

State Load Despatch Center, Airoli (MSETCL) Statement I
Daily system Report for 17/Aug/2023 THURSDAY

I GENERATION (MUs)			II EXCHANGES (MUs)		
A) MSPGCL	Daily	Monthly	E) InterState Exchanges	Daily	Monthly
1) Thermal	118.643	2196.955	1) Gujrat	14.308	204.804
2) Hydro	28.771	258.495	2) Madhya Pradesh	7.670	125.745
3) Gas	2.405	7.070	3) Chattisgarh	1.350	28.660
Total MSPGCL	149.819	2462.520	4) Maharashtra	186.165	2710.296
B) 1) APLM	55.551	940.787	5) Goa (Amona)	-1.755	-27.042
2) JSWEL	21.628	243.355	Total	207.738	3042.463
3) VIPL	0.000	0.000	a) Mumbai Schedule	29.623	540.682
4) RPL(AMT)	29.820	460.416	b) Mumbai Drawl	32.868	602.917
5) SWPGPL	11.408	153.319	c) MSEDCL Bilateral *	106.001	1541.339
6) Other IPP	5.528	97.153	Include PX	0.000	0.000
7) PGPL	0.000	0.000	d) Mumbai Bilateral *	29.623	540.682
C) 1) TPCL Thermal	15.039	196.476	Include PX	0.000	0.000
2) TPCL Hydro	7.489	92.069	Standby	0.000	0.000
3) TPCL Gas	2.956	49.877	H) ENERGY CATERED (MUs)		
4) AEML Thermal	10.501	158.396	1) MSEDCL	485.756	7592.753
D) STATE			2) Mumbai Discoms	68.853	1099.735
1) Thermal	268.118	4446.857	3) Other Discoms	10.251	169.337
(A1+C1+C4+(B1-B6))			TOTAL STATE	564.860	8861.825
2) Hydro (A2+C2)	36.260	350.564			
3) Gas (A3+B7+C3)	5.361	56.947			
4) Wind	33.331	767.091			
6) SOLAR	14.052	197.903			
TOTAL STATE	357.122	5819.362			

* Displayed for information, not added in total.

DETAILS OF MAHARASHTRA STATE PEAK DEMAND(MW) Statement II

PARTICULARS	A. Morning Peak at 12 Hrs	B. Day Peak at 13 Hrs	C. Evening Peak at 20 Hrs	D. Night Minimum at 1 Hrs
MSPGCL Thermal	4939	4952	4695	5116
MSPGCL Hydro	1019	831	1555	1086
MSPGCL Gas	10	0	183	10
MSPGCL Total Generation	5968	5783	6433	6212
Central Sector Receipt	10696	10508	7995	6481
WIND	932	966	1691	1489
CPP / IPP Thermal	5405	5383	4939	5383
CPP / IPP Gas	0	0	0	0
SOLAR	1727	1813	1	0
Exchange with Mumbai	-2073	-1942	-1311	-962
MSEDCL DEMAND MET	22195	22065	19275	18221
Load Shedding	0	0	2344	0
MSEDCL DEMAND	22195	22065	21619	18221
TPCL GENERATION	898	951	1270	1121
AEML GENERATION	430	467	498	481
MUMBAI DEMAND	3401	3360	3079	2564
OTHER DISCOM DEMAND	460	446	473	382
STATE DEMAND MET	26056	25871	22827	21167
STATE DEMAND	26056	25871	25171	21167
Frequency (Hz)	50.07	50.04	50.04	50.00

FREQUENCY PARTICULARS

MAXIMUM FREQ.	MINIMUM FREQ.	AVERAGE FREQ.	FREQ. BELOW 49.4 Hz
50.19 Hz at 12:02 Hrs	49.84 Hz at 07:50 Hrs	50.02	0 % of Time(min)

Note : The report is based on Operational Data and is for statistical purpose only.

