



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

State Load Dispatch Center, Airoli

Daily system Report

for

07/Jun/2012

State Load Dispatch Center, Airoli (MSETCL)
Daily system Report for 07/Jun/2012 THURSDAY

I GENERATION (MUs)			II EXCHANGES (MUs)		
A) MSGENCO	Daily	Monthly	E) Central Sector	Daily	Monthly
1) Thermal	106.922	797.478	1) Gujrat	0.959	59.462
2) Hydro	13.629	74.626	2) Madhya Pradesh	25.039	149.018
3) Gas	11.304	91.312	3) Chattisgarh	11.620	76.390
Total MSGENCO	131.855	963.416	4) Maharashtra	56.640	403.268
B) OTHERS			5) Goa	-6.598	-46.578
1) JSW JAIGAD	28.858	199.056	6) TAPS 1&2 Injection	7.617	53.563
2) WPCL	9.974	69.396	7) RGPPL Injection	20.550	148.089
3) Other CPP / IPP	6.751	45.172	8) Pench (Excess)	-0.083	-0.919
4) Wind Generation	9.753	134.697	# Total Cent. Sector	115.744	842.293
5) PENCH (MS)	0.083	0.919	F) Other Exchanges		
C) TPCL & REL			1) With TPCL (Excess)	-13.053	-107.824
1) TPCL Thermal	28.552	192.986	G) Bilateral Power *		
2) TPCL Hydro	5.176	33.354	1) MSEDCL Bilateral	34.422	233.383
TOTAL TPCL	33.728	226.340	Include PX	0.794	3.249
3) REL Thermal	12.605	87.910	2) MUMBAI Bilateral	18.093	123.107
D) STATE			Include PX	3.106	18.546
1) Thermal (A1+C1+C3)	148.079	1078.374	3) MUMBAI Schedule	18.093	123.107
2) Hydro (A2+B5+C2)	18.888	108.899	H) ENERGY CATERED (MUs)		
3) Gas (A3)	11.304	91.312	1) MSEDCL	289.965	2147.125
4) Wind (B4)	9.753	134.697	2) TPCL	39.458	278.700
5) CPP (B1+B2+B3)	45.583	313.624	3) REL	19.926	143.364
TOTAL STATE	233.607	1726.906	TOTAL STATE	349.349	2569.189

DETAILS OF MAHARASHTRA STATE PEAK DEMAND(MW)

PARTICULARS	A. Morning Peak at 12 Hrs	B. Evening Peak at 20 Hrs	C. Night Minimum at 4 Hrs
MSGENCO Thermal	4224	4774	4326
MSGENCO Hydro	1589	239	411
MSGENCO Gas	455	470	476
MSGENCO Total Generation	6268	5483	5213
Central Sector Receipt	5062	5072	4546
WIND	334	444	407
CPP / IPP	1863	1888	1911
Exchange with Mumbai	-724	-556	-331
MSEDCL DEMAND MET	12803	12331	11746
Load Shedding	746	260	238
MSEDCL DEMAND	13549	12591	11984
TPCL GENERATION	1698	1619	1022
R-INFRA GENERATION	522	525	527
TPCL+R-INFRA DEMAND	2944	2700	1880
STATE DEMAND MET	15747	15031	13626
STATE DEMAND	16493	15291	13864
Frequency (Hz)	49.60	49.76	49.48

FREQUENCY PARTICULARS

MAXIMUM FREQ.	MINIMUM FREQ.	AVERAGE FREQ.	FREQ. BELOW 49.2 Hz
50.29 Hz at 18.03 Hrs	48.95 Hz at 00.08 Hrs	49.65	1.59 % 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 07/Jun/2012

