

# **ANALYSIS OF UK WIND POWER GENERATION, NOVEMBER 2008 TO DECEMBER 2010**

## **SUPPORTING DOCUMENTATION**

**The principal documents which record and sort data from the BMRS website are two EXCEL spreadsheets and a series of Graphical Representations of recorded wind output. These are in three pdf files.**

### **MASTER SPREADSHEET.**

**This is a master spreadsheet recording and analysing data by time and generation level. In hard copy it is unwieldy, so a small scale overview has been provided along with the various sections in isolation for easier study and this is presented in a single pdf file.**

### **LOW WIND EVENTS.**

**This is a spreadsheet record of low wind events.**

### **GRAPHS.**

**These are the graphical representations of wind output over 26 months.**

### ANALYSIS OF WIND POWER GENERATION NOVEMBER 2008 TO DECEMBER 2010

#### MASTER WORKSHEET PERIODS GENERATION LEVELS 5 MINUTE PERIODS AT Banded LEVELS GENERATION LEVELS AS A PERCENTAGE OF TIME

PERIODS	GENERATION LEVELS				5 MINUTE PERIODS AT Banded LEVELS												GENERATION LEVELS AS A PERCENTAGE OF TIME																																	
	Maximum output	Minimum output	Average output	Percentage of Capacity	Max demand	Wind at Max demand	Over 47MW	Over 42-46MW	Over 37-41MW	Over 32-36MW	Over 27-31MW	Over 22-26MW	Over 17-21MW	Over 12-16MW	Over 7-11MW	Over 2-6MW	Over 30%	20 to 30%	10 to 20%	5 to 10%	2.5 to 5%	1.25 to 2.5%	0.625 to 1.25%	Over 30%	20 to 30%	10 to 20%	5 to 10%	2.5 to 5%	1.25 to 2.5%	0.625 to 1.25%																				
<b>Period during which capacity was 2500MW</b>	1964	17	500	19.31	60191	134	1776	1289	2881	1497	720	697	68	19	19	19.89	14.44	32.27	16.77	8.06	7.81	0.76	19.89	80.11	85.67	33.40	16.63	8.57	0.76	34.36	13.85	31.35	16.41	2.08	1.00	0.94	32.54	17.12	25.10	15.17	3.78	1.37	0.93	32.54	67.46	50.35	24.25	6.08	2.30	0.93
<b>Period during which capacity was 2430MW</b>	1877	6	611	25.14	46346	245	2719	1410	2319	987	646	201	358	71.38	27.72	0.84	0.00	0.00	0.00	0.00	0.00	0.00	71.38	28.82	0.84	0.00	0.00	0.00	15.23	12.05	20.47	17.08	17.62	12.05	5.50	15.23	84.77	72.73	52.26	35.17	17.55	5.50								
<b>Period during which capacity was 2100MW</b>	1216	12	303	14.36	43129	47	673	503	1669	1112	535	567	125	12.98	9.70	32.20	21.45	10.32	10.94	2.41	12.98	87.02	77.31	45.12	23.67	13.35	2.41	11	1881	61190																				
<b>Period during which capacity was 1588MW</b>	1440	11	600	37.78	41961	343	2212	426	384	206	295	197	24	59.08	11.38	10.26	5.50	7.88	5.26	0.64	59.08	40.92	29.54	19.28	13.78	5.90	0.64	13	7800	400176																				
<b>Period during which capacity was 1428MW</b>	1189	12	372	26.09	51124	89	3081	1613	1745	1296	716	349	128	48.39	7.27	14.12	10.80	12.33	5.20	1.90	48.39	51.61	44.34	30.22	19.42	7.09	1.90	3	1686	236716																				
<b>Period during which capacity was 1288MW</b>	1069	18	353	27.41	44371	163	3363	1227	2252	964	513	321	0	38.92	14.20	26.08	11.16	5.94	3.72	0.00	38.92	61.08	46.88	20.81	9.65	3.72	0.00	21	10752	247296																				
<b>Period during which capacity was 1203MW</b>	995	8	559	46.47	54359	959	1070	38	47	83	114	86	2	74.31	0.44	0.54	0.96	1.32	1.00	0.02	74.31	4.28	3.84	3.30	2.34	1.02	0.02	5	2795	6015																				
<b>Period during which capacity was 300MW</b>	187	16	69	23.00	54255	35	324	690	606	120	0	0	0	22.50	4.61	7.01	1.39	0.00	0.00	0.00	22.50	12.92	8.40	1.39	0.00	0.00	0.00	5	345	1500																				

