

*Data extracted in January 2019.
Planned article update: February 2020.*

This article provides recent statistics on [renewable energy sources](#) 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](#) .

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 have the potential to stimulate employment in the EU, through the creation of jobs in new 'green' technologies.

Renewable energy produced in the EU increased by two thirds in 2007-2017

The [primary production](#) of renewable energy within the [EU-28](#) in 2017 was 226.5 million [tonnes of oil equivalent \(toe\)](#) . The quantity of renewable energy produced within the EU-28 increased overall by 64.0 % between 2007 and 2017, equivalent to an average increase of 5.1 % per year.

Among renewable energies, the most important source in the EU-28 was wood and other solid biofuels, accounting for 42.0 % of primary renewables production in 2017 (see Figure 1). Wind power was, for the first time, the second most important contributor to the renewable energy mix (13.8 % of the total), followed by hydro power (11.4 %). Although their levels of production remained relatively low, there was a particularly rapid expansion in the output of biogas, liquid biofuels and solar energy, which accounted respectively for a 7.4 %, 6.7 % and 6.4 % share of the EU-28's renewable energy produced in 2017. Ambient heat (captured by heat pumps) and geothermal energy accounted for 5.0 % and 3.0 % of the total, respectively, while renewable wastes increased to reach 4.4 %. There are currently very low levels of tide, wave and ocean energy production, with these technologies principally found in France and the United Kingdom.

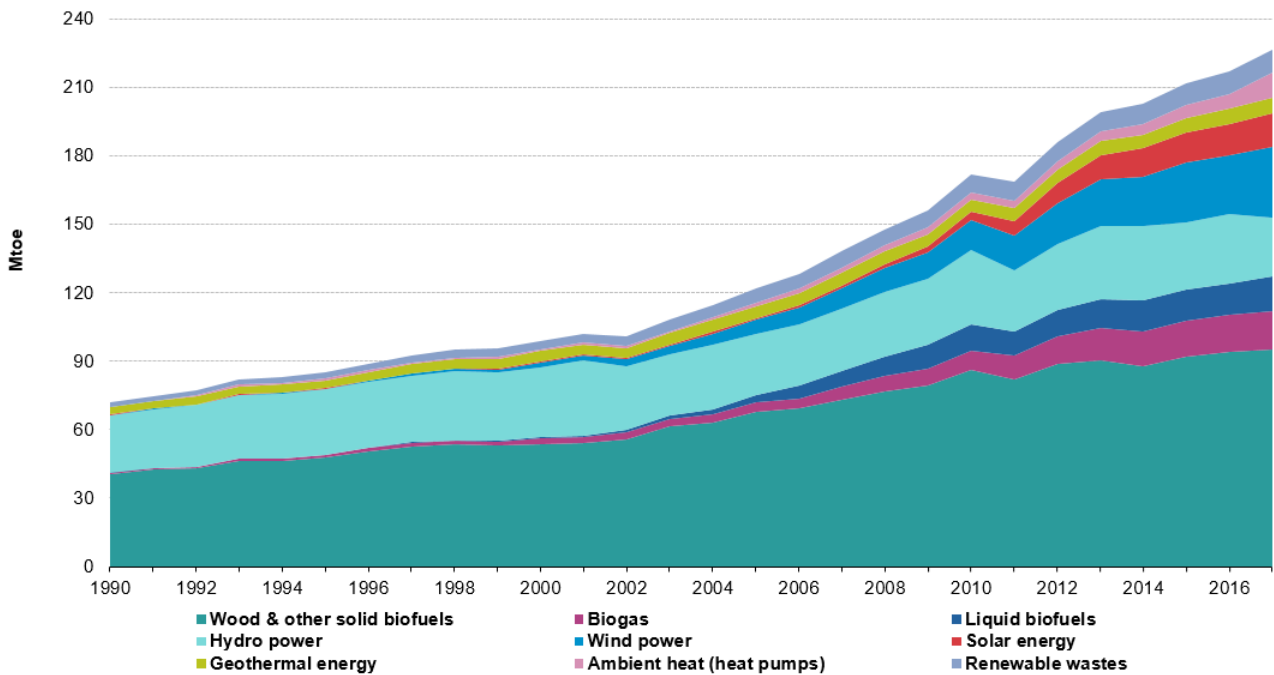


Figure 1: Primary production of energy from renewable sources, EU-28, 1990-2017(Mtoe)Source: Eurostat (nrg_bal_c)

Share of energy available from renewable sources highest in Latvia and Sweden

Renewable energy sources accounted for a 13.9 % share of the EU-28’s gross inland energy consumption in 2017. Wood and other solid biofuels continues to be the largest contributor to the mix of renewable energy sources. Hydro power and wood accounted for 91.3 % in 1990. However, their combined relative rate of increase since then has been much smaller than that of the other sources. Consequently, their combined share decreased to 53.4 % in 2017. A graphic evolution of gross inland energy consumption of renewable energies is shown in Figure 2 (where electricity production is not normalised).

