

*Data extracted in December 2024.  
Planned article update: December 2025.*

### Highlights

**" In 2023, renewable energy represented 24.5% of energy consumed in the EU, up from 23.0% in 2022. "**

**" The share of energy from renewable sources used in transport in the EU reached 10.8% in 2023, up from 9.6% in 2022."**

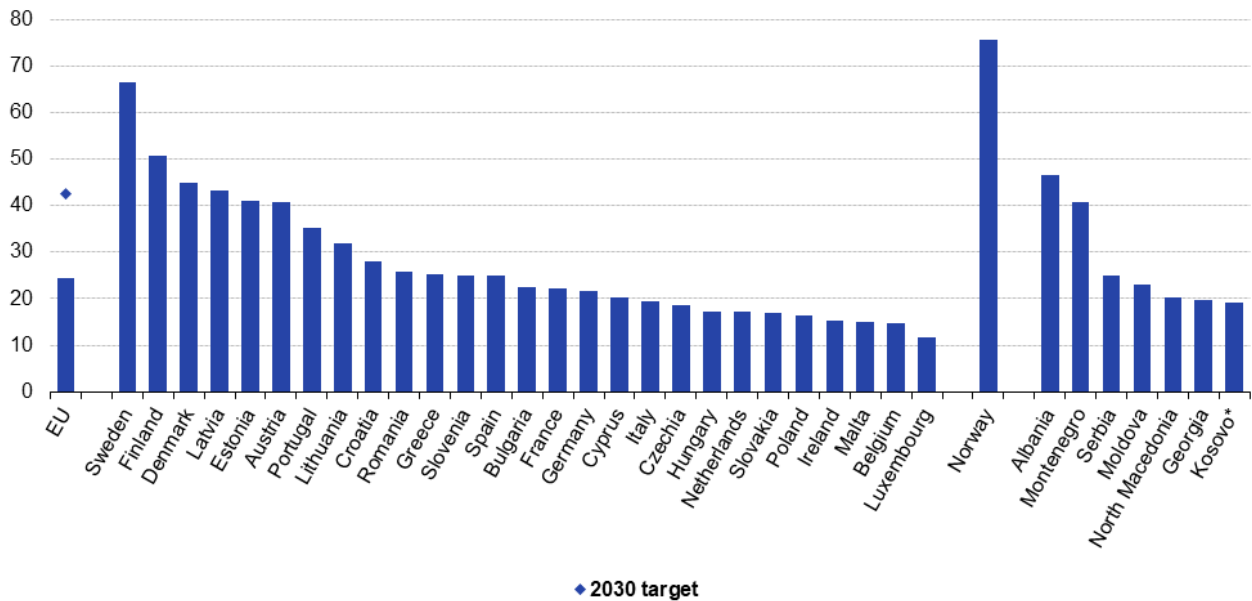
Becoming the world's first climate-neutral continent by 2050 requires ambitious measures to enable European citizens and businesses to benefit from sustainable green transition. The use of renewable energy has many potential benefits, including a reduction in [greenhouse gas](#) emissions, the diversification of energy supplies and a reduced dependency on [fossil fuel](#) markets (in particular, oil and gas). The growth of renewable energy sources may also stimulate employment in the EU, through the creation of jobs in new 'green' technologies, which will be one of the cornerstones of the future Clean Industrial Deal. This article provides recent statistics on the share of [energy from renewable sources](#) overall and in 3 consumption areas (electricity, heating and cooling, and transport) in the [European Union \(EU\)](#) . Renewable energy sources include wind power, solar power (thermal, photovoltaic and concentrated), hydro power, tidal power, geothermal energy, ambient heat captured by heat pumps, [biofuels](#) and the renewable part of [waste](#) .

### Share of renewable energy almost tripled between 2004 and 2023

The EU reached a 24.5% share of its gross final energy consumption from renewable sources in 2023, around 1.5 [percentage points \(pp\)](#) higher than in 2022 and almost 3 times higher than in 2004 (9.6%). [EU Directive 2023/2413](#) on the promotion of the use of energy from renewable sources has revised upwards the EU's 2030 renewable energy target from 32% to 42.5% (with an aim to increase it to 45%). Therefore, EU countries need to intensify their efforts to collectively comply with the new EU target for 2030, which requires increasing the share of renewable energy sources in the EU's gross final energy consumption by almost 20 pp.

Figure 1 shows the latest data available for the share of renewable energies in gross final energy consumption.

## Share of energy from renewable sources, 2023 (%)



\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: nrg\_ind\_ren)

eurostat

**Figure 1: Share of energy from renewable sources, 2023 (% of gross final energy consumption) Source: Eurostat (nrg\_ind\_ren)**

Sweden ranked first among EU countries, with two-thirds (66.4%) of its gross final energy consumption coming from renewable sources in 2023. Sweden primarily relied on solid biofuels, hydro and wind. Finland followed with 50.8%, also relying on solid biofuels, wind and hydro, while Denmark came in third with 44.9%, with most of its renewable energy sourced from solid biofuels and wind. The lowest shares of renewables were recorded in Luxembourg (11.6%, Belgium (14.7%) and Malta (15.1%).

Table 1 presents data for all reporting countries.

