



***Maharashtra State Electricity Transmission
Company Ltd.***

State Load Dispatch Center, Airoli

Daily system Report

for

17/Jul/2014

State Load Dispatch Center, Airoli (MSETCL)
Daily system Report for 17/Jul/2014 THURSDAY

I GENERATION (MUs)			II EXCHANGES (MUs)		
A) MSGENCO	Daily	Monthly	E) Central Sector	Daily	Monthly
1) Thermal	98.946	1811.545	1) Gujrat	-0.834	-16.444
2) Hydro	6.179	86.314	2) Madhya Pradesh	14.104	251.388
3) Gas	9.454	170.162	3) Chattisgarh	5.710	128.830
Total MSGENCO	114.579	2068.021	4) Maharashtra Net	63.063	1394.021
B) 1) JSW JAIGAD	24.426	434.180	(Incl. 765kV Solapur-Raichur)	-3.799	-63.303
2) WPCL	3.940	53.394	5) Goa	-6.408	-109.593
3) ADANI	37.587	765.475	6) TAPS 1&2 Injection	7.306	123.286
4) Other CPP / IPP	16.078	302.861	7) RGPPL Injection	0.000	0.000
5) Wind Generation	38.984	533.166	8) Pench (Excess)	-0.311	-2.322
6) PENCH (MS)	0.311	2.322	# Total Cent. Sector	82.630	1769.166
7) SOLAR	0.789	14.161	F) Other Exchanges		
C) 1) TPCL Thermal	15.257	304.100	1) With TPCL (Excess)	-25.964	-419.614
2) TPCL Hydro	3.019	39.847	G) Bilateral Power *		
TOTAL TPCL	18.276	343.947	1) MSEDCL Bilateral	19.883	572.216
3) REL Thermal	12.205	192.903	Include PX	-3.830	118.227
D) STATE			2) MUMBAI Bilateral	25.208	426.530
1) Thermal (A1+C1+C3)	126.408	2308.548	Include PX	2.177	38.824
2) Hydro (A2+B6+C2)	9.509	128.483	3) MUMBAI Schedule	25.208	435.217
3) Gas (A3)	9.454	170.162	H) ENERGY CATERED (MUs)		
4) Wind (B5)	38.984	533.166	1) MSEDCL	293.360	5523.132
5) CPP/IPP (B1+B2+B3+B4)	82.031	1555.910	2) TPCL	36.090	606.706
6) SOLAR (B7)	0.789	14.161	3) REL	20.353	349.744
TOTAL STATE	267.175	4710.430	TOTAL STATE	349.803	6479.582

DETAILS OF MAHARASHTRA STATE PEAK DEMAND(MW)

PARTICULARS	A. Morning Peak at 11 Hrs	B. Evening Peak at 21 Hrs	C. Night Minimum at 4 Hrs
MSGENCO Thermal	4172	4194	3743
MSGENCO Hydro	423	511	126
MSGENCO Gas	403	401	397
MSGENCO Total Generation	4998	5106	4266
Central Sector Receipt	3957	4237	2806
WIND	1487	1701	1564
CPP / IPP	3668	3501	3061
SOLAR	80	0	0
Exchange with Mumbai	-1381	-1246	-642
MSEDCL DEMAND MET	12809	13349	11055
Load Shedding	55	51	55
MSEDCL DEMAND	12864	13400	11110
TPCL GENERATION	953	765	531
R-INFRA GENERATION	523	521	456
TPCL+R-INFRA DEMAND	2857	2532	1629
STATE DEMAND MET	15666	15881	12684
STATE DEMAND	15721	15932	12739
Frequency (Hz)	49.83	49.99	49.94

FREQUENCY PARTICULARS

MAXIMUM FREQ.	MINIMUM FREQ.	AVERAGE FREQ.	FREQ. BELOW 49.2 Hz
50.24 Hz at 12.57 Hrs	49.7 Hz at 10.07 Hrs	49.97	0 % of Time(min)

* Displayed for information, not added in total. # Total Cent. Sector includes MSEDCL and TPCL bilateral power.