TOTALS OF PERIODS NOV 2008-DEC 2010			
PERIODS	Max demand	Wind at Max demand	Over 30% capacity
<b>2010</b>	76176	28928	46596
<b>2009</b>	8295	1606	2645
<b>2008</b>	40524	14611	19515
<b>2009/2010</b>	67881	27322	43951

### AVERAGE OUTPUT AS A PERCENTAGE OF THEORETICAL MAXIMUM OUTPUT

NOV 2008-DEC 2011	NOV 2008-DEC 2010	2010	2009	2008
31 15500	31 15500	31 15500	31 15500	31 15500
30 21900	30 21900	30 21900	30 21900	30 21900
24 14160	24 14160	24 14160	24 14160	24 14160
7 6979	7 6979	7 6979	7 6979	7 6979
30 18330	30 18330	30 18330	30 18330	30 18330
20 7280	20 7280	20 7280	20 7280	20 7280
11 1881	11 1881	11 1881	11 1881	11 1881
18 5454	18 5454	18 5454	18 5454	18 5454
13 7800	13 7800	13 7800	13 7800	13 7800
30 5940	30 5940	30 5940	30 5940	30 5940
31 5332	31 5332	31 5332	31 5332	31 5332
30 9840	30 9840	30 9840	30 9840	30 9840
31 13051	31 13051	31 13051	31 13051	31 13051
28 6440	28 6440	28 6440	28 6440	28 6440
31 14787	31 14787	31 14787	31 14787	31 14787
31 10137	31 10137	31 10137	31 10137	31 10137
27 13365	27 13365	27 13365	27 13365	27 13365
3 1686	3 1686	3 1686	3 1686	3 1686
31 11532	31 11532	31 11532	31 11532	31 11532
30 12960	30 12960	30 12960	30 12960	30 12960
31 12741	31 12741	31 12741	31 12741	31 12741
31 7471	31 7471	31 7471	31 7471	31 7471
30 5580	30 5580	30 5580	30 5580	30 5580
10 2780	10 2780	10 2780	10 2780	10 2780
21 10752	21 10752	21 10752	21 10752	21 10752
30 10590	30 10590	30 10590	30 10590	30 10590
31 15965	31 15965	31 15965	31 15965	31 15965
28 9408	28 9408	28 9408	28 9408	28 9408
31 14384	31 14384	31 14384	31 14384	31 14384
31 9920	31 9920	31 9920	31 9920	31 9920
20 10160	20 10160	20 10160	20 10160	20 10160
5 2795	5 2795	5 2795	5 2795	5 2795
5 345	5 345	5 345	5 345	5 345
316635	316635	316635	316635	316635
1311553	1311553	1311553	1311553	1311553

### ANALYSIS OF WIND POWER GENERATION NOVEMBER 2008 TO DECEMBER 2010

PEAK DEMANDS AND WIND OUTPUT WINTER 2009/2010 AND WINTER 2010/2011 TO 31ST DECEMBER 2010												
DATE	TIME	TOTAL OUTPUT MW	CCGT MW	OIL MW	COAL MW	NUCLEAR MW	WIND MW	PUMP STORAGE MW	HYDRO MW	OCGT MW	FRENCH INTER. CONNECTOR MW	METERED WIND CAPACITY MW
7th JANUARY 2010	17 05 HRS	59541	22918	0	25910	7775	75	2065	665	133	0	1588
7th DECEMBER 2010	17 20 HRS	60191	23525	2065	22632	7732	134	2170	723	188	1002	2430
20th DECEMBER 2010	17 20 HRS	60017	21910	974	24014	8321	62	2065	645	26	2000	2430
21st DECEMBER 2010	17 30 HRS	59405	22666	643	23056	8189	61	1919	453	419	1999	2430

