

2003

2002 Actual		Fuel used	Net Elec Supplied*		CO2 emissions 2002	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.	'000 Tonnes per Gwh	'000 Tonnes of CO2
0.35598	Coal	344,552	118,475	0.34385	0.31581	108814
0.01547	Oil	14,977	4,217	0.28157	0.05402	809
0.34037	Gas	329,442	148,870	0.45189	0.16436	54148
	<b>Total Fossil Fuels</b>	<b>688,971</b>	<b>271,562</b>			0
0.24152	Nuclear	233,765	81,090	0.34689	0.00020	47
0.00769	All Hydro	7,440	3,862	0.51909		
0.02491	Other Renewables	24,107	5,307	0.22014		
0.01275	Other thermal fuels	12,343	3,578	0.28988		
0.00130	Other	1,259	1,259	1.00000		
	<b>Total others</b>	<b>278,914</b>	<b>95,096</b>		0.13538	6112
1.00000	<b>Total Fuels</b>	<b>967,885</b>	<b>SUPPLY</b>	<b>366.658</b>	Thousand Tonnes CO2	<b>169931</b>

2003 Actual		Fuel used	Net Elec Supplied*		CO2 emissions 2003	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.	Conversion rate	'000 Tonnes of CO2
0.37760	Coal	378,463	131,760	0.34814	0.31482	119149.21
0.01384	Oil	13,867	4,171	0.30079	0.05530	766.85
0.32318	Gas	323,926	145,134	0.44805	0.16341	52933.26
	<b>Total Fossil Fuels</b>	<b>716,256</b>	<b>281,065</b>			
0.23255	Nuclear	233,080	81,911	0.35143	0.00021	48.30
0.00595	All Hydro (net)	5,962	2,307	0.38695		
0.02794	Other Renewables	28,008	6,290	0.22458		
0.01766	Other thermal fuels	17,703	3,665	0.20703		
0.00129	Other	1,288	1,288	1.00000		
	<b>Total others</b>	<b>286,041</b>	<b>95,461</b>		0.13274	7029.84
1.00000	<b>Total Fuels</b>	<b>1,002,297</b>	<b>SUPPLY</b>	<b>376.526</b>	Thousand Tonnes CO2	<b>179927</b>

2003 If same Fuel Mix as 2002		Fuel used	Net Elec Supplied*		CO2 emissions 2003	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.	Conversion rate	'000 Tonnes of CO2
0.35598	Coal	354,148	123,295	0.34814	0.31482	111494.35
0.01547	Oil	15,394	4,630	0.30079	0.05530	851.30
0.34037	Gas	338,617	151,716	0.44805	0.16341	55334.02
	<b>Total Fossil Fuels</b>	<b>708,160</b>	<b>279,642</b>			
0.24152	Nuclear	240,276	84,440	0.35143	0.00021	49.79
0.00769	All Hydro (net)	7,647	2,959	0.38695		0.00
0.02491	Other Renewables	24,778	5,565	0.22458		0.00
0.01275	Other thermal fuels	12,687	2,627	0.20703		0.00
0.00130	Other	1,294	1,294	1.00000		0.00
	<b>Total others</b>	<b>286,682</b>	<b>96,884</b>		0.13274	6159.82
1.00000	<b>Total Fuels</b>	<b>994,842</b>	<b>SUPPLY</b>	<b>376.526</b>	Thousand Tonnes CO2	<b>173889</b>

2004

2002 Actual		Fuel used	Net Elec Supplied*		CO2 emissions 2002	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.	'000 Tonnes per Gwh	'000 Tonnes of CO2
0.35598	Coal	344,552	118,475	0.34385	0.31581	108813.81
0.01547	Oil	14,977	4,217	0.28157	0.05402	809.01
0.34037	Gas	329,442	148,870	0.45189	0.16436	54148.49
	Total Fossil Fuels	<b>688,971</b>	<b>271,562</b>			0
0.24152	Nuclear	233,765	81,090	0.34689	0.00020	47.19
0.00769	All Hydro	7,440	3,862	0.51909		
0.02491	Other Renewables	24,107	5,307	0.22014		
0.01275	Other thermal fuels	12,343	3,578	0.28988		
0.00130	Other	1,259	1,259	1.00000		
	Total others	<b>278,914</b>	<b>95,096</b>		0.13538	6112.20
1.00000	Total Fuels	<b>967,885</b>	<b>SUPPLY</b>	<b>366.658</b>	Thousand Tonnes CO2	<b>169931</b>