State Load Dispatch Center,Airoli (MSETCL)

Daily and Progressive Generation,Maximum,Minimum,OLC Details for 17/Jul/2014

Generating unit	Generation				OLC (MW)
	Daily (Mus)	Monthly (Mus)	Max (MW)	Min (MW)	
Koradi					
Unit 5	0.00	0.00	0	0	0
Unit 6	3.19	41.54	150	110	130
Unit 7	3.47	63.32	170	120	150
Total	6.66	104.86			280
Bhusawal					
Unit 2	3.40	43.65	155	130	140
Unit 3	0.00	32.23	0	0	0
Unit 4	7.80	145.95	355	305	305
Unit 5	5.95	129.21	310	0	240
Total	17.14	351.04			685
Parli					
Unit 3	0.00	0.00	0	0	0
Unit 4	0.00	0.00	0	0	0
Unit 5	3.79	47.69	166	140	155
Unit 6	4.51	76.17	193	176	175
Unit 7	4.55	76.78	192	180	190
Total	12.84	200.65			520
Chandrapur					
Unit 1	2.83	33.05	128	109	140
Unit 2	3.04	57.52	141	104	150
Unit 3	0.00	41.44	0	0	0
Unit 4	3.96	70.96	182	150	210
Unit 5	9.37	164.30	440	343	450
Unit 6	7.68	149.96	380	240	400
Unit 7	0.00	0.00	0	0	0
Total	26.89	517.23			1350
Paras					
Unit 3	3.96	70.19	200	152	152
Unit 4	0.00	43.12	0	0	0
Total	3.96	113.31			152
Khaparkheda					
Unit 1	3.62	31.11	165	140	160
Unit 2	3.56	61.80	160	140	160
Unit 3	3.60	60.20	165	139	170
Unit 4	3.60	51.52	155	145	170
Unit 5	8.69	147.12	405	345	400
Total	23.07	351.75			1060
Nasik					
Unit 3	0.00	41.57	0	0	0
Unit 4	4.21	65.55	191	165	198
Unit 5	4.17	65.59	183	162	190
Total	8.38	172.71			388
Uran					
All Units	9.45	170.16	403	333	430
Total	9.45	170.16			430
PENCH (MS)					
Pench (MS)	0.31	2.32	50	0	
Total	0.31	2.32			
Koyna					
Stage 1-2	1.30	26.86	175	40	600
Stage 4	0.07	0.70	37	0	250
Stage 3	1.80	13.31	180	0	320
Kovna 12&4 Total	1.37	27.56			850

Generating unit	Generation				OLC (MW)
	Daily (Mus)	Monthly (Mus)	Max (MW)	Min (MW)	
Total	3.17	40.87			1170
Hydro					
KDPH	0.00	4.14	0	0	0
VTRNA	0.74	8.98	61	0	61
TILLARI	0.83	2.21	63	0	0
BHTGR/VEER	0.00	0.00	0	0	0
BHIRA T.R.	0.50	2.27	41	0	40
RNGR+BHTSA	0.00	2.37	0	0	0
BHANDARDRA	0.15	1.56	34	0	0
ELDARY	0.00	0.00	0	0	0
SMLHY PTN	0.08	3.37	10	1	8
GHATGHAR	0.70	20.55	209	0	0
Total	3.01	45.44			109
Wind					
MalharPeth	1.17	15.69			
Vankuswadi	1.14	27.52			
ATIT	0.32	3.96			
Kale	0.95	11.02			
Satara	21.67	247.20			
Shirala	1.49	13.97			
K Mahankal	0.20	1.68			
Supa	0.49	4.42			
Vita	5.37	56.26			
Dondaicha	2.51	96.53			
Sakri	0.46	13.56			
Nandurbar	0.18	10.42			
Khandke	2.05	16.37			
Khaparale	1.00	14.59			
Total	38.98	533.17			
CPP					
JSW JAIGAD	24.43	434.18	1183	950	1089
WARDHA	3.94	53.39	173	134	170
Adani	37.59	765.48	1878	1324	1846
Other CPPs	16.08	292.17			645
Total	82.03	1545.22			3750
SOLAR					
Total	0.79	14.16			
Total	0.79	14.16			
Tata					
Trombay 4	0.00	0.00	0	0	0
Trombay 5	10.61	188.30	501	317	500
Trombay 6	0.00	47.81	0	0	0
Trombay 7A	2.98	42.74	126	123	120
Trombay 7B	1.66	25.25	70	69	60
Trombay 8	0.00	0.00	0	0	0
TATA Hydro	3.02	39.85	303	0	447
Total	18.28	343.95			1127
REL					
1&2	12.20	192.90	524	456	500
Total	12.20	192.90			500
Cent Sect					
Share					4235
Total					4235
MS PG CL	Thermal	98.95	1811.54		4435
	Thml+Gas	108.40	1981.71		4865
	Hydro	6.18	86.31		1279
	Total	114.58	2068.02		6144
State Total		267.18	4710.43		15756