NOTES: CCGT IS CLOSED CYCLE GAS TURBINE, OCGT IS OPEN CYCLE GAS TURBINE.

PEAK DEMANDS AND WIND OUTPUT IN 2010					
DATE	TIME	DEMAND MW	WIND MW	METERED WIND CAPACITY MW	% of METERED WIND CAPACITY
7th JANUARY 2010	17 05 HRS	59541	75	1588	4.72
7th DECEMBER 2010	17 20 HRS	60191	134	2430	5.51
20th DECEMBER 2010	17 20 HRS	60017	62	2430	2.55
21st DECEMBER 2010	17 30 HRS	59405	61	2430	2.51

# ANALYSIS OF WIND POWER GENERATION NOVEMBER 2008 TO DECEMBER 2010

## MASTER WORKSHEET

PERIODS	GENERATION LEVELS					5 MINUTE PERIODS AT BANDED LEVELS								GENERATION LEVELS AS A PERCENTAGE OF TIME														
	Maximum output	Minimum output	Average output	Percentage of Capacity	Max demand	Wind at Max demand	Over 777MW	518-777MW	259-517MW	130-258MW	65-129MW	33-64MW	<33MW	Over 30%	20 to 30%	10 to 20%	5 to 10%	2.5 to 5%	1.25 to 2.5%	<1.25%	% over 30	% under 30	% under 20	% under 10	% under 5	% under 2.5	% > 1.25	
Period during which capacity was 2590MW																												
Dec-10	1964	17	500	19.31	60191	134	1776	1289	2881	1497	720	697	68	19.89	14.44	32.27	16.77	8.06	7.81	0.76	19.89	80.11	65.67	33.40	16.63	8.57	0.76	
Nov-10	2084	9	703	27.14	58384	441	2969	1197	2709	1418	180	86	81	34.36	13.85	31.35	16.41	2.08	1.00	0.94	34.36	65.64	51.78	20.43	4.02	1.93	0.94	
Oct-10	1879	9	590	22.78	50939	374	2249	1183	1804	1256	261	95	64	32.54	17.12	26.10	18.17	3.78	1.37	0.93	32.54	67.46	50.35	24.25	6.08	2.30	0.93	
Period during which capacity was 2430MW																												
Oct-10	1874	458	997	41.03	45437	1112	1439	560	17	0	0	0	0	71.38	27.78	0.84	0.00	0.00	0.00	0.00	71.38	28.62	0.84	0.00	0.00	0.00	0.00	
Sep-10	1877	6	611	25.14	46346	248	2719	1410	2319	987	646	201	358	31.47	16.32	26.84	11.42	7.48	2.33	4.14	31.47	68.53	52.21	25.37	13.95	6.47	4.14	
Aug-10	1615	6	364	14.98	41388	78	877	694	1179	984	1015	694	317	15.23	12.05	20.47	17.08	17.62	12.05	5.50	15.23	84.77	72.73	52.26	35.17	17.55	5.50	
Period during which capacity was 2110MW																												
Aug-10	897	1	171	8.10	40103	67	93	53	731	1160	638	205	288	2.94	1.67	23.07	36.62	20.14	6.47	9.09	2.94	97.06	95.39	72.32	35.70	15.56	9.09	
Jul-10	1216	12	303	14.36	43129	47	673	503	1669	1112	535	567	125	12.98	9.70	32.20	21.45	10.32	10.94	2.41	12.98	87.02	77.31	45.12	23.67	13.35	2.41	
Period during which capacity was 1588MW																												
Jul-10	1440	11	600	37.78	41961	343	2212	426	384	206	295	197	24	59.08	11.38	10.26	5.50	7.88	5.26	0.64	59.08	40.92	29.54	19.28	13.78	5.90	0.64	
Jun-10	1022	2	198	12.47	42300	142	1003	844	1907	1371	1402	1097	1016	11.61	9.77	22.07	15.87	16.23	12.70	11.76	11.61	88.39	78.62	56.55	40.68	24.46	11.76	
May-10	868	4	172	10.83	44751	256	373	615	2714	2462	1899	653	212	4.18	6.89	30.40	27.58	21.27	7.31	2.37	4.18	95.82	88.93	58.53	30.96	9.69	2.37	
Apr-10	1374	7	328	20.65	46196	867	2299	565	1947	2042	1030	468	289	26.61	6.54	22.53	23.63	11.92	5.42	3.34	26.61	73.39	66.85	44.32	20.68	8.76	3.34	
Mar-10	1359	3	421	26.51	55558	11	3566	906	958	1519	889	348	742	39.94	10.15	10.73	17.01	9.96	3.90	8.31	39.94	60.06	49.91	39.18	22.17	12.21	8.31	