Daily and Progressive Generation,Maximum,Minimum for 17/Aug/2023

Generating unit	Generation			
	Daily (Mus)	Monthly (Mus)	Max (MW)	Min (MW)
Koradi				
Unit 6	3.64	53.89	170	135
Unit 8	8.72	218.98	620	0
Unit 9	12.97	208.76	550	533
Unit 10	0.00	0.00	0	0
Total	25.34	481.63		
Bhusawal				
Unit 3	3.21	51.54	145	125
Unit 4	10.71	120.50	480	400
Unit 5	0.08	154.17	78	0
Total	14.00	326.21		
Parli				
Unit 6	5.21	42.46	250	173
Unit 7	4.00	41.75	248	97
Unit 8	3.56	42.18	155	141
Total	12.77	126.39		
Chandrapur				
Unit 3	3.40	50.56	157	120
Unit 4	0.00	0.00	0	0
Unit 5	0.00	0.00	0	0
Unit 6	0.00	102.86	0	0
Unit 7	7.18	123.17	326	275
Unit 8	10.46	174.50	459	408
Unit 9	10.33	173.08	476	367
Total	31.37	624.17		
Paras				
Unit 3	0.00	72.39	0	0
Unit 4	4.76	75.85	217	153
Total	4.76	148.24		
Khaparkheda				
Unit 1	2.23	35.46	120	75
Unit 2	2.52	45.02	125	60
Unit 3	3.55	63.28	159	132
Unit 4	4.14	66.33	182	160
Unit 5	10.25	163.96	445	381
Total	22.69	374.04		
Nasik				
Unit 3	0.00	46.24	0	0
Unit 4	3.91	45.36	181	147
Unit 5	3.81	24.68	169	151
Total	7.72	116.28		
Uran				
All Units	2.40	7.07	185	0
Total	2.40	7.07		
PGPL				
Unit 1	0.00	0.00	0	0
Unit 2	0.00	0.00	0	0
Total	0.00	0.00		
PENCH (MS)				
Pench (MS)	0.69	14.72	51	0
Total	0.69	14.72		
Koyna				
Stage 1-2	5.16	50.04	365	30

Generating unit	Generation			
	Daily (Mus)	Monthly (Mus)	Max (MW)	Min (MW)
Stage 4	14.61	70.41	753	200
Stage 3	3.96	30.04	240	0
Total	23.72	150.50		
Hydro				
KDPH	0.00	7.15	0	0
VTRNA	0.00	0.61	0	0
TILLARI	0.00	1.62	0	0
BHIRA T.R.	0.46	7.55	80	0
SMLHY_PTN	3.90	71.25	165	157
GHATGHAR	0.00	5.10	0	0
Total	4.36	93.28		
Wind				
Total	33.33	767.09	0	0
Total	33.33	767.09		
CPP				
APML(Mus)	55.55	940.79	0	0
JSWEL(Mus)	21.63	243.36	0	0
VIPL(Mus)	0.00	0.00	0	0
RPLAMT-Mus	29.82	460.42	0	0
SWPGPL-Mus	11.41	153.32	0	0
Dhariwal	0.00	0.00	0	0
IEPL	4.45	80.04	263	0
Other(Mus)	1.08	17.12	0	0
Total	123.94	1895.03		
SOLAR				
Total	14.05	197.90	0	0
Total	14.05	197.90		
Tata				
Trombay 5	10.05	129.75	456	290
Trombay 6	0.00	0.00	0	0
Trombay 7A	1.77	29.68	107	39
Trombay 7B	1.19	20.20	63	35
TATA Hydro	7.49	92.07	434	169
Trombay 8	4.99	66.73	219	166
Total	25.48	338.42		
AEML				
DTPS U-1&2	10.50	158.40	501	330
Total	10.50	158.40		

* Infirm Power			Summary			Summary		
Particulars	Daily (Mus)	Monthly	Particulars	Daily (Mus)	Monthly (Mus)	Particulars	Daily (Mus)	Monthly (Mus)
			MSPGCL Thermal	118.64	2196.96	MSPGCL Total	149.82	2462.52
			MSPGCL Thml+Gas	121.05	2204.02	Koyna 1,2 & 4 Total	19.76	120.46
			MSPGCL Hydro	28.77	258.50	State Total	357.12	5819.36

State Load Despatch Center,Airoli (MSETCL)

