	906	58	1124	1125	-1	1115	1121	-6	1063	1063	0	1108	1113	-5	1070	1052	18	1243	1118	125
0130-0145	964	906	58	1124	1124	0	1113	1119	-6	1060	1060	0	1105	1110	-5	1105	1087	18	1243	1106	137
0145-0200	964	906	58	1071	1072	-1	1115	1121	-6	1068	1068	0	1108	1113	-5	1112	1094	18	1243	1039	204
0200-0215	966	908	58	1067	1068	-1	1123	1128	-5	1086	1086	0	1052	1057	-5	1113	1153	-40	1243	1041	202
0215-0230	964	906	58	1067	1067	0	1071	1076	-5	1085	1085	0	1064	1069	-5	1112	1212	-100	1243	1041	202
0230-0245	945	887	58	1064	1065	-1	1074	1079	-5	1033	1033	0	1059	1064	-5	1288	1270	18	1243	1058	185
0245-0300	893	835	58	1085	1085	0	1073	1078	-5	1040	1040	0	1063	1068	-5	1298	1280	18	1243	1058	185
0300-0315	894	836	58	1085	1086	-1	1074	1079	-5	1039	1039	0	1065	1069	-4	1301	1283	18	1243	1059	184
0315-0330	893	835	58	1085	1085	0	1073	1078	-5	1040	1040	0	1060	1065	-5	1299	1281	18	1243	1057	186
0330-0345	899	841	58	1094	1095	-1	1071	1077	-6	1038	1038	0	1070	1075	-5	1298	1280	18	1243	1117	126
0345-0400	901	843	58	1085	1086	-1	1073	1079	-6	1038	1038	0	1084	1089	-5	1298	1280	18	1243	1176	67
0400-0415	999	941	58	1184	1184	0	1194	1200	-6	1144	1144	0	1193	1198	-5	1287	1287	0	1243	1249	-6
0415-0430	1134	1008	126	1209	1209	0	1204	1210	-6	1149	1149	0	1191	1196	-5	1272	1272	0	1247	1247	0
0430-0445	1145	1078	67	1218	1219	-1	1204	1209	-5	1285	1285	0	1215	1220	-5	1279	1279	0	1247	1246	1
0445-0500	1159	1159	0	1218	1219	-1	1221	1227	-6	1309	1309	0	1241	1246	-5	1275	1275	0	1268	1268	0
0500-0515	1346	1347	-1	1330	1331	-1	1338	1344	-6	1435	1435	0	1391	1396	-5	1327	1327	0	1459	1459	0
0515-0530	1527	1527	0	1484	1484	0	1525	1531	-6	1606	1606	0	1542	1547	-5	1481	1481	0	1625	1625	0
0530-0545	1780	1781	-1	1781	1781	0	1731	1736	-5	1808	1808	0	1757	1761	-4	1654	1654	0	1874	1874	0
0545-0600	2089	2070	19	2059	2059	0	2014	2019	-5	2089	2089	0	2028	2030	-2	1941	1941	0	2167	2167	0
0600-0615	2069	2070	-1	2079	2079	0	1994	1999	-5	2139	2139	0	2063	2068	-5	1978	1978	0	2157	2079	78
0615-0630	2113	2114	-1	2143	2143	0	2043	2048	-5	2223	2223	0	2123	2128	-5	2037	2037	0	2160	2160	0
0630-0645	2161	2162	-1	2181	2181	0	2086	2091	-5	2273	2273	0	2202	2206	-4	2081	2081	0	2160	2209	-49
0645-0700	2161	2161	0	2183	2183	0	2073	2078	-5	2241	2241	0	2185	2190	-5	2052	2052	0	2160	2186	-36
0700-0715	2231	2234	-3	2038	2038	0	2085	2091	-6	1967	1967	0	2175	2180	-5	1829	1829	0	2184	2184	0
0715-0730	2201	2202	-1	2005	2006	-1	2077	2084	-7	1935	1935	0	2125	2130	-5	1807	1807	0	2150	2150	0
0730-0745	2039	2040	-1	2016	2017	-1	1890	1895	-5	1714	1714	0	1968	1973	-5	1904	1904	0	1947	1947	0
0745-0800	1846	1847	-1	1878	1879	-1	1709	1715	-6	1502	1502	0	1809	1814	-5	1697	1697	0	1795	1795	0
0800-0815	1706	1706	0	1760	1761	-1	1631	1637	-6	1557	1555	2	1707	1712	-5	1590	1590	0	1674	1674	0