Feb-10	983	8	230	14.48	56624	324	1446	733	1704	1320	1350	740	781	17.93	9.09	21.13	16.37	16.74	9.05	9.69	17.93	82.07	72.98	51.85	35.48	18.74	9.69	
Jan-10	1328	18	477	30.04	59541	75	3663	1733	1513	1377	577	56	9	41.03	19.41	16.95	15.42	6.46	0.63	0.10	41.03	58.97	39.56	22.61	7.19	0.73	0.10	
Dec-09	1301	13	327	20.59	55429	626	2149	1470	1686	1804	1028	703	88	24.07	16.47	18.88	20.21	11.51	7.87	0.99	24.07	75.93	59.46	40.58	20.37	8.86	0.99	
Nov-09	1212	10	495	31.17	54747	84	3830	1083	978	771	918	151	45	49.25	13.93	12.58	9.92	11.81	1.94	0.58	49.25	50.75	36.82	24.24	14.33	2.52	0.58	
Period during which capacity was 1426MW																												
Nov-09	1163	176	562	39.41	52240	314	506	182	176	0	0	0	0	58.56	21.06	20.37	0.00	0.00	0.00	0.00	58.56	41.44	20.37	0.00	0.00	0.00	0.00	
Oct-09	1189	12	372	26.09	51124	89	3081	1613	1745	1296	716	349	128	34.51	18.07	19.55	14.52	8.02	3.91	1.43	34.51	65.49	47.42	27.88	13.36	5.34	1.43	
Sep-09	1140	8	412	28.89	45247	123	4181	628	1220	933	1065	449	164	48.39	7.27	14.12	10.80	12.33	5.20	1.90	48.39	51.61	44.34	30.22	19.42	7.09	1.90	
Aug-09	1157	3	411	28.82	43013	811	3976	1394	1447	842	530	368	371	44.53	15.61	16.21	9.43	5.94	4.12	4.16	44.53	55.47	39.85	23.64	14.21	8.28	4.16	
Jul-09	1014	13	241	16.90	43856	30	1415	1696	2361	1757	838	817	44	15.85	19.00	26.44	19.68	9.39	9.15	0.49	15.85	84.15	65.15	38.71	19.03	9.64	0.49	
Jun-09	967	4	186	13.04	43151	56	1095	711	1550	2393	1489	788	614	12.67	8.23	17.94	27.70	17.23	9.12	7.11	12.67	87.33	79.10	61.16	33.46	16.23	7.11	
May-09	826	9	278	19.50	41503	181	623	461	968	471	156	120	81	21.63	5.16	10.84	5.28	1.75	1.34	0.91	21.63	25.28	20.12	9.27	4.00	2.25	0.91	
Period during which capacity was 1288MW																												
May-09	1178	64	512	39.75	43174	781	3744	807	938	555	4	0	0	61.90	9.34	10.86	6.42	0.05	0.00	0.00	61.90	26.67	17.33	6.47	0.05	0.00	0.00	
Apr-09	1069	18	353	27.41	44371	163	3363	1227	2252	964	513	321	0	38.92	14.20	26.06	11.16	5.94	3.72	0.00	38.92	61.08	46.88	20.81	9.65	3.72	0.00	
Mar-09	1169	10	515	39.98	52985	122	4963	997	1543	829	401	102	93	55.59	11.17	17.28	9.29	4.49	1.14	1.04	55.59	44.41	33.24	15.96	6.68	2.18	1.04	
Feb-09	1182	2	336	26.09	56781	230	3006	1328	1278	1036	955	202	259	37.28	16.47	15.85	12.85	11.84	2.50	3.21	37.28	62.72	46.25	30.41	17.56	5.72	3.21	
Jan-09	1133	2	464	36.02	59299	175	4592	1014	1373	1108	511	178	152	51.43	11.36	15.38	12.41	5.72	1.99	1.70	51.43	48.57	37.21	21.83	9.42	3.70	1.70	
Dec-08	1074	2	320	24.84	57712	119	2990	831	1397	1326	1387	629	368	33.49	9.31	15.65	14.85	15.54	7.05	4.12	33.49	66.51	57.20	41.55	26.70	11.17	4.12	
Nov-08	1045	4	508	39.44	56242	527	3911	347	595	243	235	178	251	67.90	4.02	6.89	2.81	2.72	2.06	2.91	67.90	21.40	17.38	10.50	7.69	4.97	2.91	
Period during which capacity was 1203MW																												
Nov-08	995	8	559	46.47	54359	959	1070	38	47	83	114	86	2	74.31	0.44	0.54	0.96	1.32	1.00	0.02	74.31	4.28	3.84	3.30	2.34	1.02	0.02	
Period during which capacity was 300MW																												
Nov-08	187	16	69	23.00	54255	35	324	390	606	120	0	0	0	22.50	4.51	7.01	1.39	0.00	0.00	0.00	22.50	12.92	8.40	1.39	0.00	0.00	0.00	