State Load Dispatch Center,Airoli (MSETCL)

Hourly Load Data As on 17/Jul/2014

TIME SR. NO.	MSPGCL GEN.			TOTAL	WIND	CPP / IPP	SOLAR	CS SHARE	CS RECPT	Mum.S CH.	Mum. NET EXCH.	MSEDCL DEM. MET	LOAD SHEDDI NG	MSEDCL DEM. WITH LS	TPCL + R -INFRA DEMAND	STATE DEMAND	FREQ. (Hz)
	THM	HY	GAS														
1	3997	232	399	4628	1569	3264	0	3114	2965	-668	-917	11509	79	11588	1900	13488	49.95
2	3981	155	398	4534	1557	3180	0	2535	2890	-671	-759	11402	55	11457	1726	13183	49.96
3	3797	121	396	4314	1558	3118	0	2723	3040	-707	-686	11344	55	11399	1656	13055	49.99
4	3743	126	397	4266	1564	3061	0	2759	2806	-713	-642	11055	55	11110	1629	12739	49.94
5	3921	131	390	4442	1548	3258	0	2804	2706	-755	-640	11324	55	11379	1637	13016	49.93
6	4066	71	397	4534	1459	3527	0	3445	3196	-792	-650	12089	55	12144	1729	13873	49.99
7	4170	55	395	4620	1538	3623	4	3842	3679	-838	-703	12784	55	12839	1861	14700	49.95
8	4188	132	397	4717	1442	3970	17	3792	3757	-932	-838	13075	55	13130	2042	15172	49.96
9	4198	250	396	4844	1472	3889	39	4011	3841	-1139	-1116	12969	55	13024	2336	15360	49.96
10	4267	314	395	4976	1428	3777	61	4177	3869	-1308	-1271	12840	55	12895	2646	15541	49.83
11	4172	423	403	4998	1487	3668	80	4123	3957	-1424	-1381	12809	55	12864	2857	15721	49.83
12	4146	482	398	5026	1484	3421	76	3974	3800	-1369	-1364	12443	55	12498	2885	15383	49.89
13	4148	474	398	5020	1736	3488	109	3409	3204	-1334	-1363	12194	106	12300	2880	15180	49.99
14	4119	264	395	4778	1870	3427	123	3334	2982	-1335	-1329	11851	51	11902	2808	14710	50.04
15	4224	239	392	4855	1715	3222	112	3362	3386	-1292	-1337	11953	51	12004	2831	14835	49.92
16	4178	297	396	4871	1860	3319	79	3353	3576	-1296	-1374	12331	51	12382	2826	15208	49.94
17	4186	314	394	4894	1835	3310	51	3545	3459	-1271	-1347	12202	51	12253	2787	15040	50.01
18	4214	173	403	4790	1816	3185	35	3432	3290	-1262	-1312	11804	51	11855	2729	14584	50.04
19	4230	365	403	4998	1766	3247	3	3211	3512	-1146	-1315	12216	51	12267	2683	14950	49.95
20	4187	310	400	4897	1553	3243	0	4050	4031	-1156	-1262	12502	51	12553	2630	15183	49.99
21	4194	511	401	5106	1701	3501	0	4006	4237	-1070	-1246	13349	51	13400	2532	15932	49.99
22	4186	447	399	5032	1680	3502	0	3643	3605	-986	-1157	12712	51	12763	2432	15195	50.10
23	4224	190	379	4793	1721	3447	0	3531	3230	-888	-1042	12199	51	12250	2287	14537	50.01
24	4210	103	333	4646	1625	3384	0	3517	3609	-856	-913	12401	51	12452	2116	14568	50.02
MUs	98.95	6.18	9.45	114.58	38.98	82.03	0.79	83.69	82.63	-25.21	-25.96	293.36	1.35	294.71	56.44	351.15	49.97