2004 Actual		Fuel used	Net Elec Supplied*		CO2 emissions 2004	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.	Conversion rate	'000 Tonnes of CO2
0.36926	Coal	364,158	125,689	0.34515	0.31677	115354.13
0.01297	Oil	12,792	4,094	0.32004	0.04117	526.69
0.34500	Gas	340,228	153,734	0.45186	0.16578	56403.84
	Total Fossil Fuels	<b>717,178</b>	<b>283,517</b>			
0.21421	Nuclear	211,248	73,682	0.34879	0.00024	49.91
0.00760	All Hydro (net)	7,493	3,883	0.51822		
0.03264	Other Renewables	32,184	7,427	0.23077		
0.01636	Other thermal fuels	16,132	2,951	0.18293		
0.00197	Other	1,939	1,939	1.00000		
	Total others	<b>268,996</b>	<b>89,882</b>		0.13753	7942.25
1.00000	Total Fuels	<b>986,174</b>	<b>SUPPLY</b>	<b>373.399</b>	Thousand Tonnes CO2	<b>180277</b>

2004 If Fuel Mix As 2002		Fuel used	Net Elec Supplied*		CO2 emissions 2004	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.	Conversion rate	'000 Tonnes of CO2
0.35598	Coal	350,514	120,980	0.34515	0.31677	111032.25
0.01547	Oil	15,236	4,876	0.32004	0.05402	823.01
0.34037	Gas	335,143	151,436	0.45186	0.16578	55560.82
	Total Fossil Fuels	<b>700,893</b>	<b>277,292</b>			
0.24152	Nuclear	237,810	82,947	0.34879	0.00024	56.18
0.00769	All Hydro (net)	7,569	3,922	0.51822		
0.02491	Other Renewables	24,524	5,659	0.23077		
0.01275	Other thermal fuels	12,557	2,297	0.18293		
0.00130	Other	1,281	1,281	1.00000		
	Total others	<b>283,741</b>	<b>96,106</b>		0.13753	6316.92
1.00000	Total Fuels	<b>984,634</b>	<b>SUPPLY</b>	<b>373.399</b>	Thousand Tonnes CO2	<b>173789</b>

2005

2002 Actual		Fuel used	Net Elec Supplied*		CO2 emissions 2002	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.	'000 Tonnes per Gwh	'000 Tonnes of CO2
0.35598	Coal	344,552	118,475	0.34385	0.31581	108813.81
0.01547	Oil	14,977	4,217	0.28157	0.05402	809.01
0.34037	Gas	329,442	148,870	0.45189	0.16436	54148.49
	Total Fossil Fuels	<b>688,971</b>	<b>271,562</b>			0
0.24152	Nuclear	233,765	81,090	0.34689	0.00020	47.19
0.00769	All Hydro	7,440	3,862	0.51909		
0.02491	Other Renewables	24,107	5,307	0.22014		
0.01275	Other thermal fuels	12,343	3,578	0.28988		
0.00130	Other	1,259	1,259	1.00000		
	Total others	<b>278,914</b>	<b>95,096</b>		0.13538	6112.20
1.00000	Total Fuels	<b>967,885</b>	<b>SUPPLY</b>	<b>366,658</b>	Thousand Tonnes CO2	<b>169931</b>

2005 Actual		Fuel used	Net elec supplied*	Net Efficiency.	CO2 emissions	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh			'000 Tonnes of CO2
0.37596	Coal	378,846	128,513	0.33922	0.31162	118057
0.01560	Oil	15,722	4,650	0.29576	0.06717	1056
0.32587	Gas	328,372	149,214	0.45441	0.16889	55459
	Total Fossil Fuels	<b>722,940</b>	<b>282,377</b>			
0.21203	Nuclear	213,661	75,173	0.35183	0.00027	58
0.00779	All Hydro	7852	3,819	0.48637		
0.03869	Other Renewables	38,990	8,955	0.22967		
0.02116	Other thermal fuels	21,327	3,543	0.16613		
0.00289	Other	2,912	2,912	1.00000		
	Total others	<b>284,742</b>	<b>94,402</b>		0.11689	8309
1.00000	Total Fuels	<b>1,007,682</b>		<b>376,779</b>	Thousand Tonnes CO2	<b>182940</b>