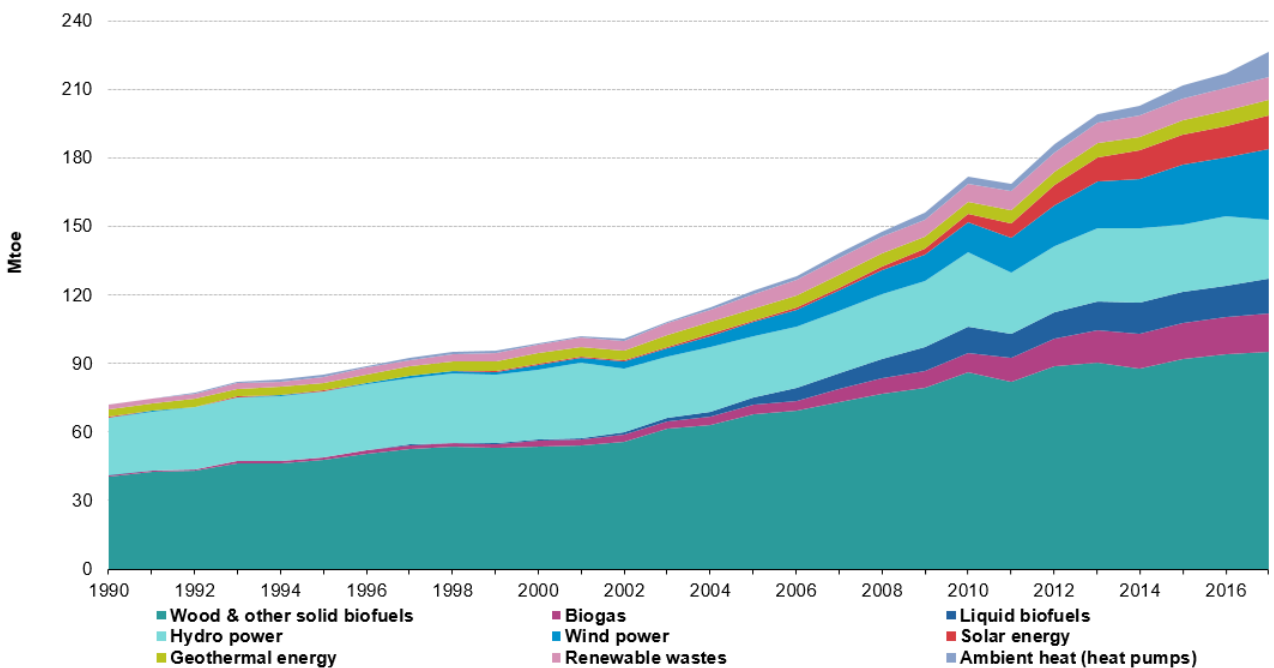


Figure 2: Gross inland consumption of renewables, EU-28, 1990-2017(Mtoe)Source: Eurostat (nrg_bal_c)

The importance of renewables in gross inland consumption (see Table 1) was relatively high in Denmark (32.8 %) and Austria (28.9 %) and exceeded one third of inland consumption in Latvia (42.5 %), Sweden (41.2 %) and Finland (34.7 %), as was the case also in Norway (45.7 %).