## Overall share of energy from renewable sources, 2004-2023

(% of gross final energy consumption)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>EU</b>	9.605	10.182	10.778	11.749	12.552	13.850	14.405	14.547	16.002	16.659	17.416	17.820	17.978	18.411	19.096	19.887	22.038	21.886	23.087	24.531
Belgium	1.916	2.325	2.658	3.140	3.611	4.746	6.004	6.302	7.086	7.671	8.038	8.060	8.744	9.136	9.472	9.929	13.000	13.076	13.817	14.741
Bulgaria	9.231	9.173	9.415	9.098	10.345	12.005	13.927	14.152	15.837	18.898	18.050	18.261	18.760	18.695	20.581	21.545	23.319	19.445	19.044	22.583
Czechia	6.773	7.113	7.362	7.895	8.674	9.977	10.513	10.945	12.814	13.927	15.074	15.070	14.926	14.799	15.139	16.239	17.303	17.614	18.123	18.586
Denmark	14.839	15.965	16.332	17.747	18.543	19.948	21.888	23.389	25.465	27.173	29.310	30.469	31.715	34.387	35.159	37.020	31.681	41.813	42.383	44.923
Germany	6.207	7.167	8.466	10.039	10.072	10.851	11.667	12.470	13.549	13.757	14.381	14.901	14.885	15.472	16.660	17.266	19.090	19.281	20.912	21.547
Estonia	18.420	17.478	16.011	17.139	18.811	23.009	24.575	25.515	25.586	25.356	26.130	28.987	29.232	29.538	29.970	31.730	30.069	37.342	38.542	40.950
Ireland	2.378	2.822	3.073	3.497	3.979	5.243	5.755	6.605	7.029	7.521	8.516	9.083	9.189	10.520	10.942	11.979	16.160	12.996	13.068	15.253
Greece	7.161	7.277	7.458	8.249	8.183	8.731	10.077	11.153	13.741	15.326	15.683	15.690	15.390	17.300	18.001	19.633	21.749	22.001	22.671	25.269
Spain	8.345	8.444	9.156	9.667	10.744	12.958	13.782	13.176	14.239	15.081	15.879	16.221	17.015	17.118	17.023	17.852	21.220	20.550	21.896	24.852
France	9.319	9.272	8.936	9.426	11.188	12.215	12.671	10.813	13.239	13.880	14.362	14.803	15.451	15.847	16.384	17.174	19.109	19.316	20.445	22.283
Croatia	23.404	23.691	22.668	22.161	21.986	23.596	25.103	25.389	26.757	28.040	27.817	28.969	28.266	27.280	28.047	28.466	31.023	31.285	28.088	28.051
Italy	6.316	7.549	8.328	9.807	11.492	12.775	13.023	12.881	15.441	16.741	17.082	17.525	17.415	18.267	17.796	18.181	20.359	18.883	19.131	19.561
Cyprus	3.071	3.131	3.263	4.001	5.131	5.920	6.161	6.245	7.111	8.428	9.144	9.903	9.833	10.478	13.873	13.777	16.879	19.069	19.427	20.213
Latvia	32.794	32.264	31.141	29.615	29.811	34.317	30.375	33.478	35.709	37.037	38.629	37.538	37.138	39.008	40.019	40.929	42.132	42.096	43.720	43.223
Lithuania	17.221	16.768	16.887	16.482	17.824	19.798	19.639	19.943	21.437	22.689	23.592	25.748	25.612	26.038	24.695	25.474	26.773	28.166	29.599	31.926
Luxembourg	0.899	1.402	1.469	2.725	2.809	2.929	2.851	2.855	3.112	3.494	4.471	4.987	5.364	6.194	8.942	7.046	11.699	11.726	14.429	11.619
Hungary	4.364	6.931	7.433	8.575	8.564	11.673	12.742	13.972	15.530	16.205	14.618	14.495	14.377	13.556	12.548	12.634	13.850	14.134	15.193	17.361
Malta	0.102	0.123	0.149	0.177	0.195	0.221	0.979	1.850	2.862	3.760	4.744	5.119	6.208	7.219	7.914	8.230	10.714	12.631	13.969	15.077
Netherlands	2.030	2.478	2.778	3.298	3.596	4.266	3.917	4.524	4.659	4.691	5.415	5.714	5.846	6.507	7.394	8.886	13.999	12.955	14.902	17.154
Austria	22.553	24.353	26.276	28.144	28.788	31.039	31.205	31.552	32.734	32.665	33.550	33.497	33.370	33.136	33.784	33.755	36.545	34.792	34.074	40.844
Poland	6.882	6.867	6.859	6.903	7.686	8.676	9.281	10.337	10.955	11.452	11.605	11.881	11.396	11.059	14.936	15.377	16.102	15.620	16.847	16.496
Portugal	19.205	19.523	20.792	21.907	22.929	24.405	24.150	24.603	24.574	25.699	29.508	30.514	30.864	30.611	30.203	30.623	33.982	33.982	34.675	35.163
Romania	16.811	17.571	17.096	18.195	20.204	22.157	22.834	21.743	22.825	23.886	24.845	24.785	25.032	24.454	23.875	24.290	24.478	23.871	24.229	25.757
Slovenia	18.397	19.809	18.416	19.675	18.646	20.765	21.081	20.937	21.551	23.160	22.459	22.879	21.975	21.658	21.378	21.968	25.000	25.000	25.002	25.066
Slovakia	6.391	6.360	6.584	7.766	7.723	9.368	9.099	10.348	10.453	10.133	11.713	12.882	12.029	11.465	11.896	16.894	17.345	17.419	17.481	16.990
Finland	29.232	28.814	30.043	29.561	31.071	31.045	32.166	32.532	34.222	36.630	38.633	39.230	38.943	40.857	41.185	42.807	43.939	42.854	47.740	50.750
Sweden	38.427	39.982	41.734	43.224	43.922	47.024	46.099	47.632	49.403	50.153	51.151	52.220	52.597	53.390	53.916	55.785	60.124	62.527	66.287	66.393
Iceland	58.899	60.270	60.921	71.925	67.981	70.238	70.909	72.298	73.727	73.787	73.043	71.949	75.329	74.104	77.173	78.612	83.725	80.185	79.475	.
Norway	58.417	60.069	60.521	60.398	62.003	65.071	61.889	64.638	64.932	66.480	68.406	68.545	69.235	70.036	71.566	74.406	77.358	74.026	75.875	75.613
Montenegro	.	35.694	34.842	32.925	32.290	39.371	40.640	40.648	41.513	43.696	44.098	43.073	41.529	39.693	38.801	37.722	43.770	39.891	41.064	40.883
Serbia	12.724	14.257	14.542	14.327	15.888	21.024	19.763	19.118	20.790	21.095	22.864	21.989	21.147	20.287	20.320	21.443	26.297	25.340	24.764	24.904
Bosnia and Herzegovina	.	.	.	.	.	.	.	.	.	.	24.873	26.607	25.358	23.241	35.972	37.454	39.835	36.562	39.294	.
Albania	29.620	31.367	32.070	32.657	32.448	31.437	31.867	31.187	35.152	33.167	31.856	34.913	36.953	35.776	36.572	38.042	45.015	41.389	44.076	46.620
North Macedonia	15.702	16.466	16.527	14.976	15.555	17.238	16.451	16.407	18.128	18.509	19.559	19.526	18.044	19.636	18.179	17.485	19.222	17.800	19.213	20.214
Kosovo*	20.541	19.773	19.511	18.812	18.429	18.230	18.230	17.598	18.625	18.823	19.544	18.484	24.472	23.082	24.616	24.215	24.401	22.143	18.773	19.260
Moldova	7.450	6.402	6.960	6.443	6.994	7.924	21.369	22.081	24.328	24.419	26.169	26.173	26.888	27.836	27.476	23.843	25.057	22.202	21.538	22.995
Georgia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	18.292	18.141	19.850

Note: Data until 2020 are calculated on the basis of Directive 2009/28/EC, while data from 2021 onwards follow Directive (EU) 2018/2001.

.: Data not available.

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Source: Eurostat (online data code: nrg\_ind\_ren)

**Table 1: Share of energy from renewable sources, 2004-2023 (% of gross final energy consumption) Source: Eurostat (nrg\_ind\_ren)**

Some countries used statistical transfers to maintain higher levels than their 2020 targets (which is an obligation for the 2021-2030 period). Statistical transfers are agreements between EU countries to transfer a specified amount of energy from renewable sources from one Member State to another Member States. See Table 1a for more details on the statistical transfers reported for reference year 2023.

## Statistical transfers reported by countries for reference year 2023

(1 000 tonnes of oil equivalent, ktoe)

		Amount added to the share of renewables	
		Belgium	Germany
Amount deduced from the share of renewables	Denmark	50.3	4.2

Source: Eurostat (online data code: nrg\_ind\_stjbjss)



**Table 1a: Statistical transfers reported by countries for reference year 2023 (1 000 tonnes of oil equivalent, ktoe)** Source: Eurostat (nrg\_ind\_stjbjss)

The rest of this article’s statistical findings deal with the developments from 2004 to 2023 in the share of energy from renewable sources in 3 areas: electricity, heating and cooling, and transport.