2005 If same Fuel Mix as 2002		Fuel used	Net elec supplied*	Net Efficiency.	CO2 emissions	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh			'000 Tonnes of CO2
0.35598	Coal	354,970	120,414	0.33922	0.31162	110617
0.01547	Oil	15,430	4,564	0.29576	0.06717	1036
0.34037	Gas	339,403	154,227	0.45441	0.16889	57322
	Total Fossil Fuels	<b>709,803</b>	<b>279,204</b>			
0.24152	Nuclear	240,833	84,733	0.35183	0.00027	65
0.00769	All Hydro	7665	3,728	0.48637		
0.02491	Other Renewables	24,836	5,704	0.22967		
0.01275	Other thermal fuels	12,716	2,113	0.16613		
0.00130	Other	1,297	1,297	1.00000		
	Total others	<b>287,347</b>	<b>97,575</b>		0.11689	5437
1.00000	Total Fuels	<b>997,150</b>		<b>376,779</b>	Thousand Tonnes CO2	<b>174478</b>



## 2007

2002 Actual		Fuel used	Net Elec Supplied*		CO2 emissions 2002	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.	'000 Tonnes per Gwh	'000 Tonnes of CO2
0.35598	Coal	344,552	118,475	0.34385	0.31581	108814
0.01547	Oil	14,977	4,217	0.28157	0.05402	809
0.34037	Gas	329,442	148,870	0.45189	0.16436	54148
	<b>Total Fossil Fuels</b>	<b>688,971</b>	<b>271,562</b>			0
0.24152	Nuclear	233,765	81,090	0.34689	0.00020	47
0.00769	All Hydro	7,440	3,862	0.51909		
0.02491	Other Renewables	24,107	5,307	0.22014		
0.01275	Other thermal fuels	12,343	3,578	0.28988		
0.00130	Other	1,259	1,259	1.00000		
	<b>Total others</b>	<b>278,914</b>	<b>95,096</b>		0.13538	6112
1.00000	<b>Total Fuels</b>	<b>967,885</b>	<b>SUPPLY</b>	<b>366,658</b>	<b>Thousand Tonnes CO2</b>	<b>169931</b>

2007 Actual		Fuel used	Net Elec. Supplied*		CO2 emissions 2007	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.		'000 Tonnes of CO2
0.38887	Coal	382,630	129,734	0.33906	0.31165	119247
0.01440	Oil	14,169	4,127	0.29127	0.06316	895
0.35869	Gas	352,929	161,110	0.45649	0.16728	59037
	<b>Total Fossil Fuels</b>	<b>749,728</b>	<b>294,971</b>			
0.16591	Nuclear	163,244	57,249	0.35070	0.00030	49
0.00909	All Hydro	8,948	3,818	0.42669		
0.04121	Other Renewables	40,547	9,143	0.22549		
0.01646	Other thermal fuels	16,198	2,926	0.18064		
0.00537	Other	5,285	5,285	1.00000		
	<b>Total others</b>	<b>234,222</b>	<b>78,421</b>		0.12152	8625
1.00000	<b>Total Fuels</b>	<b>983,950</b>	<b>SUPPLY</b>	<b>373,392</b>	<b>Thousand Tonnes CO2</b>	<b>187853</b>

2007 if Same Fuel Mix as 2002		Fuel used	Net Elec. Supplied*		CO2 emissions 2007	
Fuel Proportions of Total	Fuel Type	Gwh	Gwh	Net Efficiency.		'000 Tonnes of CO2
0.35598	Coal	351,844	119,296	0.33906	0.31165	109653
0.01547	Oil	15,294	4,455	0.29127	0.06316	966
0.34037	Gas	336,415	153,571	0.45649	0.16728	56274
	<b>Total Fossil Fuels</b>	<b>703,553</b>	<b>277,322</b>			
0.24152	Nuclear	238,713	83,716	0.35070	0.00030	71
0.00769	All Hydro	7,597	3,242	0.42669		
0.02491	Other Renewables	24,617	5,551	0.22549		
0.01275	Other thermal fuels	12,604	2,277	0.18064		
0.00130	Other	1,286	1,286	1.00000		
	<b>Total others</b>	<b>284,817</b>	<b>96,071</b>		0.12152	5602
1.00000	<b>Total Fuels</b>	<b>988,370</b>	<b>SUPPLY</b>	<b>373,392</b>	<b>Thousand Tonnes CO2</b>	<b>172567</b>