Annexure-2

Hourly Load Data As on 17/Aug/2023

TIME SR. NO.	MSPGCL GEN.			TOTAL	WIND	CPP / IPP		SOLAR	CS SHARE	CS RECPT	Mum. NET EXCH.	MSEDC L DEM. MET	Load Shedding		MSEDC L DEM. WITH LS	MUMBAI DEMAND	OTHER DISCOM DEMAND	STATE DEMAND	FREQ. (Hz)
	THM	HY	GAS			THM	GAS						Planned	*Transmission Constraint					
1	5116	1086	10	6212	1489	5383	0	0	6681	6481	-962	18221	0	0	18221	2564	382	21167	50.00
2	5019	1309	0	6328	1486	5367	0	0	6743	6875	-866	18831	0	0	18831	2369	359	21559	50.01
3	5041	1323	0	6364	1466	5358	0	0	6933	6883	-792	18946	0	0	18946	2225	333	21504	50.04
4	5088	1050	12	6150	1425	5349	0	0	7216	7179	-771	18989	0	0	18989	2156	343	21488	50.04
5	5134	998	67	6199	1309	5348	0	0	7687	7491	-755	19247	0	0	19247	2134	345	21726	50.01
6	5160	1195	158	6513	1258	5343	0	3	8222	8360	-784	20317	50	0	20367	2244	376	22987	49.98
7	5192	1435	164	6791	1161	5331	0	50	8597	8731	-884	20793	742	0	21535	2375	387	24297	49.99
8	5157	1517	167	6841	896	5360	0	415	9169	9207	-1147	21148	56	0	21204	2574	424	24202	50.02
9	5163	987	164	6314	947	5357	0	983	9803	10008	-1572	21585	0	0	21585	2916	452	24953	49.97
10	5177	552	159	5888	1057	5432	0	1439	10434	10348	-1959	21738	0	0	21738	3210	467	25415	49.96
11	5059	626	144	5829	994	5362	0	1728	10698	10810	-2089	22176	0	0	22176	3374	458	26008	50.07
12	4939	1019	10	5968	932	5405	0	1727	10533	10696	-2073	22195	0	0	22195	3401	460	26056	50.07
13	4952	831	0	5783	966	5383	0	1813	10496	10508	-1942	22065	0	0	22065	3360	446	25871	50.04
14	5097	715	0	5812	1142	5184	0	1727	10471	10431	-2149	21693	0	0	21693	3220	454	25367	50.01
15	5063	1168	0	6231	1431	4946	0	1563	9997	9934	-1965	21693	0	0	21693	3279	447	25419	50.02
16	4945	1487	4	6436	1588	4827	0	1240	9866	9935	-1773	21784	98	0	21882	3338	469	25689	50.02
17	4640	1114	69	5823	2053	4851	0	908	9629	9281	-1687	20748	437	0	21185	3316	481	24982	49.99
18	4580	1394	180	6154	2108	4879	0	382	8712	8517	-1541	20036	91	0	20127	3231	463	23821	50.01
19	4600	1573	182	6355	1741	4933	0	73	8230	8611	-1384	19851	636	0	20487	3152	478	24117	50.03
20	4695	1555	183	6433	1691	4939	0	1	8014	7995	-1311	19275	2344	0	21619	3079	473	25171	50.04
21	4716	1266	185	6167	1555	4946	0	0	7680	7487	-1225	18464	1724	0	20188	2977	466	23631	50.07
22	4715	1596	184	6495	1565	4944	0	0	7533	7575	-1123	19008	874	0	19882	2851	448	23181	50.02
23	4695	1560	184	6439	1482	4920	0	0	7347	7241	-1074	18581	738	0	19319	2783	427	22529	50.03
24	4700	1415	179	6294	1589	4788	0	0	7362	7154	-1040	18373	536	0	18909	2725	412	22046	50.04
MUs	118.64	28.77	2.40	149.82	33.33	123.94	0.00	14.05	208.05	207.74	-32.87	485.76	8.33	0.00	494.08	68.85	10.25	573.19	50.02

NOTE : ALL VALUES IN MW

Mumbai Net Exch is shown with reference to MSETCL system and (-) sign indicates MSETCL periphery to Mumbai system.