Generating unit	Generation				OLC (MW)
	Daily (Mus)	Monthly (Mus)	Max (MW)	Min (MW)	
Koradi					
Unit 5	2.88	19.14	132	108	150
Unit 6	2.99	20.44	145	111	150
Unit 7	3.28	21.62	150	125	140
Total	9.15	61.21			440
Bhusawal					
Unit 2	3.41	23.28	150	130	140
Unit 3	4.18	28.09	180	160	170
Unit 4	0.00	18.53	0	0	
Unit 5	0.00	0.00	0	0	
Total	7.58	69.90			310
Parli					
Unit 3	3.62	26.42	183	137	150
Unit 4	0.00	2.58	0	0	0
Unit 5	3.70	26.52	169	129	135
Unit 6	4.72	34.99	219	167	165
Unit 7	4.45	26.75	211	160	170
Total	16.50	117.25			620
Chandrapur					
Unit 1	3.82	27.22	165	152	165
Unit 2	3.92	14.36	173	156	165
Unit 3	4.44	25.88	190	180	185
Unit 4	4.62	30.80	202	174	200
Unit 5	2.00	49.12	380	0	0
Unit 6	10.77	75.91	481	385	470
Unit 7	9.70	68.24	434	374	425
Total	39.28	291.54			1610
Paras					
Unit 3	5.99	35.88	260	207	250
Unit 4	0.00	0.00	0	0	0
Total	5.99	35.88			250
Khaparkheda					
Unit 1	0.00	13.85	0	0	0
Unit 2	0.00	0.72	0	0	0
Unit 3	4.94	34.44	215	195	210
Unit 4	5.09	35.12	219	202	210
Unit 5	3.61	35.35	253	0	150
Total	13.64	119.48			570
Nasik					
Unit 3	5.28	36.60	225	215	210
Unit 4	4.93	33.37	213	188	210
Unit 5	4.58	32.25	203	173	200
Total	14.80	102.22			620
Uran					
All Units	11.30	91.31	483	452	480
Total	11.30	91.31			480
PENCH (MS)					
Pench (MS)	0.08	0.92	25	0	
Total	0.08	0.92			
Koyna					
Stage 1-2	4.51	26.84	540	40	600
Stage 4	4.65	21.89	638	0	250
Stage 3	2.36	11.48	240	0	320
Kovna 12&4 Total	9.16	48.73			850

Generating unit	Generation				OLC (MW)
	Daily (Mus)	Monthly (Mus)	Max (MW)	Min (MW)	
Total	11.52	60.20			1170
Hydro					
KDPH	0.36	3.30	16	14	30
VTRNA	0.88	0.88	61	0	0
TILLARI	0.00	0.00	0	0	0
BHTGR/VEER	0.00	0.00	0	0	0
BHIRA T.R.	0.30	1.71	81	0	80
RNGR+BHTSA	0.29	1.20	12	12	12
BHANDARDRA	0.00	0.00	0	0	0
ELDARY	0.00	0.00	0	0	0
SMLHY PTN	0.28	2.37	19	9	8
GHATGHAR	0.00	4.97	0	0	0
Total	2.10	14.42			130
Wind					
MalharPeth	0.31	3.62			
Vankuswadi	0.37	6.48			
ATIT	0.15	1.11			
Kale	0.12	2.28			
Satara	0.47	11.91			
Shirala	0.31	2.69			
K Mahankal	0.76	6.29			
Supa	0.09	1.83			
Vita	1.61	14.89			
Dondaicha	4.13	58.85			
Sakri	0.57	8.00			
Nandurbar	0.49	6.04			
Khandke	0.11	4.79			
Khaparale	0.27	5.92			
Total	9.75	134.70			
CPP					
JSW JAIGAD	28.86	199.06	1218	1141	1100
WARDHA	9.97	69.40	419	413	415
Other CPPs	6.75	45.17			
Total	45.58	313.62			1515
Tata					
Trombay 4	0.00	0.00	0	0	0
Trombay 5	11.52	76.73	503	410	500
Trombay 6	6.59	43.06	366	157	500
Trombay 7A	2.86	20.00	124	116	120
Trombay 7B	1.59	11.13	68	65	60
Trombay 8	5.99	42.06	252	239	250
TATA Hydro	5.18	33.35	457	0	447
Total	33.73	226.34			1877
REL					
1&2	12.60	87.91	527	522	500
Total	12.60	87.91			500
Cent Sect					
Share					5132
Total					5132