NOTE : ALL VALUES IN MW

Mumbai Sch./Net Exch is shown with reference to MSETCL System. (+) indicates Mum. to MSETCL and (-) indicates MSETCL to Mum. Mumbai Schedule is calculated for MSETCL periphery (taking 4% loss for import & 4.85% MSETCL loss # Without Applying Load Diversity Factor

State Load Dispatch Center, Airoli (MSETCL)
Details of Generating Unit Outages/Trippings for 17/Jul/2014

Position as on 6.30 Hrs of 18/Jul/2014

Name of Generating Unit	Capacity	Tripped Date	Tripped Time	Sync.Date	Sync. Time	Reason of Outage	Expected Date
PLANNED OUTAGE							
Parli Unit 3	210	13/02/2013	23.50		Continued.	Water Shortage	
Chandrapur Unit 7	500	19/06/2014	06.00		Continued.	A/OH.	
Koyna ST - IV 3	250	07/07/2014	09.00		Continued.	Annual Overhaul	23/08/2014
Nasik Unit 3	210	10/07/2014	14.10		Continued.	A/OH.	
Koyna Unit 7	80	17/07/2014	07.10		Continued.	AOH.	26/07/2014
FORCED OUTAGE							
Dabhol 1B	230	28/05/2013	22.02		Continued.	Gas shortage.	
Dabhol 3A	230	06/06/2013	08.28		Continued.	Gas Shortage	
Dabhol 2A	230	06/06/2013	09.10		Continued.	Gas Shortage	
Dabhol 1X	290	27/06/2013	21.46		Continued.	Gas Shortage	
Dabhol 1A	230	27/06/2013	21.47		Continued.	Gas Shortage	
Dabhol 2X	290	15/07/2013	15.09		Continued.	Gas Shortage	
Dabhol 2B	230	08/08/2013	15.03		Continued.	Gas Shortage	
Dabhol 3X	290	29/12/2013	05.47		Continued.	Gas Shortage	
Dabhol 3B	230	29/12/2013	06.14		Continued.	Gas Shortage	
Tata Trombay 8	250	09/01/2014	22.54		Continued.	Emergency H/T, Fire at turbine track.	
CPP WPCL U-1	135	30/01/2014	12.45		Continued.	turbine vibration	
CPP WPCL U-2	135	18/02/2014	00.02		Continued.	Ash Conveying problem	
CPP Dhariwal	300	28/05/2014	02.27		Continued.	PA Fan Vibration Problem. (U-1).	
Koradi Unit 5	200	17/06/2014	11.53		Continued.	I D Fan Bearing Temperature High.	
CPP IPL U-1	270	26/06/2014	05.46		Continued.	Coal Shortage.	
Parli Unit 4	210	29/06/2014	10.19		Continued.	Coal Shortage	
CPP Adani U-4	660	10/07/2014	11.32		Continued.	Depletion in coal stock.	
Bhusawal Unit 3	210	11/07/2014	22.25		Continued.	Coal shortage.	
Paras Unit 4	250	12/07/2014	10.37		Continued.	Drum level low	
Tata Trombay 6	500	12/07/2014	22.13		Continued.	Economic shut down	
Chandrapur Unit 3	210	14/07/2014	22.05		Continued.	Super Heater safety Valve Repair work	
Uran Unit 6	108	15/07/2014	16.24		Continued.	Gas Shortage.	
Bhusawal Unit 5	500	17/07/2014	02.12	17/07/2014	04.10	Flame Failure.	
Uran Unit 5	108	17/07/2014	23.38		Continued.	Rotor Balancing Work of A0 Unit.	23/07/2014
Uran Unit A0	120	17/07/2014	23.40		Continued.	Rotor Balancing Work of A0 Unit.	23/07/2014

State Load Dispatch Center, Airoli (MSETCL)
Details of Line outages/Trippings for 17/Jul/2014