**TABLE 1. CO2 EMISSIONS FROM ELECTRICITY GENERATION 2002-2007**

Source: www.statistics.gov.uk

Thousand Tonnes of CO2	2002	2003	2004	2005	2006	2007	2008*		
Coal	108813.81	119149.21	115354.13	118057.28	130290.67	119247.29	108353.82		
Oil	809.01	766.85	526.69	1056.12	1096.69	894.95	1297.10		
Gas	54148.49	52933.26	56403.84	55459.37	51825.13	59036.95	63099.61		
Nuclear	47.19	48.30	49.91	57.61	59.47	48.72	41.34	Others 2007	70,978 Gwh
Others	6112.20	7029.84	7942.25	8309.39	8648.12	8624.91	8358.43	Others 2008	68,785 Gwh
<b>Total</b>	<b>169,931</b>	<b>179,927</b>	<b>180,277</b>	<b>182,940</b>	<b>191,920</b>	<b>187,853</b>	<b>181,150</b>		11,220 6.60%

\* As figures for CO2 emissions for 2008 were not available we have applied the 2007 Tonnes per Gwh figures to the 2008 fuel-use figures to estimate the CO2 emissions for 2008

**TABLE 2. WIND FARM OUTPUT 2002-2008**

WIND-FARM OUTPUT 2002-2008	Unit	2002	2003	2004	2005	2006	2007	2008	Totals	Totals 2003-2008
Source: BERR. Digest of UK Energy Statistics - Table 7.4										
Installed wind capacity	Mwe	534	742	933	1565	1954	2477	3406		
Installed wind capacity (Annual generation capacity)	GWh	4669	6484	8152	13672	17075	21641	29755	101447	
Output	Gwh	1256	1286	1935	2904	4225	5274	7097	23977	22,721
Load factor (percentage of maximum output)	%	26.90%	19.83%	23.74%	21.24%	24.74%	24.37%	23.85%	23.64%	Average Load Factor
									Percentage of supply	1.929%
									Theoretical CO2 saved	9,770
										000 tonnes CO2

**TABLE 3. CO2 Emissions Reductions assuming same fuel proportions as 2002**

	2002	2003	2004	2005	2006	2007	2008*	Total 2003 - 2008
CO2 emissions from electricity generation - Thousand Tonnes of CO2	169,931	179,927	180,277	182,940	191,920	187,853	181,150	
Electricity Supply - Gwh	366,658	376,526	373,399	376,779	374,397	373,392	367,961	
Thousand Tonnes of CO2 emitted per Gwh of supply	0.46346	0.47786	0.48280	0.48554	0.51261	0.50310	0.49231	
Thousand Tonnes of CO2 emitted assuming same fuel proportions as 2002 (see annual tables)	169,931	173,889	173,789	174,478	175,077	172,567	169,903	
Thousand Tonnes of CO2 emitted per Gwh of supply assuming same fuel proportions as 2002	0.46346	0.46183	0.46542	0.46308	0.46762	0.46216	0.46174	
Thousand Tonnes of CO2 saved compared to 2002 assuming same fuel proportions as 2002		615.14	-734.00	143.20	-1559.32	484.92	632.23	-417.83
Expected savings from wind-farms @ 430 tonnes/Gwh (ASA ruling)		553	832	1249	1817	2268	3052	9770

**TABLE 4 - EVIDENCED CONTRIBUTION TO ELECTRICITY SUPPLY FROM WIND-POWER (Fuel use per GWh of Supply)**

	Unit	2002	2003	2004	2005	2006	2007	2008	Totals
Total Fuel Use (with same fuel proportions as 2002)	Gwh	967,885	994,842	984,634	997,150	1,002,746	988,370	973,110	
<b>WIND OUTPUT (Source: BERR. Digest of UK Energy Statistics - Table 7.4)</b>	<b>Gwh</b>	<b>1,256</b>	<b>1,286</b>	<b>1,935</b>	<b>2,904</b>	<b>4,225</b>	<b>5,274</b>	<b>7,097</b>	<b>15,624</b>
Fuel use (all fuels except wind)	Gwh	966,629	993,556	982,699	994,246	998,521	983,096	966,013	
Electricity supply	Gwh	366,658	376,526	373,399	376,779	374,397	373,392	367,961	
Fuel use per Gwh of supply (all fuels except wind. 2002 fuel proportions)	Gwh	2.636	2.639	2.632	2.6388	2.6670	2.633	2.625	
<b>Evidenced fuel saving compared to 2002</b>	<b>Gwh</b>		<b>-912</b>	<b>1,701</b>	<b>-935</b>	<b>-11,489</b>	<b>1,286</b>	<b>4,942</b>	<b>-5,406</b>