MS PG CL	Thermal	106.92	797.48			4420
	Thml+Gas	118.23	888.79			4900
	Hydro	13.63	74.63			1300
	Total	131.86	963.42			6200
State Total		233.61	1726.91			15224

State Load Dispatch Center,Airoli (MSETCL)

Hourly Load Data As on 07/Jun/2012

TIME SR. NO.	MSPGCL GEN.			TOTAL	WIND	CPP / IPP	CS SHARE	CS RECPT	Mum.S CH.	Mum. NET EXCH.	MSEDCL DEMAND MET	LOAD SHEDDI NG	MSEDCL DEMAND WITH LS	TPCL + R -INFRA DEMAND	STATE DEMAND	FREQ. (Hz)
	THM	HY	GAS													
1	4404	636	479	5519	414	1916	5163	4938	-827	-499	12288	173	12461	2228	14689	49.42
2	4331	760	479	5570	327	1923	4850	4848	-705	-429	12239	211	12450	2058	14508	49.48
3	4332	596	480	5408	420	1909	4767	4583	-625	-369	11951	221	12172	1940	14112	49.49
4	4326	411	476	5213	407	1911	4702	4546	-560	-331	11746	238	11984	1880	13864	49.48
5	4391	436	483	5310	321	1907	4676	4575	-534	-287	11826	256	12082	1829	13911	49.46
6	4340	674	482	5496	281	1914	4673	4844	-530	-311	12224	358	12582	1867	14449	49.78
7	4367	409	481	5257	288	1911	4670	4868	-535	-343	11981	699	12680	1880	14560	49.86
8	4463	220	482	5165	337	1909	4656	4983	-545	-360	12034	734	12768	1971	14739	49.92
9	4428	298	474	5200	300	1912	4652	4950	-555	-399	11963	829	12792	2271	15063	49.79
10	4431	952	466	5849	371	1911	4816	5263	-720	-550	12844	629	13473	2650	16123	49.80
11	4352	1053	456	5861	367	1908	5051	5215	-859	-687	12664	631	13295	2906	16201	49.63
12	4224	1589	455	6268	334	1863	5134	5062	-935	-724	12803	746	13549	2944	16493	49.60
13	4199	1268	459	5926	316	1862	5149	5070	-944	-711	12463	813	13276	2965	16241	49.67
14	4340	957	454	5751	410	1894	5174	4900	-968	-807	12148	699	12847	2944	15791	49.49
15	4323	671	455	5449	527	1912	5176	4991	-981	-762	12117	559	12676	2964	15640	49.59
16	4352	460	452	5264	548	1839	5167	4894	-982	-777	11768	580	12348	2972	15320	49.54
17	4572	172	458	5202	653	1912	5077	4621	-986	-783	11605	660	12265	2924	15189	49.68
18	4668	122	476	5266	477	1915	4945	4234	-837	-683	11209	395	11604	2807	14411	49.85
19	4802	160	480	5442	502	1916	4945	4440	-715	-776	11524	80	11604	2651	14255	49.98
20	4774	239	470	5483	444	1888	5069	5072	-724	-556	12331	260	12591	2700	15291	49.76
21	4768	206	480	5454	448	1893	4981	4450	-655	-417	11838	407	12245	2645	14890	49.69
22	4677	139	472	5288	439	1882	5030	4710	-710	-492	11852	393	12245	2562	14807	49.67
23	4566	392	477	5435	438	1889	4973	4929	-797	-495	12221	175	12396	2472	14868	49.45
24	4492	809	478	5779	384	1887	4904	4758	-864	-505	12326	130	12456	2356	14812	49.48
MUs	106.92	13.63	11.30	131.86	9.75	45.58	118.40	115.74	-18.09	-13.05	289.96	10.88	300.84	59.39	360.23	49.65