## Wind and water provide most renewable electricity; solar is the fastest-growing energy source

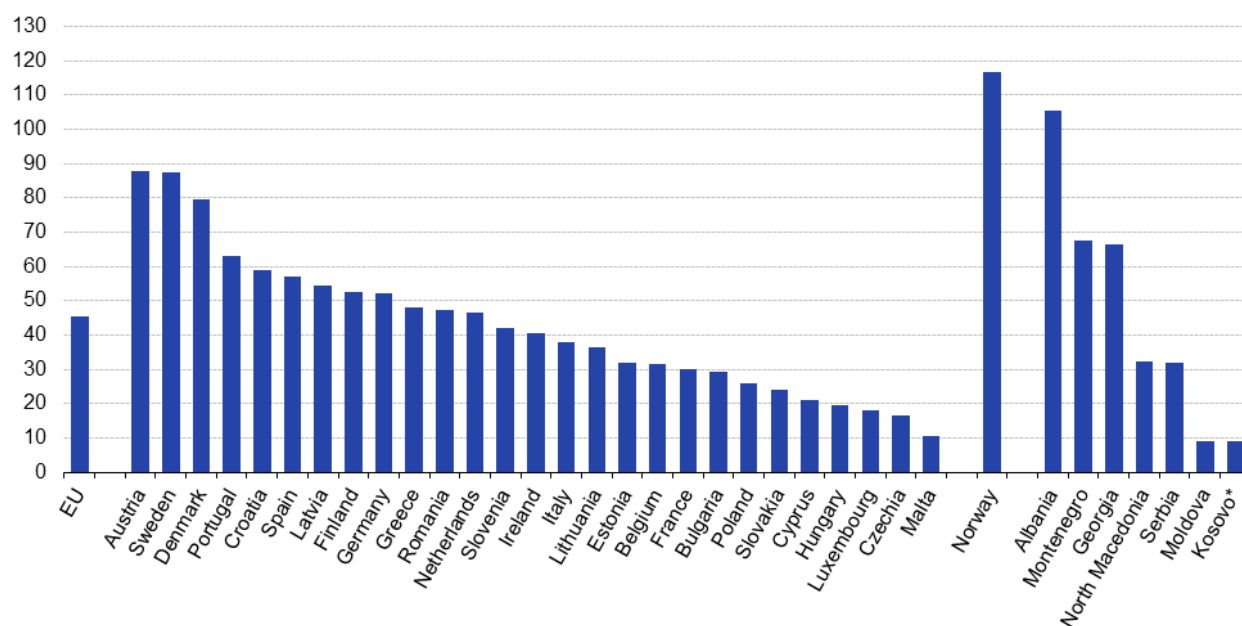
The accounting rules in Directive (EU) 2018/2001 prescribe that electricity generated by hydro power and wind power have to be normalised to account for annual weather variations (hydro is normalised over the last 15 years and wind over the last 5 years, separating on-shore and off-shore wind normalisation). This article presents the results applying these accounting rules.

The growth in electricity generated from renewable energy sources during the period 2013 to 2023 largely reflects an expansion in two renewable energy sources across the EU, namely wind power and solar power. In 2023, renewable energy sources made up 45.3% of gross electricity consumption in the EU, more than 4 pp higher than the previous year (41.2% in 2022).

Wind and hydro power accounted for more than two-thirds of the total electricity generated from renewable sources (38.5 and 28.2%, respectively). The remaining one-third of electricity generated was from solar power (20.5%), solid biofuels (6.2%) and other renewable sources (6.6%). Solar power is the fastest-growing source: in 2008, it accounted for 1%. This means that the growth in electricity from solar power has been dramatic, rising from just 7.4 TWh in 2008 to 252.1 TWh in 2023.

The share of energy from renewable sources in electricity is presented in Figure 2.

## Share of energy from renewable sources in gross electricity consumption, 2023 (%)



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Source: Eurostat (online data code: nrg\_ind\_ren)

eurostat 

**Figure 2: Share of energy from renewable sources in gross electricity consumption, 2023** Source: Eurostat (nrg\_ind\_ren)

Among the EU countries, more than 75% of electricity consumed in 2023 was generated from renewable sources in Austria (87.8%), Sweden (87.5%) and Denmark (79.4%). The consumption of electricity from renewable sources was also high in Portugal (63.0%), Croatia (58.8%), Spain (56.9%), Latvia (54.3%) and Finland (52.4%), accounting for more than half of electricity consumed. At the other end of the scale, the share of electricity from renewable sources was less than 20% in Malta (10.7%), Czechia (16.4%), Luxembourg (18.0%) and Hungary (19.5%). The EFTA country Norway and the candidate country Albania produced more electricity from renewable sources than the total amount of electricity they consumed in 2023, therefore leading to a share higher than 100%.

For more details, see Table 2.