0815-0830	1561	1562	-1	1647	1648	-1	1621	1626	-5	1537	1537	0	1683	1688	-5	1545	1545	0	1613	1613	0
0830-0845	1472	1473	-1	1667	1668	-1	1602	1608	-6	1479	1479	0	1682	1686	-4	1526	1526	0	1596	1596	0
0845-0900	1447	1447	0	1654	1654	0	1612	1617	-5	1489	1489	0	1650	1655	-5	1553	1553	0	1517	1517	0
0900-0915	1363	1364	-1	1527	1528	-1	1487	1492	-5	1497	1497	0	1503	1508	-5	1518	1518	0	1473	1473	0
0915-0930	1384	1384	0	1506	1507	-1	1412	1417	-5	1493	1493	0	1445	1450	-5	1469	1469	0	1419	1419	0
0930-0945	1354	1355	-1	1504	1504	0	1318	1324	-6	1447	1447	0	1376	1381	-5	1357	1357	0	1407	1407	0
0945-1000	1358	1358	0	1507	1508	-1	1282	1288	-6	1364	1364	0	1372	1377	-5	1295	1295	0	1402	1402	0
1000-1015	1297	1297	0	1367	1368	-1	1298	1288	10	1313	1313	0	1368	1372	-4	1240	1240	0	1319	1319	0
1015-1030	1298	1298	0	1330	1330	0	1278	1283	-5	1319	1319	0	1370	1375	-5	1234	1234	0	1279	1279	0
1030-1045	1298	1299	-1	1335	1326	9	1251	1256	-5	1331	1331	0	1353	1358	-5	1238	1238	0	1282	1282	0
1045-1100	1269	1270	-1	1323	1323	0	1255	1260	-5	1333	1333	0	1350	1355	-5	1240	1240	0	1284	1284	0
1100-1115	1233	1234	-1	1241	1241	0	1180	1185	-5	1295	1295	0	1252	1257	-5	1188	1188	0	1221	1221	0
1115-1130	1221	1222	-1	1242	1243	-1	1196	1202	-6	1282	1282	0	1253	1258	-5	1170	1170	0	1224	1224	0
1130-1145	1223	1224	-1	1247	1248	-1	1200	1206	-6	1270	1270	0	1262	1267	-5	1168	1168	0	1217	1217	0
1145-1200	1224	1225	-1	1245	1245	0	1201	1206	-5	1275	1275	0	1264	1269	-5	1169	1169	0	1226	1226	0
1200-1215	1225	1226	-1	1032	1033	-1	1218	1224	-6	1274	1274	0	1259	1264	-5	1166	1166	0	1208	1208	0
1215-1230	1227	1228	-1	1034	1035	-1	1218	1223	-5	1275	1263	12	1262	1267	-5	1149	1149	0	1190	1190	0
1230-1245	1224	1225	-1	1035	1036	-1	1218	1224	-6	1263	1263	0	1243	1248	-5	1168	1168	0	1166	1166	0
1245-1300	1219	1220	-1	1036	1037	-1	1218	1223	-5	1247	1247	0	1245	1249	-4	1159	1168	-9	1166	1166	0
1300-1315	1227	1227	0	1240	1241	-1	1220	1225	-5	1240	1240	0	1231	1236	-5	1153	1153	0	1152	1152	0
1315-1330	1226	1227	-1	1241	1241	0	1214	1219	-5	1239	1239	0	1231	1236	-5	1154	1154	0	1149	1149	0
1330-1345	1231	1232	-1	1229	1230	-1	1222	1227	-5	1252	1252	0	1189	1193	-4	1165	1165	0	1161	1161	0
1345-1400	1231	1231	0	1249	1249	0	1231	1237	-6	1263	1263	0	1181	1186	-5	1162	1162	0	1172	1172	0
1400-1415	1249	1249	0	1248	1249	-1	1218	1224	-6	1258	1258	0	1165	1170	-5	1161	1161	0	1171	1168	3
1415-1430	1264	1265	-1	1247	1248	-1	1217	1223	-6	1256	1256	0	1165	1169	-4	1173	1173	0	1160	1160	0
1430-1445	1251	1251	0	1246	1246	0	1232	1237	-5	1255	1255	0	1177	1181	-4	1172	1172	0	1178	1178	0
1445-1500	1249	1249	0	1249	1249	0	1243	1249	-6	1279	1279	0	1191	1196	-5	1184	1184	0	1182	1182	0
1500-1515	1245	1246	-1	1258	1259	-1	1237	1243	-6	1279	1292	-13	1199	1204	-5	1244	1244	0	1159	1159	0
1515-1530	1261	1262	-1	1278	1279	-1	1235	1241	-6	1279	1297	-18	1194	1199	-5	1259	1259	0	1167	1167	0