**AVERAGE OUTPUT AS A PERCENTAGE OF THEORETICAL MAXIMUM OUTPUT**

<b>NOV 2008-DEC 2011</b>			<b>2010</b>			<b>2009/2010</b>		
NO OF DAYS IN PERIOD	DAYS TIMES MONTHLY AVERAGE OUTPUT (ACTUAL MW DAYS)	DAYS TIMES METERED CAPACITY (THEORETICAL MAXIMUM IN MW DAYS)						
31	15500		31	15500		31	15500	
30	21090		30	21090		30	21090	
24	14160	220150	24	14160	220150	24	14160	220150
7	6979		7	6979		7	6979	
30	18330		30	18330		30	18330	
20	7280	138510	20	7280	138510	20	7280	138510
11	1881		11	1881		11	1881	
18	5454	61190	18	5454	61190	18	5454	61190
13	7800		13	7800		13	7800	
30	5940		30	5940		30	5940	
31	5332		31	5332		31	5332	
30	9840		30	9840		30	9840	
31	13051		31	13051		31	13051	
28	6440		28	6440		28	6440	
31	14787		31	14787		31	14787	
31	10137		31	10137		31	10137	
27	13365	400176	27	13365	400176	27	13365	400176
3	1686		3	1686		3	1686	
31	11532		31	11532		31	11532	
30	12360		30	12360		30	12360	
31	12741		31	12741		31	12741	
31	7471		31	7471		31	7471	
30	5580		30	5580		30	5580	
10	2780	236716	10	2780	236716	10	2780	236716
21	10752		21	10752		21	10752	
30	10590		30	10590		30	10590	
31	15965		31	15965		31	15965	
28	9408		28	9408		28	9408	
31	14384		31	14384		31	14384	
31	9920		31	9920		31	9920	
20	10160	247296	20	10160	247296	20	10160	247296
5	2795	6015	5	2795	6015	5	2795	6015
5	345	1500	5	345	1500	5	345	1500
	315835	1311553		23220	73203		292615	1238350
	<b>24.08 %</b>			<b>31.72 %</b>			<b>23.63 %</b>	