Share of energy from renewable sources in gross electricity consumption, 2004-2023 (%)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>EU</b>	15.871	16.402	16.879	17.647	18.526	20.654	21.283	23.300	25.138	26.769	28.601	29.655	30.172	31.104	32.134	34.086	37.408	37.760	41.220	45.286
Belgium	1.714	2.386	3.130	3.662	4.625	6.176	7.332	8.989	11.338	12.547	13.414	15.573	15.834	17.214	18.886	20.817	25.122	26.018	29.098	31.370
Bulgaria	8.358	8.666	8.730	8.899	9.544	10.906	12.358	12.621	15.816	18.682	18.686	18.975	19.147	19.022	22.355	23.509	23.586	21.413	20.080	29.426
Czechia	3.693	3.782	4.096	4.621	5.182	6.378	7.516	10.610	11.667	12.781	13.890	14.072	13.615	13.654	13.711	14.046	14.810	14.468	15.499	16.448
Denmark	23.754	24.647	23.966	25.001	25.936	28.257	32.735	35.874	38.716	43.084	48.493	51.292	53.717	59.940	62.394	65.347	65.323	72.920	77.223	79.392
Germany	9.436	10.577	11.944	13.727	15.141	17.521	18.241	20.930	23.605	25.284	28.171	30.882	32.273	34.612	37.691	40.604	44.215	43.880	47.888	52.240
Estonia	0.546	1.127	1.428	1.432	1.972	5.966	11.016	12.307	13.810	16.364	21.241	21.923	22.089	22.657	24.464	26.001	31.295	35.856	35.881	42.361
Ireland	6.031	7.196	8.505	9.534	10.822	14.061	15.642	18.252	19.838	20.960	23.320	25.725	27.069	30.318	33.171	36.460	39.055	37.665	37.387	40.428
Greece	7.842	8.213	8.924	9.330	9.646	11.016	12.307	13.810	16.364	21.241	21.923	22.089	22.657	24.464	26.001	31.295	35.856	35.881	42.361	48.225
Spain	19.018	19.166	20.027	21.718	23.777	27.882	29.748	31.530	33.438	36.027	37.128	36.972	36.676	36.465	35.236	37.131	42.944	46.001	50.901	56.933
France	13.782	13.738	14.058	14.289	14.358	15.088	14.815	16.179	16.548	16.977	18.465	18.821	19.209	19.933	21.131	22.389	24.819	24.733	27.292	29.981
Croatia	35.027	35.184	34.818	33.976	33.865	35.877	37.520	37.592	38.764	42.077	45.241	45.409	46.667	46.437	48.139	49.783	53.816	53.471	56.245	58.826
Italy	16.086	16.293	15.926	15.954	16.645	18.007	20.091	23.546	27.420	31.302	33.420	33.459	34.012	34.104	33.930	34.969	38.081	35.996	37.102	38.100
Cyprus	0.019	0.024	0.034	0.074	0.285	0.589	1.390	3.445	4.927	6.654	7.399	8.445	8.587	8.911	9.357	9.756	12.041	14.840	16.963	20.939
Latvia	45.958	43.023	40.414	38.622	38.733	41.942	42.051	44.694	44.877	48.685	51.037	52.205	51.251	54.352	53.499	53.423	53.357	51.399	53.519	54.317
Lithuania	3.587	3.831	4.016	4.652	4.914	5.869	7.401	9.020	10.876	13.149	13.705	15.543	16.872	18.255	18.408	18.790	20.166	21.278	26.461	36.469
Luxembourg	2.765	3.179	3.172	3.305	3.581	4.105	3.786	4.075	4.660	5.329	5.958	6.197	6.674	8.055	9.115	10.863	13.887	14.216	16.187	18.044
Hungary	2.220	4.419	3.453	4.193	5.317	6.958	7.103	6.379	6.057	6.600	7.305	7.341	7.292	7.513	8.306	9.969	11.904	13.660	15.333	19.536
Malta	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.454	1.115	1.571	3.333	4.312	5.714	6.845	7.702	7.485	9.489	9.649	10.122	10.740
Netherlands	4.446	6.297	6.541	5.963	7.464	9.069	9.601	9.740	10.350	9.911	9.924	11.040	12.550	13.812	15.171	18.230	26.407	33.251	39.650	46.400
Austria	61.627	62.901	63.527	65.666	65.880	68.626	66.361	66.779	67.439	68.909	71.059	71.487	72.521	71.626	74.189	75.067	78.204	73.881	74.806	87.764
Poland	2.049	2.512	2.860	3.316	4.248	5.713	6.549	8.078	10.610	10.676	12.360	13.401	13.342	13.082	13.027	14.356	16.237	17.167	21.009	25.792
Portugal	27.390	27.703	29.308	32.285	34.063	37.562	40.608	45.780	47.505	49.101	52.064	52.616	53.990	54.168	52.186	53.774	58.032	58.433	60.991	63.010
Romania	28.427	28.775	28.054	28.108	28.075	30.894	30.378	31.131	33.567	37.516	41.679	43.161	42.712	41.965	41.793	42.616	43.374	42.676	43.725	47.391
Slovenia	29.271	28.654	28.231	27.697	29.962	33.756	32.200	31.045	31.637	33.081	33.935	32.722	32.056	32.425	32.307	32.632	35.095	34.976	37.005	41.887
Slovakia	15.403	15.735	16.566	16.467	17.013	17.765	17.774	19.305	20.054	20.800	22.870	22.656	22.513	21.343	21.499	22.103	23.066	22.402	22.901	24.201
Finland	26.711	26.918	26.420	25.468	26.745	26.821	27.216	28.964	29.110	30.543	31.114	32.207	32.716	35.044	36.539	37.969	39.564	39.583	47.966	52.375
Sweden	51.196	50.899	51.783	53.210	53.687	58.252	55.767	59.624	59.779	61.737	63.214	65.733	64.869	65.909	66.228	71.234	74.495	75.760	83.372	87.547
Iceland	93.148	94.928	93.497	113.700	90.847	92.861	92.419	93.915	95.422	96.719	97.063	93.110	95.310	93.376	98.497	100.640	102.709	99.536	99.193	..
Norway	97.973	97.423	100.843	99.052	100.154	105.191	98.252	105.887	104.599	106.917	110.135	106.830	105.638	104.850	106.829	110.445	113.802	113.642	120.010	116.538
Montenegro	..	39.102	37.679	37.622	38.258	46.615	45.740	41.583	42.765	49.067	51.444	49.613	50.961	50.111	52.419	53.647	61.490	60.462	68.513	67.529
Serbia	18.486	22.366	23.603	24.812	25.868	28.252	28.183	27.526	28.509	29.771	30.274	28.915	29.154	27.448	28.658	30.107	30.701	29.820	30.290	31.795
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	38.394	38.726	40.829	39.564	41.498	45.482	49.308	46.318	39.294	..
Albania	69.979	76.112	74.208	79.631	73.299	70.714	74.618	66.131	72.427	62.665	70.985	79.222	82.104	91.025	92.450	92.994	99.975	94.421	102.968	105.381
North Macedonia	14.511	13.989	14.011	13.671	13.848	15.471	15.847	14.849	16.659	18.206	19.273	21.663	24.138	24.839	24.838	23.778	25.532	22.785	25.868	32.201
Kosovo*	0.472	0.611	0.907	0.971	1.136	1.361	1.368	1.496	1.628	1.867	1.842	3.973	3.622	4.234	5.155	5.259	5.172	6.685	8.975	..
Moldova	0.841	0.821	0.787	0.830	0.828	0.959	1.813	1.799	1.694	1.693	1.903	1.975	1.947	2.137	2.627	3.039	3.118	3.579	5.535	9.209
Georgia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	51.314	55.492	66.257

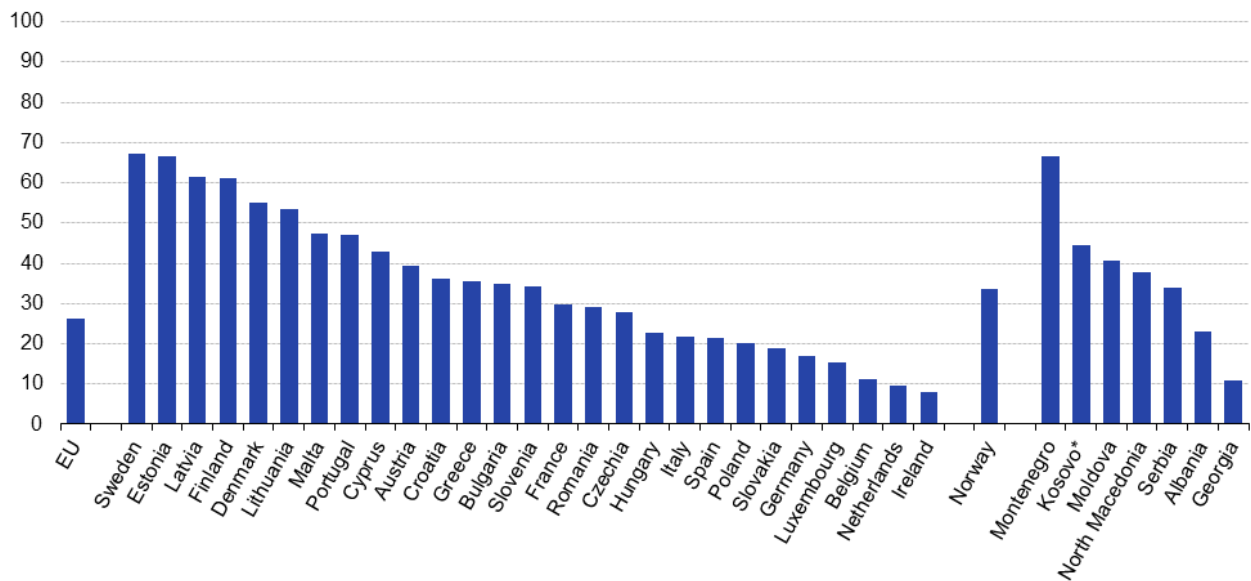
Note: Data until 2020 are calculated on the basis of Directive 2009/28/EC, while data from 2021 onwards follow Directive (EU) 2018/2001.  
 .. Data not available.  
 \* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.  
 Source: Eurostat (online data code: nrg\_ind\_ren)

Table 2: Share of energy from renewable sources in gross electricity consumption, 2004-2023 (% of gross final electricity consumption) Source: Eurostat (nrg\_ind\_ren)

## Almost one-quarter of energy used for heating and cooling from renewable sources

In 2023, renewable energy accounted for 26.2% of total energy use for heating and cooling in the EU, increasing from 11.7% in 2004. Developments in the industrial sector, services and households contributed to this growth. Ambient energy captured by heat pumps for heating and renewable cooling are also taken into account. The share of energy from renewable sources in heating and cooling is presented in Figure 3.

## Share of energy from renewable sources for heating and cooling, 2023 (%)



\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: nrg\_ind\_ren)

eurostat

**Figure 3: Share of energy from renewable sources for heating and cooling, 2023** Source: Eurostat (nrg\_ind\_ren)

Among EU countries, the share of energy from renewable sources in heating and cooling was more than half in Sweden (67.1%), Estonia (66.7%), Latvia (61.4%), Finland (61.3%), Denmark (54.9%) and Lithuania (53.6%). At the other side of the scale, the EU countries with a share of energy from renewable sources in heating and cooling of less than 10% were Ireland (7.9%) and the Netherlands (9.6%), see Table 3.