*Load Shedding due to Transmission Constraint :-

State Load Despatch Center,Airoli (MSETCL) Statement-VI
Details of Generating Unit Outages/Trippings for 17/Aug/2023

Position as on 6.30 Hrs of 18/Aug/2023

Generating Company	Name of Generating Unit	Capacity	Tripped Date	Tripped Time	Sync.Date	Sync. Time	Reason of Outage	Expected Date
PLANNED OUTAGE								
MSPGCL	Koyna Unit 11	80	10/07/2023	09:40		Continued.	COH	07/12/2023
MSPGCL	Koradi Unit-10	660	11/07/2023	00:45		Continued.	Capital Overhaul.	27/08/2023
MSPGCL	Koyna Unit 8	80	11/07/2023	08:05		Continued.	COH	23/09/2023
MSPGCL	Chandrapur Unit 4	210	27/07/2023	03:00		Continued.	OVERHAUL	25/08/2023
IPP	Adani U-4	660	12/08/2023	23:44		Continued.	Annual Overhaul	05/09/2023
FORCED OUTAGE								
PGPL	PGPL U1	262	07/02/2017	17.30		Continued.	No Schedule (NO PPA)	
PGPL	PGPL U2	126	07/02/2017	17.30		Continued.	No Schedule.(NO PPA)	
IPP	VIPL U-1	300	29/12/2018	00.30		Continued.	Coal Shortage. (NO PPA From 20.05.2019)	
IPP	VIPL U-2	300	17/01/2019	00.15		Continued.	Coal shortage.(NO PPA From 20.05.2019)	
CENT.SECTOR	Tarapur 1	160	08/01/2020	10:37		Continued.	Refueling. While refueling preparation, some repair works identified which are being executed before refueling.	01/04/2024
CENT.SECTOR	Tarapur 2	160	13/07/2020	04:38		Continued.	For cleaning of clogged basket strainer of cooling water system due to heavy ingress of debris from sea. The outage extended for repair and re-fueling.	01/05/2024
MSPGCL	Ghatghar Unit-1	125	20/04/2022	00:35		Continued.	Stator Earth Fault	08/11/2023
MSPGCL	Uran Unit A0	120	07/09/2022	16:30		Continued.	TURBINE TRIPPED ON HIGH VIBRATIONS	23/08/2023
MSPGCL	Uran Unit 5	108	12/11/2022	13:23		Continued.	Major overhauled.	05/10/2023
MSPGCL	Chandrapur Unit 5	500	22/05/2023	19:00		Continued.	COH (Hot spot on Stator).	13/09/2023
MSPGCL	Koyna STG-IV Unit-1	250	05/06/2023	16:30		Continued.	The KGSC Stg-4 Unit No-1(250MW) not available due to foreign material impact at Guide vane no 4	18/09/2023
MSPGCL	Uran Unit B0	120	24/06/2023	19:01		Continued.	On RR end bearing high vibrations	20/08/2023
IPP	JSW (J) U1	300	02/08/2023	06:42		Continued.	Condenser cooling water problem heavy leakage	19/08/2023
MSPGCL	Koyna Unit 7	80	13/08/2023	09:00		Continued.	Spherical Valve maintenance	02/09/2023
MSPGCL	Nasik Unit 3	210	13/08/2023	16:00		Continued.	Boiler Tube Leakage (Tolling from 15:00 hrs on Dt 14.08.2023.)	
MSPGCL	Chandrapur Unit 6	500	14/08/2023	06:30		Continued.	BTL	19/08/2023
IPP	IEPL Unit 1	270	15/08/2023	01:30	17/08/2023	05:18	Due to Abnormal sound in APH	
MSPGCL	Uran Unit 8	108	15/08/2023	20:07	17/08/2023	03:44	No Schedule	
MSPGCL	Paras Unit 3	250	16/08/2023	10:48		Continued.	Boiler Tube Leakage	19/08/2023
MSPGCL	Bhusawal Unit 5	500	17/08/2023	00:17	18/08/2023	14:50	Boiler Tube Leakage	20/08/2023
MSPGCL	Uran Unit 6	108	17/08/2023	11:00	17/08/2023	15:40	Zero Schedule	
MSPGCL	Uran Unit 8	108	17/08/2023	11:16	17/08/2023	16:24	zero schedule	

State Load Despatch Center,Airoli (MSETCL) Statement-VI
Details of Generating Unit Outages/Trippings for 17/Aug/2023

Position as on 6.30 Hrs of 18/Aug/2023

Generating Company	Name of Generating Unit	Capacity	Tripped Date	Tripped Time	Sync.Date	Sync. Time	Reason of Outage	Expected Date
IPP	Adani U-2	660	17/08/2023	14:30		Continued.	APH A Hot PA bellow leakage.	19/08/2023
MSPGCL	Koradi Unit 8	660	17/08/2023	16:20		Continued.	Boiler Tube Leakage	20/08/2023
MSPGCL	Uran Unit 8	108	17/08/2023	23:17		Continued.	Gas shortage	