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 07/Jun/2012

Position as on 6.30 Hrs of 08/Jun/2012

Name of Generating Unit	Capacity	Tripped Date	Tripped Time	Sync.Date	Sync. Time	Reason of Outage	Expected Date
PLANNED OUTAGE							
Paras Unit 4	250	01/05/2012	03.25		Continued.	Annual Overhaul.	10/06/2012
Cent_Sect NTPC(V-3)	210	20/05/2012	00:25		Continued.	AOH.	
Khaparkheda Unit 2	210	01/06/2012	05.45		Continued.	Annual overhaul.	05/07/2012
Cent_Sect NTPC(K-5)	500	01/06/2012	23.50		Continued.	A/OH.	30/06/2012
FORCED OUTAGE							
Bhusawal Unit 5	500	30/03/2012	04.34		Continued.	Hand Tripped	
Dabhol 1A	230	30/03/2012	23.29		Continued.	Gas Shortage	
Dabhol 1X	290	31/03/2012	19:43		Continued.	Maintenance work.	
Dabhol 1B	230	31/03/2012	19:45		Continued.	Maintenance work.	
Parli Unit 4	210	02/06/2012	00.30		Continued.	ID Fan problem.	
Khaparkheda Unit 1	210	03/06/2012	21.05		Continued.	Flame failure.	
Chandrapur Unit 5	500	05/06/2012	09.55	07/06/2012	12.47	Boiler Tube Leakage	
Uran Unit 5	108	05/06/2012	18.28		Continued.	Gas Shortage	
Bhusawal Unit 4	500	06/06/2012	06.27		Continued.	Vibration Problem	
Dabhol 2A	230	06/06/2012	10.25		Continued.	Due To Gas Shortage.	
Khaparkheda Unit 5	500	07/06/2012	10.37	07/06/2012	12.49	Drum Level High.	
Khaparkheda Unit 5	500	07/06/2012	13.48	07/06/2012	15.49	Drum Level Low.	
Chandrapur Unit 5	500	07/06/2012	21.33		Continued.	Air Pre Heater.	
CPP WPCL U-3	135	08/06/2012	04.50		Continued.	Tripped.	

State Load Dispatch Center, Airoli (MSETCL)
Details of Line outages/Trippings for 07/Jun/2012

Position as on 6.30 Hrs of 08/Jun/2012

Name of Line	Tripped Date	Tripped Time	Synchronised Date	Synchronised Time	Reason of Outage
InterState					
Voltage Level : 400KV			Outage Type HAND TRIPPED		
765 KV Wardha - Seoni - I	30/05/2012	17.48		Continued.	Over Voltage.
Kolhapur - Mapusa - II	07/06/2012	00.36	07/06/2012	00.58	Over Voltage.
Kolhapur - Mapusa - I	07/06/2012	01.01	07/06/2012	09.57	Over Voltage.
Dhule-Sar'Sarovar - I	07/06/2012	13.45		Continued.	Over Voltage.
Akola - Aurangabad - I	07/06/2012	15.28	07/06/2012	15.45	To Take 50 MVAR Line Reactor in Service.
Kolhapur - Mapusa - II	07/06/2012	22.04		Continued.	Over Voltage.