Share of energy from renewable sources for heating and cooling, 2004-2023  
(%)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>EU</b>	<b>11.735</b>	<b>12.437</b>	<b>13.210</b>	<b>14.819</b>	<b>15.325</b>	<b>16.786</b>	<b>16.995</b>	<b>17.415</b>	<b>18.582</b>	<b>19.044</b>	<b>19.929</b>	<b>20.307</b>	<b>20.400</b>	<b>20.819</b>	<b>21.604</b>	<b>22.432</b>	<b>22.983</b>	<b>23.019</b>	<b>24.996</b>	<b>26.191</b>
Belgium	2.927	3.418	3.812	4.713	5.121	6.087	6.710	6.718	7.108	7.639	7.751	7.942	8.247	8.200	8.290	8.319	8.447	9.279	10.556	11.304
Bulgaria	14.056	14.257	14.790	13.862	17.262	21.639	24.334	24.768	27.241	29.234	28.518	28.903	29.990	29.854	33.250	35.423	37.178	30.015	31.646	35.028
Czechia	9.918	10.835	11.234	12.370	12.918	14.260	14.096	15.388	16.249	17.706	19.528	19.787	19.879	19.728	20.642	22.632	23.535	24.349	25.821	27.769
Denmark	20.501	22.612	23.661	26.707	27.964	29.403	30.369	31.889	33.201	34.679	38.014	39.536	41.078	44.063	44.968	47.302	51.073	51.292	52.323	54.898
Germany	7.198	7.711	8.410	10.249	10.330	11.155	12.055	12.607	13.423	13.408	13.409	13.432	13.032	13.369	14.220	14.504	14.481	15.529	17.640	17.101
Estonia	33.361	32.369	30.838	33.037	35.997	42.028	43.162	44.550	43.218	43.112	44.934	50.031	51.765	52.217	53.671	52.193	58.834	61.347	65.442	66.668
Ireland	2.873	3.442	3.592	3.786	3.513	4.181	4.281	4.657	4.849	5.185	6.261	6.184	6.243	6.624	6.381	6.344	6.264	5.564	5.523	7.862
Greece	13.465	13.384	13.095	14.675	14.718	17.247	18.658	20.111	24.122	27.418	27.870	26.557	25.422	28.246	30.123	30.048	31.941	31.081	30.622	35.547
Spain	9.550	9.409	11.376	11.246	11.618	13.218	12.498	13.469	13.969	13.967	15.557	16.850	15.898	16.205	16.135	17.203	17.966	16.957	19.470	21.449
France	12.531	12.363	11.696	12.787	13.283	15.038	16.160	15.263	16.589	17.608	18.047	18.879	20.120	20.599	21.216	22.360	23.368	24.643	27.272	29.926
Croatia	29.406	30.002	29.069	29.301	28.818	31.298	32.881	33.820	36.554	37.308	36.219	38.619	37.636	36.627	36.650	36.791	36.928	38.006	37.213	36.173
Italy	5.713	8.223	10.094	13.334	15.311	16.431	15.642	13.818	16.984	18.092	18.914	19.255	18.887	20.083	19.279	19.699	19.949	19.335	20.566	21.626
Cyprus	9.264	9.970	10.434	13.064	14.469	17.313	18.813	19.977	21.764	22.537	22.186	24.066	24.690	26.420	37.164	35.051	37.117	42.595	41.560	42.750
Latvia	42.488	42.679	42.594	42.363	42.937	47.887	40.745	44.710	47.265	49.650	52.150	51.738	51.812	54.582	55.413	57.749	57.094	57.360	60.960	61.356
Lithuania	30.439	29.318	29.227	29.094	31.992	33.720	32.534	32.788	34.535	36.873	40.628	46.081	46.563	46.495	46.016	47.372	50.350	48.624	51.540	53.611
Luxembourg	1.822	3.612	3.630	4.354	4.571	4.629	4.704	4.736	4.932	5.330	7.070	6.858	7.058	7.450	8.362	8.687	12.614	12.888	15.541	15.479
Hungary	6.450	9.935	11.380	13.544	11.970	17.019	18.077	20.043	23.313	23.699	21.283	21.335	21.027	19.902	18.204	18.160	17.720	17.898	20.354	22.724
Malta	1.035	1.028	1.363	1.507	1.696	2.011	7.282	12.026	13.397	15.399	15.028	14.639	16.854	19.314	22.825	23.602	23.027	32.606	39.942	47.474
Netherlands	2.178	2.379	2.700	2.914	3.024	3.370	3.100	3.688	3.768	4.002	4.925	5.278	5.192	5.750	6.160	7.217	8.053	7.785	8.597	9.613
Austria	20.165	22.817	24.491	27.142	27.195	29.626	30.959	31.517	33.077	33.222	33.375	33.231	33.480	33.670	34.178	33.929	34.995	33.432	31.293	39.387
Poland	10.207	10.161	10.168	10.460	10.846	11.607	11.812	13.240	13.497	14.265	14.237	14.795	14.919	14.779	21.473	22.005	22.143	21.007	22.476	20.242
Portugal	32.490	32.075	34.234	34.951	37.451	37.931	33.814	35.184	33.153	34.628	40.454	40.100	41.614	41.022	40.924	41.657	41.546	42.681	45.545	47.098
Romania	17.337	17.928	17.582	19.465	23.167	26.433	27.227	24.306	25.745	26.195	26.739	25.886	26.865	26.581	25.434	25.739	25.327	24.573	26.251	29.126
Slovenia	22.824	26.404	24.354	29.311	27.527	28.874	29.537	31.785	33.146	35.116	34.641	36.150	35.563	34.639	32.337	32.132	32.141	35.215	33.989	34.302
Slovakia	5.062	5.031	4.451	6.232	6.097	8.178	7.898	9.258	8.803	7.875	8.865	10.791	9.879	9.837	10.599	19.696	19.427	19.521	19.882	18.794
Finland	39.504	39.116	41.409	41.434	43.078	42.888	43.973	45.732	48.230	50.772	51.955	52.618	53.704	54.593	54.905	56.884	57.622	52.084	58.292	61.264
Sweden	45.929	49.022	52.496	54.465	55.778	59.203	57.070	58.519	60.635	61.708	62.566	63.235	63.412	63.620	63.301	64.394	66.381	68.530	69.810	67.068
Iceland	52.343	53.725	57.194	60.910	64.080	64.412	66.188	68.100	68.750	65.893	67.025	69.196	78.245	78.253	79.949	80.896	80.504	79.621	83.555	..
Norway	25.549	28.837	28.435	29.326	30.918	31.814	33.727	34.671	33.968	32.758	30.907	32.674	32.346	32.464	33.099	35.384	36.126	32.305	34.271	33.637
Montenegro	..	52.907	51.358	49.126	46.008	62.078	76.478	81.291	79.793	68.492	67.618	68.543	69.085	65.679	64.497	62.648	64.782	63.498	64.895	66.594
Serbia	14.027	15.563	15.758	13.189	16.730	26.503	23.196	21.089	23.205	25.145	28.844	26.929	25.079	24.896	24.294	26.648	35.680	35.401	34.733	33.890
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	28.626	32.768	32.329	28.739	52.685	55.873	56.623	53.310	57.648	..
Albania	33.138	37.757	30.964	33.150	37.056	34.730	31.257	31.427	39.100	37.766	30.977	34.609	32.495	23.969	21.993	24.754	25.125	21.200	22.087	22.917
North Macedonia	23.308	24.681	24.917	22.491	24.642	29.207	26.503	27.338	29.595	31.762	34.991	34.474	30.924	36.301	32.450	32.066	33.729	32.337	37.833	37.791
Kosovo*	51.857	49.490	48.926	49.214	47.794	47.761	45.549	44.683	49.341	49.720	51.816	46.725	51.785	50.531	56.739	54.793	55.888	52.599	46.069	44.529
Moldova	20.159	17.417	18.399	17.350	19.020	21.408	34.579	36.339	39.025	40.014	43.634	44.557	45.544	46.099	45.056	40.472	41.173	36.877	38.390	40.655
Georgia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12.371	10.427	10.781

Note: Data until 2020 are calculated on the basis of Directive 2009/28/EC, while data from 2021 onwards follow Directive (EU) 2018/2001.