Position as on 6.30 Hrs of 18/Jul/2014

Name of Line	Tripped Date	Tripped Time	Synchronise d Date	Synchronise d Time	Reason of Outage
InterState					
Voltage Level : 400KV			Outage Type HAND TRIPPED		
Kolhapur-Mapusa-II	16/07/2014	23.06	17/07/2014	09.09	Over Voltage.
Kolhapur-Solapur(PGCIL)-I	17/07/2014	06.21		Continued.	Over Voltage.
Kolhapur - Mapusa - II	17/07/2014	22.40		Continued.	Over Voltage.
Voltage Level : 400KV			Outage Type TRIPPED		
Dhule-Sar'Sarovar - II	14/07/2014	20.42		Continued.	Distance Protection,RFC FROM15.7.14@14.33 hRS.
765 KV Seoni-Wardha-II	16/07/2014	03.01		Continued.	Over Voltage.
765KV Aurangabad PG-Wardha PG-I	16/07/2014	03.52		Continued.	Over Voltage.
Dhule-Sar'Sarovar - I	18/07/2014	03.00		Continued.	Distance Protection.
Voltage Level : 220KV			Outage Type TRIPPED		
Tillari-Halkarni.	17/07/2014	04.15	17/07/2014	07.40	Tripped @ Tillary. End.
IntraState					
Voltage Level : 400KV			Outage Type PLANNED OUTAGE		
400/220KV 500MVA ICT-II at Warora	09/07/2014	14.35		Continued.	Attending CTR Fire System Nitrogen Leakage.
Auxiliary Bus @ Babaleshwar	15/07/2014	15.25		Continued.	Stu Bus Stringing & Erection Work of 400KV End Bay.(3 Days Outage)
Akola - Indiabull (Nandgaonpeth)	16/07/2014	12.07	17/07/2014	17.45	Attending Air Leakage.Line Will be in Service Through Tie Bay.
Chandrapur-II - Warora - I	17/07/2014	07.29	17/07/2014	17.45	OPGW Work.
Lonikand - Jejuri	17/07/2014	08.01	17/07/2014	19.51	REPL of Faulty Insulator String.
400/220 KV 500 MVA ICT-I @ Deepnagar	17/07/2014	09.14	17/07/2014	17.54	For Repairing Of Lumasence OFBT Unit.
Chandrapur - Parli - III	17/07/2014	12.26	17/07/2014	21.15	Replacement Of Broken Disc Insulator.
Main Bus - I @ Parli	17/07/2014	12.36	17/07/2014	18.42	Replacement Of Isolator B Phase covering of Bucholz relay.
Voltage Level : 220KV			Outage Type PLANNED OUTAGE		
Lonikand -Theur - II	09/07/2014	10.30		Continued.	C & R Panel Replacement,Taken on TBC 2 Days.
220/132 KV 100 MVA ICT-II @ Babaleshwar	17/07/2014	10.00	17/07/2014	13.05	C.R. Pannel Replacement Work Under Jica-2.
Jejury - Lonand	17/07/2014	10.58	17/07/2014	15.28	Replacement Of Line Insolator.
Parly Ext - Nanded - II	17/07/2014	11.10	17/07/2014	15.11	Quarterly Maintainance Work.
Virur - Gadhchiroli	17/07/2014	11.26	17/07/2014	14.55	Replacement of Line Insulators.
Nasik - Ghatghar	17/07/2014	13.17	17/07/2014	16.03	Replacement of Disc Insulator.
Khaperkheda - Ambazari - II	17/07/2014	14.34	17/07/2014	17.38	Measurement Of Tan Delta Of Ct.
Voltage Level : 400KV			Outage Type HAND TRIPPED		
Karad - Kolhapur - I	14/07/2014	16.10		Continued.	Over Voltage
Bhusawal- Aurangabad	14/07/2014	18.49		Continued.	Over Voltage
Karad - Kolhapur - II	16/07/2014	21.44	17/07/2014	08.50	Over Voltage.
Karad-Jaigad I	16/07/2014	21.47	17/07/2014	08.53	Over Voltage.
Lonikand- Koyna Stage IV	16/07/2014	22.04	17/07/2014	07.33	Over Voltage.
Karad - Kolhapur - II	17/07/2014	16.56		Continued.	Over Voltage.
Bhusawal- Aurangabad	17/07/2014	17.04		Continued.	Over Voltage.