Voltage Level : 400KV			Outage Type TRIPPED		
Akola - Aurangabad - II	07/06/2012	16.18	07/06/2012	17.07	Ref Protection Operated of Line Reactor @ Arbd.Line Charged Without Line Reactor.
IntraState					
Voltage Level : 500KV			Outage Type PLANNED OUTAGE		
HVDC POLE - II	06/06/2012	22.00	07/06/2012	04.12	Attending Oil Leakage of B Ph. Converter T/F.
Voltage Level : 400KV			Outage Type PLANNED OUTAGE		
50MVAR Reactor C'Pur - Parli -I at Parli end	16/04/2012	16.50		Continued.	Filtration work
400/220 KV 315 MVA ICT-II @ Dhule	02/06/2012	09.01		Continued.	Cable termination work.
Padgha - Nagothane- II	06/06/2012	10.19	08/06/2012	00.40	Repl.of Suspension Insulator String @ Loc.No.118 of Y & B Ph.
400/220 KV 500 MVA ICT-I @ Jejuri	07/06/2012	00.34	07/06/2012	04.12	Oil Leakage Problem of C B.
Lonikand - Chakan	07/06/2012	07.09	07/06/2012	19.54	Broken Insulator Replacement @ Loc.No. 44,C T Tan Delta
Nagothane-Dabhol-I	07/06/2012	08.48	07/06/2012	19.25	Cold Line Washing of Insulator of Loc. 48 to 66. & Replacement of Insulator String. Loc.40 & 8.
Lonikand- Koyna Stage IV	07/06/2012	09.00	07/06/2012	19.43	Insulator String Replacement.
403-52 Breaker @ Lamboti	07/06/2012	09.15	07/06/2012	14.20	Silicon Coating to 403-52 C B of Parli Line.
New Koyna - Jaigad - II	07/06/2012	09.52	07/06/2012	14.56	Insulator Decapping,Attending Work @ Loc.No. 20.
400/220 KV 315 MVA ICT - I @ Chakan	07/06/2012	11.03	07/06/2012	18.19	Testing & Maint. Work.
Karad-Jaigad I	07/06/2012	15.18	07/06/2012	23.14	Repl.of Decapping Insulator String Work.Line Ready for Charging @ 19.00 Hrs.
Voltage Level : 220KV			Outage Type PLANNED OUTAGE		
Uran-Kharghar-II	15/02/2012	07.42		Continued.	Mumbai system strengthening work
Khargar-Topworth	15/02/2012	07.47		Continued.	Mumbai system strengthening work
Kharghar-TSS	18/02/2012	08.52		Continued.	Temporary Reconfigured as Uran-TSS at 20.30Hrs Dt.18/2/12
220/132 KV 100 MVA ICT II at Girvali	14/04/2012	12:05		Continued.	Augumentation by 200 MVA ICT.
Chakan - Mahindra Vechicles	07/06/2012	07.55	07/06/2012	17.31	Maintenance Work.
Kalwa - Khargar	07/06/2012	08.15	07/06/2012	11.17	Replacement of L A @ Kalwa End.
Sahara-B'dying	07/06/2012	08.40	07/06/2012	13.10	Replacement of L A.