.. Data not available.

\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: nrg\_ind\_ren)

Table 3: Share of energy from renewable sources in heating and cooling, 2004-2023 (%) Source: Eurostat (nrg\_ind\_ren)

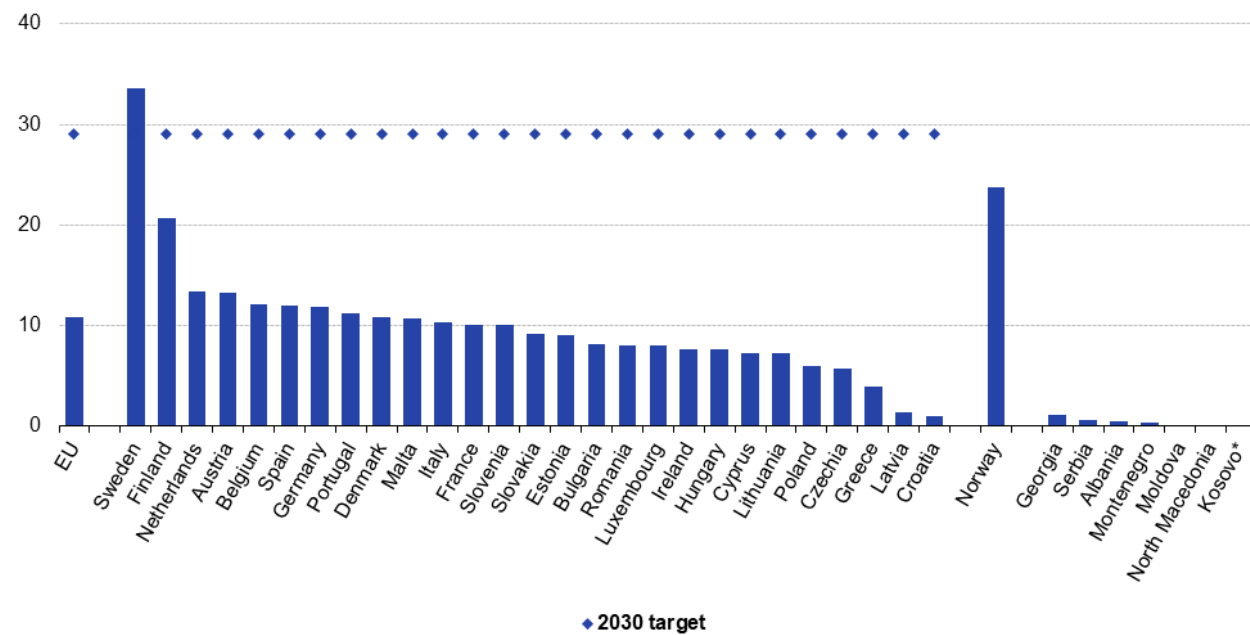
## 10.8% of renewable energy used in transport activities in 2023

The EU agreed to set a common target of 29% for the share of renewable energy (including liquid biofuels, hydrogen, biomethane, 'green' electricity, etc.) used in transport by 2030.

The average share of energy from renewable sources in transport increased from 1.6% in 2004 to 10.8% in 2023. Among EU countries, the share of renewable energy in transport fuel consumption ranged from highs of 33.6% in Sweden and 20.6% in Finland down to less than 5% in Croatia (0.9%), Latvia (1.4%) and Greece (3.9%). The EFTA country Norway also reported a high share of renewable energy in transport fuel consumption (27.7%), while the candidate and potential candidate countries all show a very low share of renewable energy in transport (from zero to around 1%). The share of energy from renewable sources in transport is presented in Figure 4.



### Share of energy from renewable sources in transport, 2023 (%)



\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: nrg\_ind\_ren)



**Figure 4: Share of energy from renewable sources in transport, 2023 (% of gross final energy consumption)**  
**Source: Eurostat (nrg\_ind\_ren)**

More details on the share of energy from renewable sources in transport can be found in Table 4.