**2010**

**2009/2010**

**2009**

**2008**

**21.14 %**

**27.18 %**

**23.63 %**

**27.18 %**

**23.63 %**

**24.08 %**

**31.72 %**

TOTALS OF PERIODS								
<b>NOV 2008-DEC 2010</b>								
<b>2010</b>	76176	28928	46596	35242	22297	11535	7034	227808
<b>NOV DEC 2008</b>	8295	1606	2645	1772	1736	893	621	17568
<b>2009</b>	40524	14611	19515	14759	9124	4548	2039	105120
<b>2010</b>	27357	12711	24436	18711	11437	6094	4374	105120
<b>NOV 2008-DEC 2010</b>								
Total Periods	76176	28928	46596	35242	22297	11535	7034	227808
% of total time	33.44	12.70	20.45	15.47	9.79	5.06	3.09	100.00
	<b>% Time over 30% capacity</b>			33.44		<b>% Time over 30% capacity</b>		33.44
	<b>% Time 20-30%</b>			12.70		<b>% Time under 30% capacity</b>		66.56
	<b>% Time 10-20%</b>			20.45		<b>% Time under 20% capacity</b>		53.86
	<b>% Time 5-10%</b>			15.47		<b>% Time under 10% capacity</b>		33.41
	<b>% Time 2.5-5%</b>			9.79		<b>% Time under 5% capacity</b>		17.94
	<b>% Time 1.25-2.5%</b>			5.06		<b>% Time under 2.5% capacity</b>		8.15
	<b>% Time &lt;1.25%</b>			3.09		<b>% Time under 1.25% capacity</b>		3.09
<b>NOV DEC 2008</b>								
Total Periods	8295	1606	2645	1772	1736	893	621	17568
% of total time	47.22	9.14	15.06	10.09	9.88	5.08	3.53	100.00
	<b>% Time over 30% capacity</b>			47.22		<b>% Time over 30% capacity</b>		47.22
	<b>% Time 20-30%</b>			9.14		<b>% Time under 30% capacity</b>		52.78
	<b>% Time 10-20%</b>			15.06		<b>% Time under 20% capacity</b>		43.64
	<b>% Time 5-10%</b>			10.09		<b>% Time under 10% capacity</b>		28.59
	<b>% Time 2.5-5%</b>			9.88		<b>% Time under 5% capacity</b>		18.50
	<b>% Time 1.25-2.5%</b>			5.08		<b>% Time under 2.5% capacity</b>		8.62
	<b>% Time &lt;1.25%</b>			3.53		<b>% Time under 1.25% capacity</b>		3.53
<b>2009</b>								
Total Periods	40524	14611	19515	14759	9124	4548	2039	105120
% of total time	38.55	13.90	18.56	14.04	8.68	4.33	1.94	100.00
	<b>% Time over 30% capacity</b>			38.55		<b>% Time over 30% capacity</b>		38.55
	<b>% Time 20-30%</b>			13.90		<b>% Time under 30% capacity</b>		61.45
	<b>% Time 10-20%</b>			18.56		<b>% Time under 20% capacity</b>		47.55
	<b>% Time 5-10%</b>			14.04		<b>% Time under 10% capacity</b>		28.99
	<b>% Time 2.5-5%</b>			8.68		<b>% Time under 5% capacity</b>		14.95
	<b>% Time 1.25-2.5%</b>			4.33		<b>% Time under 2.5% capacity</b>		6.27
	<b>% Time &lt;1.25%</b>			1.94		<b>% Time under 1.25% capacity</b>		1.94
<b>2010</b>								
Total Periods	27357	12711	24436	18711	11437	6094	4374	105120
% of total time	26.02	12.09	23.25	17.80	10.88	5.80	4.16	100.00
	<b>% Time over 30% capacity</b>			26.02		<b>% Time over 30% capacity</b>		26.02
	<b>% Time 20-30%</b>			12.09		<b>% Time under 30% capacity</b>		73.98
	<b>% Time 10-20%</b>			23.25		<b>% Time under 20% capacity</b>		61.88
	<b>% Time 5-10%</b>			17.80		<b>% Time under 10% capacity</b>		38.64
	<b>% Time 2.5-5%</b>			10.88		<b>% Time under 5% capacity</b>		20.84
	<b>% Time 1.25-2.5%</b>			5.80		<b>% Time under 2.5% capacity</b>		9.96
	<b>% Time &lt;1.25%</b>			4.16		<b>% Time under 1.25% capacity</b>		4.16
<b>2009/2010</b>								
Total Periods	67881	27322	43951	33470	20561	10642	6413	210240
% of total time	32.29	13.00	20.91	15.92	9.78	5.06	3.05	100.00
	<b>% Time over 30% capacity</b>			32.29		<b>% Time over 30% capacity</b>		32.29
	<b>% Time 20-30%</b>			13.00		<b>% Time under 30% capacity</b>		67.71
	<b>% Time 10-20%</b>			20.91		<b>% Time under 20% capacity</b>		54.72
	<b>% Time 5-10%</b>			15.92		<b>% Time under 10% capacity</b>		33.81
	<b>% Time 2.5-5%</b>			9.78		<b>% Time under 5% capacity</b>		17.89
	<b>% Time 1.25-2.5%</b>			5.06		<b>% Time under 2.5% capacity</b>		8.11
	<b>% Time &lt;1.25%</b>			3.05		<b>% Time under 1.25% capacity</b>		3.05