State Load Despatch Center, Airoli (MSETCL)
Details of Line outages/Trippings for 17/Aug/2023

Statement-VII

Position as on 6.30 Hrs of 18/Aug/2023

Name of Line	Inter State / Intra State	Tripped Date	Tripped Time	Sync. Date	Sync. Time	Outage Type	Reason of Outage
400 KV TIEBAY Outages/Trippings							
Tie bay (405) of Deepnagar line @ Taptitanda	IntraState	18/08/2023	11:22	18/08/2023	17:33	PO	405 Tie bay 89B isolator B Phase, contacts alignment work.
400 KV TBC Outages/Trippings							
TBC @ NAGOTHANE	IntraState	18/08/2023	11:02			PO	CB replacement work
400 KV MAINBAY Outages/Trippings							
400KV 125MVAR BUS REACTOR MAIN BAY(420) @ 400KV DEEPNAGAR	IntraState	16/08/2023	14:55	17/08/2023	22:00	PO	For low voltage testing on 400 kV 125 MVar Bus Reactor by M/s. CGL Testing Team
SPARE LINE-2 BAY (404) @ TAPTITANDA	IntraState	18/08/2023	11:22	18/08/2023	17:33	PO	To attend 405 bay 89 B Isolator B phase contacts alignment work.
400 KV LINE Outages/Trippings							
TALANDGE - KOLHAPUR (PG) CKT - 2	InterState	20/03/2023	07:49			PO	For reconductoring of Moose conductor with HTLS conductor for sytem improvement. AR to be kept in non Auto mode for 400KV-KOLHAPUR-MS-KOLHAPUR GIS -1
KOLHAPUR - SOLAPUR (PG) CKT - 2	InterState	18/08/2023	01:36	18/08/2023	11:44	T	Tripped on distance protection
BABHALESHWAR - RPL(NSK) CKT - 1	IntraState	01/08/2023	09:21			EO	For attending Oil Leakage Problem of 2Y2 phase Protection CT Of NTPP I (RPL 1)
AURANGABAD(MS) - PUNE (GIS) CKT - 1	IntraState	05/08/2023	10:07			HT	TO CONTROL LINE LOADING OF PUNE GIS
KHADKA-AURANGABAD (WALUJ)	IntraState	16/08/2023	20:11	17/08/2023	09:51	HT	H/T for voltage management
LONIKAND I - CHAKAN	IntraState	17/08/2023	12:04	17/08/2023	18:34	PO	DT Work & Bay Maintenance
KHADKA-AURANGABAD (WALUJ)	IntraState	17/08/2023	19:48	18/08/2023	08:34	HT	HT due to Overvoltage
400 KV ICT Outages/Trippings							
STATION TF No 3 @ CHANDRAPUR GCR	IntraState	01/03/2023	15:07			PO	1) Oil filtration work 2) Testing of Station transformer 3) Preventive maintenance work.
400/220/33 KV 167 MVA SPARE ICT @ KHAPARKHEDA	IntraState	14/07/2023	12:08			PO	Ongoing work of Rapid Restoration Scheme (RRS) For spare ICT
400/220/33 KV 500 MVA ICT - 2 @ JEJURI	IntraState	17/08/2023	17:02	17/08/2023	22:47	PO	For RRS work, Maintenance & Testing work
220 KV LINE Outages/Trippings							
EKLAHARE (OCR) - PADGHE	IntraState	22/07/2023	21:09			HT	As per usual practice line is H/T
AAREY - AEML BORIVALI	IntraState	06/08/2023	18:20			PO	Shifting of 220kv AIS Bay No 9 to New GIS Bay No 18.
AAREY - MSETCL BORIVALI CKT - 2	IntraState	15/08/2023	06:02			T	Tripped on Distance Protection
KALWA - TFIPL	IntraState	16/08/2023	00:27	18/08/2023	08:12	PO	For removing the jumpers at Loc no.40 for making LILO through at 220KV Pawane GIS S/stn.
KOLSHET - ROMA	IntraState	17/08/2023	00:55	17/08/2023	04:48	PO	for safety purpose For launching of Pier cap at location No. P118 (Nr. Patlipada flyover) under 220Kv Kolshet Roma line of Mumbai Metro Rail Project of MMRDA package CA-12.
URAN - ULWE GIS CKT	IntraState	17/08/2023	09:03	17/08/2023	18:15	PO	Replaceemnt of damaged jumper at Loc no. 26, 23,18,44,49,8
TROMBAY DHARAVI - 5	IntraState	17/08/2023	09:37	17/08/2023	20:01	PO	Realy and CVT testing
CHAKAN-MAHINDRA VEHICLE	IntraState	17/08/2023	10:21	17/08/2023	18:47	PO	Replacement of R phase WT to Stub bus Jump, replacement of worn out Hardware at B phase WT by Palm connector and replacement work of R phase 220kV CT by new.

