

Energy from Renewables and Wastes in the UK, 1990-2024

All figures in thousand tonnes energy equivalent (ttoe)

Source: Digest of UK Energy Statistics 2025

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	% 2024
Green sources																																			35.2%	
Solar heating & photovoltaics	6.4	6.8	7.1	7.4	7.7	8.1	8.7	8.9	9.1	9.4	11.2	13.4	16.3	20.0	24.9	30.1	37.2	46.1	20.3	24.1	29.9	51.0	149	207	384	683	930	1,021	1,125	1,104	1,115	1,079	1,239	1,295	1,270	4.4%
Onshore wind	0.8	0.7	2.8	18.7	29.5	33.7	41.9	57.4	75.4	73.1	81.3	82.6	108	110	149	215	307	386	498	647	621	930	1,053	1,455	1,595	1,965	1,785	2,470	2,612	2,739	2,999	2,522	3,018	2,794	2,987	10.3%
Offshore wind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.9	17.1	34.6	56.0	67.3	115	151	263	443	654	986	1,153	1,498	1,411	1,798	2,281	2,749	3,504	3,061	3,879	4,269	4,174	14.4%
Marine energy (wave/tidal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.4	0.4	0.2	0.2	0.0	0.4	0.8	1.2	1.0	0.5	1.0	1.1	1.1	0.0%
Hydro	448	398	467	370	438	416	292	358	440	459	437	349	412	270	417	423	395	437	442	450	309	489	457	404	506	541	462	506	468	510	591	466	436	470	498	1.7%
Deep geothermal	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.0%
Heat pumps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	729	751	778	808	839	871	905	933	964	998	1,034	1,032	1,077	1,121	1,182	1,248	1,317	4.5%
Brown sources																																				40.2%
Wood	174	174	204	204	204	204	204	204	204	204	204	204	204	206	232	266	299	332	265	286	388	344	420	491	460	556	625	647	733	782	845	946	936	1,006	1,035	3.6%
Waste wood	0	0	0	237	455	498	505	506	437	368	254	225	225	225	225	93	97	101	220	223	279	308	309	315	319	319	319	321	317	315	306	306	297	273	298	1.0%
Plant biomass	72	72	72	72	72	72	72	72	72	72	83	153	164	209	195	222	226	251	436	614	732	843	1,348	2,427	3,474	4,688	4,794	5,226	6,162	6,717	7,080	7,536	6,562	6,179	7,448	25.6%
Animal biomass	0	0	17	52	71	71	67	68	76	157	183	205	184	169	179	171	168	263	301	270	279	260	257	255	259	266	241	237	224	244	247	255	270	261	245	0.8%
Landfill gas	80	105	155	162	188	199	249	317	402	572	731	836	892	1,088	1,327	1,421	1,465	1,547	1,554	1,626	1,725	1,758	1,722	1,711	1,664	1,612	1,556	1,419	1,298	879	849	805	756	729	706	2.4%
Sewage gas	138	151	151	158	170	193	193	192	181	189	169	168	174	182	199	206	190	211	230	249	295	319	306	320	343	366	387	398	407	323	327	326	306	300	296	1.0%
Grid connected Sewage gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	22.9	43.2	54.1	53.9	53.9	99.1	104	0.4%
Anaerobic diges-tion	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	3.3	4.9	4.6	5.8	6.9	8.6	16.3	43.3	87.5	177	252	378	606	761	925	982	803	804	886	915	949	953	3.3%
Grid connected AD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	328	368	416	456	490	503	531	548	575	2.0%
Bioliquids	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.1	103	127	104	74	61	36	0.1%
Incineration																																				15.1%
Biodegradable E-f-W	101	104	117	147	222	229	237	267	362	365	375	413	454	480	463	460	513	520	539	656	632	600	668	594	705	972	1,187	1,278	1,464	1,618	1,678	1,806	1,884	2,077	2,113	7.3%
Co-fired	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.0	197	335	831	829	576	488	440	625	764	401	54	25	38	25	18	0	0	0	0	0	0	0	0.0%
Non-biodegrad-able wastes	82.1	84.3	100	130	217	247	248	288	352	322	330	347	378	391	380	389	405	436	464	509	534	568	664	668	847	1,049	1,268	1,359	1,545	1,697	1,759	1,975	2,091	2,219	2,275	7.8%
Blue sources																																				9.4%
Transport Bio-gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.9	53.4	85.8	116	180	356	368	437	462	459	448	428	424	458	463	367	526	750	822	888	3.1%
Transport Biod-iesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	15.1	16.7	26.1	134	276	728	858	862	760	521	629	784	550	582	573	939	1,384	1,363	1,099	1,424	1,612	1,376	4.7%
Transport Bio LPGs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.7	38.9	34.6	43.3	19.1	9.3	12.5	0.0%
Transport Bio-methane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	20.9	57.3	106	120	119	190	0.7%
Transport Avi-ation turbine fuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.4	42.0	85.2	277	1.0%
Total	1,103	1,096	1,294	1,559	2,076	2,173	2,119	2,340	2,612	2,791	2,859	2,998	3,310	3,566	4,166	4,841	5,181	5,544	7,152	7,952	8,751	9,699	10,381	12,104	14,261	17,091	18,052	19,986	22,548	24,026	25,675	25,544	26,787	27,427	29,075	