## Share of energy from renewable sources in transport, 2004-2023

(%)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
<b>EU</b>	1.432	1.819	2.472	2.887	4.133	4.891	5.900	4.115	5.767	6.070	6.552	6.753	7.165	7.471	8.265	8.804	10.253	9.059	9.634	10.824	
Belgium	0.642	0.663	0.676	0.671	0.712	2.190	4.800	4.802	4.914	5.088	5.945	3.921	6.029	6.637	6.709	6.817	11.035	10.315	10.443	12.095	
Bulgaria	0.971	0.884	1.049	0.956	0.938	1.092	1.498	0.898	0.650	5.886	5.742	6.492	7.203	7.273	8.076	7.893	9.101	7.612	7.662	8.088	
Czechia	1.203	1.099	1.073	1.048	2.843	4.312	5.220	1.285	6.249	6.445	6.997	6.537	6.496	6.616	6.556	7.841	9.383	6.740	6.240	5.653	
Denmark	0.445	0.443	0.521	0.535	0.540	0.693	1.150	3.609	6.278	6.456	6.556	6.432	6.732	6.935	6.920	7.110	9.701	10.510	10.354	10.803	
Germany	2.136	3.953	6.701	7.532	6.316	5.877	6.413	6.461	7.322	7.299	6.900	6.569	7.013	7.028	7.941	7.630	10.008	8.102	10.072	11.858	
Estonia	0.200	0.235	0.184	0.168	0.185	0.438	0.433	0.445	0.451	0.448	0.418	0.413	0.431	0.417	3.315	6.243	12.165	11.187	8.531	9.065	
Ireland	0.044	0.075	0.102	0.503	1.305	1.962	2.491	3.844	4.044	4.898	5.204	5.942	5.159	7.442	7.186	8.917	10.187	4.645	5.823	7.578	
Greece	0.087	0.059	0.735	1.269	1.062	1.102	1.915	0.600	0.903	0.980	1.326	1.100	1.624	4.001	4.108	4.049	5.341	4.414	4.083	3.942	
Spain	1.035	1.267	0.837	1.375	2.165	3.710	5.018	0.767	0.869	0.950	1.024	1.088	5.167	5.798	6.938	7.610	9.528	9.207	9.683	11.960	
France	0.783	0.784	0.792	0.828	6.245	6.649	6.577	0.987	7.414	7.600	8.249	8.366	8.405	8.765	8.963	9.248	9.207	8.115	8.866	10.028	
Croatia	0.995	1.025	1.005	1.121	1.072	1.291	1.123	1.029	1.049	2.715	2.652	2.361	1.218	1.174	2.582	5.855	6.593	6.985	2.395	0.919	
Italy	1.213	1.048	0.995	0.964	2.616	3.999	4.916	5.060	6.155	5.411	5.020	6.505	7.414	6.484	7.659	9.047	10.736	9.870	10.048	10.250	
Cyprus	0.000	0.000	0.000	0.000	1.921	2.036	1.994	0.000	0.000	1.127	2.680	2.521	2.671	2.561	2.661	3.316	7.401	7.188	7.228	7.285	
Latvia	2.139	2.389	2.165	1.666	1.688	1.888	3.978	4.090	3.995	4.029	4.075	3.639	2.449	2.270	4.729	4.554	6.733	6.436	3.123	1.358	
Lithuania	0.446	0.657	1.905	3.821	4.318	4.481	3.794	3.828	4.973	4.835	4.355	4.582	3.649	4.300	4.333	4.049	5.511	6.467	6.682	7.231	
Luxembourg	0.138	0.159	0.189	2.203	2.173	2.233	2.093	2.360	2.827	4.074	5.550	6.700	5.965	6.478	6.596	7.707	12.581	7.968	8.710	7.990	
Hungary	1.016	1.006	1.217	1.633	5.183	5.887	6.163	6.174	5.998	6.341	7.001	7.169	7.768	7.731	7.746	8.057	11.571	6.165	7.770	7.575	
Malta	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.016	3.216	3.484	4.667	4.679	5.269	6.826	8.019	8.902	10.586	10.516	10.473	10.748	
Netherlands	0.515	0.499	0.850	3.182	2.981	4.570	3.397	0.968	5.217	5.343	6.562	5.597	4.761	5.842	9.483	12.326	12.631	9.222	11.080	13.435	
Austria	4.532	5.070	7.532	8.241	9.560	11.175	10.705	10.077	10.031	9.695	10.983	11.409	10.583	9.703	9.931	10.051	10.283	9.568	10.744	13.207	
Poland	1.581	1.746	1.617	1.746	4.143	5.408	6.640	6.918	6.533	6.666	6.319	5.686	3.974	4.232	5.720	6.200	6.575	5.677	5.803	5.986	
Portugal	0.424	0.450	0.631	2.433	2.515	3.885	5.548	0.695	0.807	0.925	3.667	7.431	7.647	7.914	9.037	9.089	9.701	8.611	8.706	11.162	
Romania	1.819	1.872	1.538	1.641	1.345	1.297	1.366	5.535	4.962	5.445	4.675	5.488	6.169	6.558	6.342	7.846	8.540	8.917	8.924	8.025	
Slovenia	0.850	0.831	1.056	1.473	1.773	2.251	3.118	2.477	3.252	3.769	2.876	2.242	1.601	2.571	5.480	7.983	10.911	10.641	7.828	10.021	
Slovakia	1.500	1.660	3.295	3.994	4.278	5.364	5.292	5.727	5.596	6.212	7.951	8.631	7.765	6.950	6.988	8.308	9.259	8.755	8.931	9.182	
Finland	1.010	0.910	0.956	1.025	2.909	4.556	4.386	1.004	1.049	10.665	24.124	24.567	8.816	18.679	14.772	14.845	14.310	20.728	18.787	20.646	
Sweden	6.288	6.596	7.509	8.421	8.693	9.356	9.627	11.938	13.777	15.315	18.831	21.490	26.560	26.842	29.696	30.309	31.854	28.677	28.841	33.645	
Iceland	0.000	0.000	0.000	0.072	0.107	0.135	0.194	0.872	1.338	2.039	2.256	6.095	6.297	6.999	9.292	11.959	12.562	13.666			
Norway	3.095	3.074	3.314	3.742	5.294	5.569	5.391	2.683	3.007	3.190	6.156	7.710	13.763	19.228	20.318	25.668	28.690	20.660	23.734	27.732	
Montenegro		0.498	0.505	0.996	0.881	0.697	0.787	0.613	0.736	1.097	1.071	1.188	1.102	0.952	0.860	0.865	0.632	0.278	0.346	0.337	
Serbia		0.452	0.445	0.429	0.665	0.677	1.465	0.672	1.879	2.001	1.682	1.166	1.178	1.232	1.208	1.185	1.137	1.174	0.618	0.601	0.598
Bosnia and Herzegovina											0.456	0.530	0.525	0.533	0.439	0.396	0.464	0.244	39.294		
Albania		0.099	0.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.203	0.347	0.344	0.402	0.456	
North Macedonia		0.203	0.243	0.280	0.282	0.283	0.233	0.198	0.175	0.188	0.182	0.211	0.182	0.140	0.135	0.118	0.136	0.148	0.063	0.054	0.000
Kosovo*		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Moldova		15.870	15.870	15.870	16.400	16.890	17.660	0.131	0.148	0.189	0.214	0.177	0.184	0.236	0.320	0.280	0.174	0.179	0.016	0.017	0.022
Georgia																			0.901	1.112	1.076

Note: Data until 2020 are calculated on the basis of Directive 2009/28/EC, while data from 2021 onwards follow Directive (EU) 2018/2001.

: Data not available.

\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: nrg\_ind\_ren)

eurostat

**Table 4: Share of energy from renewable sources in transport, 2004-2023 (% of final energy consumption in transport) Source: Eurostat (nrg\_ind\_ren)**

## Source data for tables and graphs

- [Renewable energy: tables and figures](#)

## Data sources

The data presented in this article are based on energy statistics covered by [Regulation \(EC\) No 1099/2008](#) on energy statistics. In addition, the methodology laid down in [Directive 2009/28/EC](#) is used until reference year 2020. From 2021 onwards, the calculation of the share of energy from renewable sources follows the accounting rules set down in [Directive 2018/2001/EU](#) on the promotion of the use of energy from renewable sources. Due to the change of legal basis, a break in series occurs between 2020 and 2021. Another important aspect to take into account when comparing 2020 with 2021 data is the lifting of restrictions linked to the COVID-19 pandemic, which produced an increase of energy consumption and a possible decrease of the share of renewables. Readers are encouraged to analyse the differences between both Directives (RED I and RED II), the energy market and all national specificities before drawing any conclusions from the comparison of year 2021 with previous time series. When the transposition period for [Directive 2023/2413](#) will finish in 2025, calculations will be adapted to that amendment.

Analysing the break in series between 2020 and 2021, there are some cases in which the share of renewables substantially changed:

- Bulgaria: more than 6 pp decrease, due to the inability to report a certain part of their solid and gaseous biofuels as compliant. This might change in the future once they can benefit from a certification procedure.
- Denmark: around 10 pp increase, due to the reduction of their statistical transfers (as seller).
- Estonia : around 7.5 pp increase, mainly because it started to report the use of heat pumps for heating purposes (which, although already existed, Estonia had not reported it in the past).

- Ireland: more than 3.5 pp decrease, due to their decision not to use statistical transfers in 2021, as well as to the inability to report a certain part of their solid and gaseous biofuels as compliant.

Data are available for all EU countries, as well as Norway, Montenegro, Serbia, Albania, North Macedonia, Kosovo\*, Georgia and Moldova. In general, data are complete and comparable across countries.

*Kosovo\*:* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Statistical revisions in data sets submitted by reporting countries in their annual energy questionnaires have played a role on the change in data over a long period. As a consequence of the Renewable Energy Directive and the requirement of the Energy Statistics Regulation to report detailed energy consumption data in households, countries are monitoring much closer the flows of renewable energy commodities in their economies. A very significant case is the consumption of biomass, where countries are launching new more detailed surveys that usually result in higher quantities of biomass and therefore an increase of the final energy consumption of biomass. As a consequence of several countries revising their data, significant increases have been observed in their share of energy from renewable sources (e.g. Croatia, France, Lithuania, Hungary and recently Poland).