State Load Despatch Center, Airoli (MSETCL)
Details of Line outages/Trippings for 17/Aug/2023

Statement-VII

Position as on 6.30 Hrs of 18/Aug/2023

Name of Line	Inter State / Intra State	Tripped Date	Tripped Time	Sync. Date	Sync. Time	Outage Type	Reason of Outage
BARAMATI - KURKUMBH	IntraState	17/08/2023	10:45	17/08/2023	13:08	PO	Half yearly maintenance of bay equipment's and to remove bird nest from gantry in switchyard
220KV KURUNDA -GIRWALI CKT	IntraState	17/08/2023	11:37	17/08/2023	15:50	PO	Replacement of Disc insulators of LOC no.278 B ph and 292 R ph
KHARGHAR - BORIVALI CKT - 2	IntraState	17/08/2023	23:21	18/08/2023	06:43	HT	For charging of 220KV Kalwa-TFIPL Line.
KHARGHAR - NET MAGIC GIS	IntraState	17/08/2023	23:44	18/08/2023	06:07	HT	For charging of 220KV Kalwa-TFIPL Line.
VITA - GHATNANDRE	IntraState	18/08/2023	01:22	18/08/2023	05:42	HT	Emergency outage to attend heavy sparking
220 KV ICT Outages/Trippings							
220 / 110 / 22KV 250 MVA ICT 1 @ SALSETTE	IntraState	12/10/2020	11:35			T	Tripped due to Grid disturbance.
220/132 KV 100 MVA ICT 1 @ PHALTAN MIDC	IntraState	17/08/2023	09:36	17/08/2023	13:35	PO	ICT Painting Work
220/132 KV 150 MVA ICT 3 @ EKLAHRE (OCR)	IntraState	17/08/2023	10:23	17/08/2023	14:24	PO	CTR Maintenance work
220/132KV 100MVA ICT - 2 @ KALWAN	IntraState	17/08/2023	11:13	17/08/2023	16:55	PO	For Testing work
220/100 KV 200 MVA ICT 1 @ BORIVALI	IntraState	17/08/2023	12:34	17/08/2023	16:58	EO	Oil leakage attending work from B-Phase OLTC Tank of 100 MVA, 220/100 kV ICT-1.
220/132 KV 150 MVA ICT 1 @ SATANA	IntraState	17/08/2023	12:42	17/08/2023	17:13	PO	For Annual Relay Testing
220/22-22 KV 100 MVA PTR 2 @ PARVATI	IntraState	17/08/2023	14:40			PO	EHV CB overhauling work
220/132KV 200MVA ICT 4 @ EKLAHARE (OCR)	IntraState	18/08/2023	10:17	18/08/2023	10:09	PO	CTR maintenance work
220 KV BUSBAR Outages/Trippings							
220KV AUXILLARY BUS @ BAMBHORI	IntraState	26/07/2023	15:03			T	Avoid mal operation of Aux bus zone, Blocking of busbar relay for aux bus zone is required.
132 KV LINE Outages/Trippings							
RISOD-YELDARI	IntraState	20/04/2023	17:57			HT	TO CONTROL LOADING ON RISOD - MALEGAON CKT
KANHAN-PENCH	IntraState	17/08/2023	11:23	17/08/2023	15:14	PO	Routine Maint. Work
110 KV LINE Outages/Trippings							
SALSETTE POWAI	IntraState	27/03/2023	11:04			PO	Replacement of tower number 77 & 78 for TDS project work.

HT : Hand Tripping, T : Tripping, PO : Planned Outage, EO : Emergency Outage