State Load Dispatch Center, Airoli (MSETCL)
Details of Line outages/Trippings for 07/Jun/2012

Position as on 6.30 Hrs of 08/Jun/2012

Name of Line	Tripped Date	Tripped Time	Synchronised Date	Synchronised Time	Reason of Outage
TBC @ Amravati	07/06/2012	08.42	07/06/2012	10.43	Measurment of Tan Delta of C T.
Babaleshwar - Alephata	07/06/2012	09.10	07/06/2012	15.18	29 D Line Insulator Work @ Bblsr.
Lote - N.Koyna	07/06/2012	09.15	07/06/2012	14.04	String Replacement Work.
New Parli-Nanded	07/06/2012	09.50	07/06/2012	18.16	Quarterly Maintainance Work.
Pusad-Nanded	07/06/2012	09.51	07/06/2012	17.50	Q.M.Work & Measurment of Tan Delta of CT'S @ Pusad End.
220 KV Main Bus @ Nanded	07/06/2012	09.51	07/06/2012	17.50	Quarterly Maintainance Work.
220/132 KV 200 MVA ICT - I @ Borivali	07/06/2012	10.15	07/06/2012	16.04	Repl.of R Ph. HVCT & R.M.Work.
Bus Section - I @ Airoli Knoweldge Park	07/06/2012	11.31	07/06/2012	16.01	C T Tan Delta Measurment.
Bhigwan-Kurkum	07/06/2012	12.30		Continued.	Retrofitting of Dist.Relay @ Bhigwan.
Apta-Bombay Dyeing	07/06/2012	13.22	07/06/2012	17.08	Replacement of L A.
Chakan - Bhosari	07/06/2012	15.00	07/06/2012	15.51	To Attend Red Hot B Ph. C T @ Chakan.
Lamboti - Pandharpur	07/06/2012	16.33	07/06/2012	18.05	To Attend Red Hot of B Ph. C T @ Lamboti
Karad-Pophali	07/06/2012	17.44	07/06/2012	20.50	Repl. of Broken Insulator @ Loc. No.86 R Ph.
Voltage Level : 132KV			Outage Type PLANNED OUTAGE		
Chalisgaon - Manmad - I	07/06/2012	09.20	07/06/2012	18.47	Replacement of Cut Point Jumper.
Pusad-Jambazar	07/06/2012	09.42	07/06/2012	16.00	Erection of In Line Tower Bte. Loc.No. 27,28.
Voltage Level : 400KV			Outage Type HAND TRIPPED		
Deepnagar-Aurangabad-I	06/06/2012	18.20		Continued.	Over Voltage.
Bhusawal- Aurangabad	06/06/2012	20.35	07/06/2012	09.37	Over Voltage.
Bhusawal- Aurangabad	07/06/2012	20.54		Continued.	Over Voltage.
Voltage Level : 220KV			Outage Type HAND TRIPPED		
Padgha - Temghar - II	04/06/2012	14.57		Continued.	To Control Padgha ICT Loading.
Voltage Level : 500KV			Outage Type TRIPPED		
HVDC POLE I -CHDPR	07/06/2012	16.40	07/06/2012	18.17	Line Derivative Prot. Operated.
Voltage Level : 400KV			Outage Type TRIPPED		
400/220KV,500MVA ICT-III At Kalwa.	07/06/2012	16.34	07/06/2012	18.10	NDR.
Voltage Level : 220KV			Outage Type TRIPPED		
Wadkhal-IPCL-II	06/06/2012	16.55	07/06/2012	09.58	Distance Protection.
Ghodbandar - Bhoisor (MSETCL)	07/06/2012	13.32	07/06/2012	20.30	Dist.Prot.Loc.No.182 Decaping R Ph.
Trombay-Kalwa	07/06/2012	14.45	07/06/2012	15.02	Distance Protection.
Lonikand-Bhosari	07/06/2012	16.25	07/06/2012	20.05	Y Ph. L A Burst @ Bhosari.
Voltage Level : 132KV			Outage Type TRIPPED		
Chikhli - Deulgaon-Mahee	06/06/2012	19.15	07/06/2012	12.19	Dist.Prot.Operated Z-I Y & B Ph.Trial Taken @ 19.35 Hrs But Again Tripped.

State Load Dispatch Center,Airoli (MSETCL)

Details of On Line Capacity for 08/Jun/2012

Generating unit	Derated Capacity (MW)	OLC (MW)
Koradi		
Unit 5	200	135
Unit 6	210	130
Unit 7	210	140
	620	405
Bhusawal		
Unit 2	210	140
Unit 3	210	180
Unit 4	500	
Unit 5	500	
	1420	320
Parli		
Unit 3	210	160
Unit 4	210	0
Unit 5	210	170
Unit 6	250	200
Unit 7	250	180
	1130	710
Chandrapur		
Unit 1	210	165
Unit 2	210	165
Unit 3	210	185
Unit 4	210	205
Unit 5	500	0
Unit 6	500	475
Unit 7	500	425
	2340	1620
Paras		
Unit 3	250	250
Unit 4	250	0
	500	250
Khaparkheda		
Unit 1	210	0
Unit 2	210	0
Unit 3	210	210
Unit 4	210	210
Unit 5	500	250
	1340	670
Nasik		
Unit 3	210	210
Unit 4	210	210
Unit 5	210	200
	630	620
Uran		
All Units	852	480
	852	480
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	16
VTRNA	60	60

Generating unit	Derated Capacity (MW)	OLC (MW)
TILLARI	60	0
BHTGR/VEER	21	0
BHIRA T.R.	80	80
RNGR+BHTSA	20	0
BHANDARDRA	45	0
ELDARY	23	0
SMLHY PTN	12	20
GHATGHAR	250	0
	611	176
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	600	1100
WARDHA	405	415
Other CPPs	0	
	1005	1515
Tata		
Trombay 4	150	0
Trombay 5	500	500
Trombay 6	500	500
Trombay 7A	120	120
Trombay 7B	60	60
Trombay 8	250	250
TATA Hydro	444	447
	2024	1877
REL		
1&2	500	500
	500	500
Cent Sect		
Share	3455	5015
	3455	5015