State Load Dispatch Center,Airoli (MSETCL)
Details of Line outages/Trippings for 17/Jul/2014

Position as on 6.30 Hrs of 18/Jul/2014

Name of Line	Tripped Date	Tripped Time	Synchronise d Date	Synchronise d Time	Reason of Outage
Karad-Jaigad I	17/07/2014	17.04		Continued.	Over Voltage.
Lonikand- Koyna Stage IV	17/07/2014	22.03		Continued.	Over Voltage.
Voltage Level : 220KV			Outage Type HAND TRIPPED		
Chikhali - Jalna - I	28/04/2014	01.14		Continued.	To Control O/L of 220KV Paras-ChiKhli
Voltage Level : 220KV			Outage Type TRIPPED		
Pusad - Ghatodi	12/06/2014	17.40		Continued.	At loc.no 27,28 D/C tower 220KV Nanded-Ghatodi & 220KV Pusad-Ghatodi Collapsed(Line taken in service Bypassing Ghatodi LILO at 18.58/13-6-2014)
Nanded - Ghatodi	12/06/2014	17.40		Continued.	Dist.Prot,optd.Z-I at loc.no 27,28 D/C tower 220KV Nanded-Ghatodi & 220KV Pusad-Ghatodi Collapsed(Line taken in service Bypassing Ghatodi LILO at 18.58/13-6-2014)
Aurangabad-Jalna-II	02/07/2014	14.33		Continued.	Heavy Rain @ Aurangabad S/S load Trimming Schem Operated,Ckt Charged from Chikhli End @ 15.15 Hrs DT 2.7.14.
Chandrapur - Warora - II.	15/07/2014	02.40		Continued.	Tripped at Warora end only
Nasik - Ghatghar	17/07/2014	01.15	17/07/2014	01.34	Tripped @ Ghatghar End.
220/100 KV,200MVA ICT - I at Padgha	18/07/2014	02.37		Continued.	Diff.Prot
Voltage Level : 100KV			Outage Type TRIPPED		
Kalwa - Vashi - I	17/07/2014	05.52	17/07/2014	06.21	Distance Protection.

State Load Dispatch Center,Airoli (MSETCL)

Details of On Line Capacity for 18/Jul/2014

Generating unit	Derated Capacity (MW)	OLC (MW)
Koradi		
Unit 5	200	0
Unit 6	210	150
Unit 7	210	150
	620	300
Bhusawal		
Unit 2	210	145
Unit 3	210	0
Unit 4	500	330
Unit 5	500	340
	1420	815
Parli		
Unit 3	210	0
Unit 4	210	0
Unit 5	210	130
Unit 6	250	189
Unit 7	250	185
	1130	504
Chandrapur		
Unit 1	210	140
Unit 2	210	150
Unit 3	210	0
Unit 4	210	190
Unit 5	500	450
Unit 6	500	400
Unit 7	500	0
	2340	1330
Paras		
Unit 3	250	152
Unit 4	250	0
	500	152
Khaparkheda		
Unit 1	210	160
Unit 2	210	160
Unit 3	210	170
Unit 4	210	170
Unit 5	500	400
	1340	1060
Nasik		
Unit 3	210	0
Unit 4	210	198
Unit 5	210	190
	630	388
Uran		
All Units	852	280
	852	280
PENCH (MS)		
Pench (MS)	53	
	53	
Koyna		
Stage 1-2	600	600
Stage 4	1000	250
Stage 3	320	320
	1920	1170
Hydro		
KDPH	40	0
VTRNA	60	61

Generating unit	Derated Capacity (MW)	OLC (MW)
TILLARI	60	60
BHTGR/VEER	21	0
BHIRA T.R.	80	40
RNGR+BHTSA	20	0
BHANDARDRA	45	0
ELDARY	23	0
SMLHY PTN	12	8
GHATGHAR	250	0
	611	169
Wind		
MalharPeth	0	
Vankuswadi	0	
ATIT	0	
Kale	0	
Satara	0	
Shirala	0	
K Mahankal	0	
Supa	0	
Vita	0	
Dondaicha	0	
Sakri	0	
Nandurbar	0	
Khandke	0	
Khaparale	0	
	0	
CPP		
JSW JAIGAD	1200	1089
WARDHA	405	170
Adani	2640	1846
Other CPPs	300	715
	4545	3820
SOLAR		
Total	0	
	0	
Tata		
Trombay 4	150	0
Trombay 5	500	500
Trombay 6	500	0
Trombay 7A	120	120
Trombay 7B	60	60
Trombay 8	250	0
TATA Hydro	444	447
	2024	1127
REL		
1&2	500	500
	500	500
Cent Sect		
Share	3455	4107
	3455	4107