**Gross final consumption of energy** is defined in the Renewable Energy Directive 2009/28/EC (RED I) as the energy commodities delivered for energy purposes to industry, transport, households, services (including public services), agriculture, forestry and fisheries, including the consumption of electricity and heat by the energy branch for electricity and heat production and including losses of electricity and heat in distribution and transmission. The concept of transport fuel production is included in the definition in the Renewable Energy Directive (EU) 2018/2001 (RED II), but will disappear with the implementation of [Directive 2023/2413](#).

Energy production from non-renewable municipal wastes was deduced from the contribution of biomass to heating and electricity generation. Consumption for pipeline transport was included in gross final consumption of energy, in line with the sectoral classification of the Energy Statistics Regulation. To improve accuracy and consistency with national statistics in calculating renewable energy shares, **national calorific values** were used, where available, for converting quantities of all energy products into energy units, instead of the default calorific values. The exception is the use of fuels in transport, where calorific values from Annex III of RED I or RED II are used.

**Data for the period 2004-2010** : Directive 2009/28/EC did not yet exist or had not been transposed into national legislation. The values in these years are not used for any measurement of legislative compliance with the indicative trajectory defined in part B of Annex I of the Directive (RED I). The Renewable Energy Directive 2009/28/EC stipulates that only biofuels and bioliquids that fulfil sustainability criteria should be counted for the targets. It was decided that for the years 2004-2010 all biofuels and bioliquids would be counted towards the numerator of the share of energy from renewable sources.

**Data for 2011 - 2020** : Compliance with Article 17 (Sustainability criteria for biofuels and bioliquids) has to be assessed with respect to Article 18 (Verification of compliance with the sustainability criteria for biofuels and bioliquids). As of reference year 2011, countries are to report as compliant only those biofuels and bioliquids for which compliance with both Article 17 and Article 18 can be fully demonstrated. Only reported compliant biofuels and bioliquids are counted towards the respective shares of renewables. In some countries consumption of biofuels and bioliquids in the period 2011-2015 were not certified as compliant (sustainable) due to late implementation of Directive 2009/28/EC. While the share of renewable energy as a whole is increasing since 2004, between 2010 and 2011 its share in transport decreased. This can be attributed in part to the total absence of compliant biofuels reported by several EU countries (countries did report some biofuel use, but none or very little of it compliant in 2011). As some countries had not yet fully implemented all provisions of the Renewable Energy Directive, some biofuels and bioliquids were not counted as compliant (sustainable) in the period 2011-2015.

**Data for 2021 and onwards** : Compliance with Article 29 ('Sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels') has to be judged also with respect to Article 30 ('Verification of compliance with the sustainability and greenhouse gas emissions saving criteria'). As of data from the second half of 2021, countries should report as compliant only those biofuels, bioliquids and biomass fuels for which compliance with Articles 29 and 30 can be fully demonstrated. Otherwise (even when compliance cannot be demonstrated because there is not a national legal basis in place), biofuels, bioliquids and biomass fuels should not be reported as compliant and do not count towards the numerator of the share of energy from renewable sources.

The share of electricity from renewable energy sources is defined as the ratio between electricity produced from renewable energy sources and gross national electricity consumption. As stipulated in the Renewable Energy

Directive, gross final consumption of **electricity from renewable sources** is the electricity produced from renewable energy sources. This includes hydro power plants (excluding hydro power electricity produced from pumped storage plants using water previously pumped uphill), as well as electricity generated from solid biofuels/wastes, wind, solar and geothermal installations. The Directive also requires electricity production from hydro power and wind power to be normalised. Given the 15-year normalisation requirement for hydro power production and the availability of energy statistics (for the EU, starting from 1990), time series of this indicator before 2004 are not available. With the implementation of [Directive 2023/2413](#), electricity used to produce RFNBO will be deduced from the quantity of renewable electricity as RFNBO will be accounted in the sector of consumption.

For the purpose of calculating the share of **renewable energy in heating and cooling**, final consumption of energy from renewable sources is defined as the final consumption of renewable energy in industry, households, services, agriculture, forestry and fisheries for heating and cooling purposes, plus district heating produced from renewables. The total final consumption for heating and cooling is the final consumption of all energy commodities, except electricity, for purposes other than transport, plus the consumption of heat for own use at electricity and heat plants and heat losses in networks. For more detailed definition, please see the [SHARES tool manual](#).

## Context

Becoming the world's first climate-neutral continent by 2050 is the greatest challenge and opportunity of our times. To achieve this, on 11 December 2019 the European Commission presented the [European Green Deal](#) ([COM\(2019\) 640 final](#)), the most ambitious package of measures that should enable European citizens and businesses to benefit from a sustainable green transition. Measures accompanied with an initial roadmap of key policies range from ambitiously cutting emissions, to investing in cutting-edge research and innovation, to preserving Europe's natural environment. Above all, the European Green Deal sets a path for a transition that is just and socially fair. It is designed in such a way as to leave no individual or region behind in the great transformation ahead.

Some of the objectives of the Green Deal will become part of the Clean Industrial Deal, which is an integral part of the Commission's strategy to implement the United Nation's 2030 Agenda and the sustainable development goals, to boost Europe's innovation and competitiveness and many other priorities announced in President von der Leyen's political guidelines. The [European Commission](#) has set out several energy strategies for a more secure, sustainable and low-carbon economy. Aside from combating climate change through a reduction in greenhouse gas emissions, the use of renewable energy sources is likely to result in more secure and diverse energy supply, less air pollution, as well as job creation in environmental and renewable energy sectors.

Building on the 20% target for 2020, on 11 December 2018, the EU adopted [Directive 2018/2001/EU](#) on the promotion of the use of energy from renewable sources, whose last amendment by [Directive \(EU\) 2023/2413](#) includes a binding renewable energy target for the EU for 2030 of 42.5% with the aim to achieve 45%.

On 18 May 2022, the Commission published the REPowerEU plan, which sets out a series of measures to rapidly reduce EU's dependence on Russian fossil fuels well before 2030 by accelerating the clean energy transition. The REPowerEU plan is based on 3 pillars: saving energy, producing clean energy and diversifying the EU's energy supplies.

## Explore further

### Other articles

- [Calculation methodologies for the share of renewables in energy consumption](#)
- [Energy statistics introduced](#)
- [Energy statistics - an overview](#)
- [Electricity production, consumption and market overview](#)
- [Energy production and imports](#)

## Database

- [Energy - detailed datasets \(nrg\)](#) , see:

Energy statistics - quantities, annual data (nrg\_quanta)

## Dedicated section

- [Energy](#)

## Publications

- [Shedding light on energy in the EU - A guided tour of energy statistics \(2024 edition\)](#)
- [Sustainable development in the European Union — Monitoring report on progress towards the SDGs in an EU context \(2023 edition\)](#)

## Main tables

- [Energy - selected datasets \(t\\_nrg\)](#) , see:

Energy statistics - main indicators (t\_nrg\_ind)

Energy statistics - quantities (t\_nrg\_quant)

## Methodology

- [Energy Statistics Manual](#)
- [Energy statistics — quantities \(ESMS metadata file — nrg\\_quant\\_esms\)](#)
- [Share of energy from renewable sources \(nrg\\_ind\\_share\) \(ESMS metadata file — nrg\\_ind\\_share\\_esmsip2\)](#)

## External links

- [EURObserv'ER](#)
- [European Commission — Directorate-General for Energy — Renewable energy](#)
- [Europe's Energy Portal](#)
- [International Renewable Energy Agency](#)
- [International Energy Agency \(IEA\) — Renewables](#)
- [Concerted Action on Renewable Energy Sources Directive](#)