## ANALYSIS OF WIND POWER GENERATION NOVEMBER 2008 TO DECEMBER 2010

PEAK DEMANDS AND WIND OUTPUT WINTER 2009/2010 AND WINTER 2010/2011 TO 31ST DECEMBER 2010

DATE	TIME	TOTAL OUTPUT MW	CCGT MW	OIL MW	COAL MW	NUCLEAR MW	WIND MW	PUMP STORAGE HYDRO MW	HYDRO MW	OCGT MW	FRENCH INTER-CONNECTOR MW	METERED WIND CAPACITY MW	METERED WIND CAPACITY %	DEMAND %
7th JANUARY 2010	17.05 HRS	59541	22918	0	25910	7775	75	2065	665	133	0	1588	4.72	0.13
7th DECEMBER 2010	17.20 HRS	60191	23525	2085	22632	7732	134	2170	723	188	1002	2430	5.51	0.22
20th DECEMBER 2010	17.20 HRS	60017	21910	974	24014	8321	62	2065	645	26	2000	2430	2.55	0.10
21st DECEMBER 2010	17.30 HRS	59405	22666	643	23056	8189	61	1919	453	419	1999	2430	2.51	0.10

NOTES: CCGT IS CLOSED CYCLE GAS TURBINE, OCGT IS OPEN CYCLE GAS TURBINE.

### PEAK DEMANDS AND WIND OUTPUT IN 2010.

DATE	TIME	DEMAND MW	WIND MW	METERED WIND CAPACITY MW	% of METERED WIND CAPACITY
7th JANUARY 2010	17.05 HRS	59541	75	1588	4.72
7th DECEMBER 2010	17.20 HRS	60191	134	2430	5.51
20th DECEMBER 2010	17.20 HRS	60017	62	2430	2.55
21st DECEMBER 2010	17.30 HRS	59405	61	2430	2.51