Share of renewables in gross inland energy consumption, 2017

(%)

	Renewable energy	of which: Biofuels & renewable wastes (*)	Hydro power	Wind power	Solar energy	Geothermal energy	Ambient heat (heat pumps)
EU-28	13.9	8.6	1.5	1.9	0.9	0.4	0.7
Belgium	7.2	5.5	0.0	1.0	0.5	0.0	0.1
Bulgaria	10.3	6.9	1.3	0.7	0.8	0.2	0.5
Czechia	10.5	9.2	0.4	0.1	0.5	0.0	0.3
Denmark	32.8	24.0	0.0	7.0	0.7	0.0	1.2
Germany	13.3	8.2	0.5	2.8	1.3	0.1	0.3
Estonia	18.4	17.3	0.0	1.1	0.0	0.0	0.0
Ireland	9.0	4.1	0.4	4.4	0.1	0.0	0.0
Greece	12.0	4.9	1.4	2.0	2.5	0.0	1.2
Spain	13.0	5.6	1.2	3.2	2.6	0.0	0.4
France	10.4	6.4	1.7	0.8	0.4	0.2	0.9
Croatia	21.4	14.7	5.1	1.2	0.2	0.1	0.0
Italy	18.1	8.6	2.0	1.0	1.4	3.4	1.7
Cyprus	6.5	2.4	0.0	0.7	3.3	0.1	0.0
Latvia	42.5	33.9	8.3	0.3	0.0	0.0	0.0
Lithuania	21.2	18.8	0.7	1.6	0.1	0.0	0.0
Luxembourg	6.3	5.3	0.2	0.5	0.3	0.0	0.1
Hungary	11.1	10.0	0.1	0.2	0.2	0.5	0.0
Malta	5.3	1.5	0.0	0.0	3.8	0.0	0.0
Netherlands	5.5	3.7	0.0	1.2	0.3	0.1	0.2
Austria	28.9	16.1	9.6	1.6	0.8	0.1	0.7
Poland	8.5	6.9	0.2	1.2	0.1	0.0	0.1
Portugal	20.1	12.1	2.1	4.4	0.7	0.8	0.0
Romania	18.1	11.8	3.7	1.9	0.5	0.1	0.0
Slovenia	15.9	9.8	4.9	0.0	0.5	0.7	0.0
Slovakia	9.2	6.7	2.2	0.0	0.3	0.0	0.0
Finland	34.7	28.1	3.7	1.2	0.0	0.0	1.6
Sweden	41.2	23.7	11.1	3.0	0.1	0.0	3.3
United Kingdom	9.8	6.0	0.3	2.3	0.6	0.0	0.6
Norway	45.7	4.6	40.3	0.8	0.0	0.0	0.0
Montenegro	26.7	17.4	8.5	0.8	0.0	0.0	0.0
North Macedonia	12.5	8.4	3.5	0.3	0.1	0.2	0.0
Albania	26.9	10.2	16.2	0.0	0.6	0.0	0.0
Serbia	12.0	6.9	5.0	0.0	0.0	0.0	0.0
Turkey	11.8	2.0	3.3	1.0	0.7	4.8	0.0
Kosovo (*)	15.1	14.4	0.6	0.0	0.0	0.0	0.0
Georgia	24.2	7.4	16.2	0.2	0.1	0.4	0.0

(*) 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.

(*) The category "Biofuels and renewable wastes" includes wood and solid biofuels, liquid biofuels, biogas and renewable wastes.

Source: Eurostat (online data code: nrg_bal_c)

eurostat 

Table 1: Share of renewables in gross inland energy consumption, 2017(%)Source: Eurostat (nrg_bal_s) and (nrg_bal_c)

The share of renewables in gross inland consumption should not be confused with the share of renewables in gross final energy consumption (the latter being the official indicator to monitor the 2020 target established in [Directive 2009/28/EC](#) on the promotion of the use of energy from renewable sources). The exact definitions of gross inland consumption and gross final energy consumption can be found in the section [Data sources and availability](#) .

Consumption of renewable energy more than doubled between 2004 and 2017

The EU seeks to have a 20 % share of its gross final energy consumption from renewable sources by 2020; this target is distributed between the EU Member States with [national action plans](#) designed to plot a pathway for the development of renewable energies in each of the Member States. Figure 3 shows the latest data available for the share of renewable energies in gross final energy consumption and the targets that have been set for 2020. The share of renewables in gross final energy consumption stood at 17.5 % in the EU-28 in 2017, compared with 8.5 % in 2004.

This positive development has been prompted by the legally binding targets for increasing the share of energy from renewable sources enacted by [Directive 2009/28/EC](#) on the promotion of the use of energy from

renewable sources. While the EU as a whole is on course to meet its 2020 targets, some **Member States** will need to make additional efforts to meet their obligations as regards the two main targets: the overall share of energy from renewable sources in the gross final energy consumption (see Figure 3) and the specific share of energy from renewable sources in transport (see Figure 4).

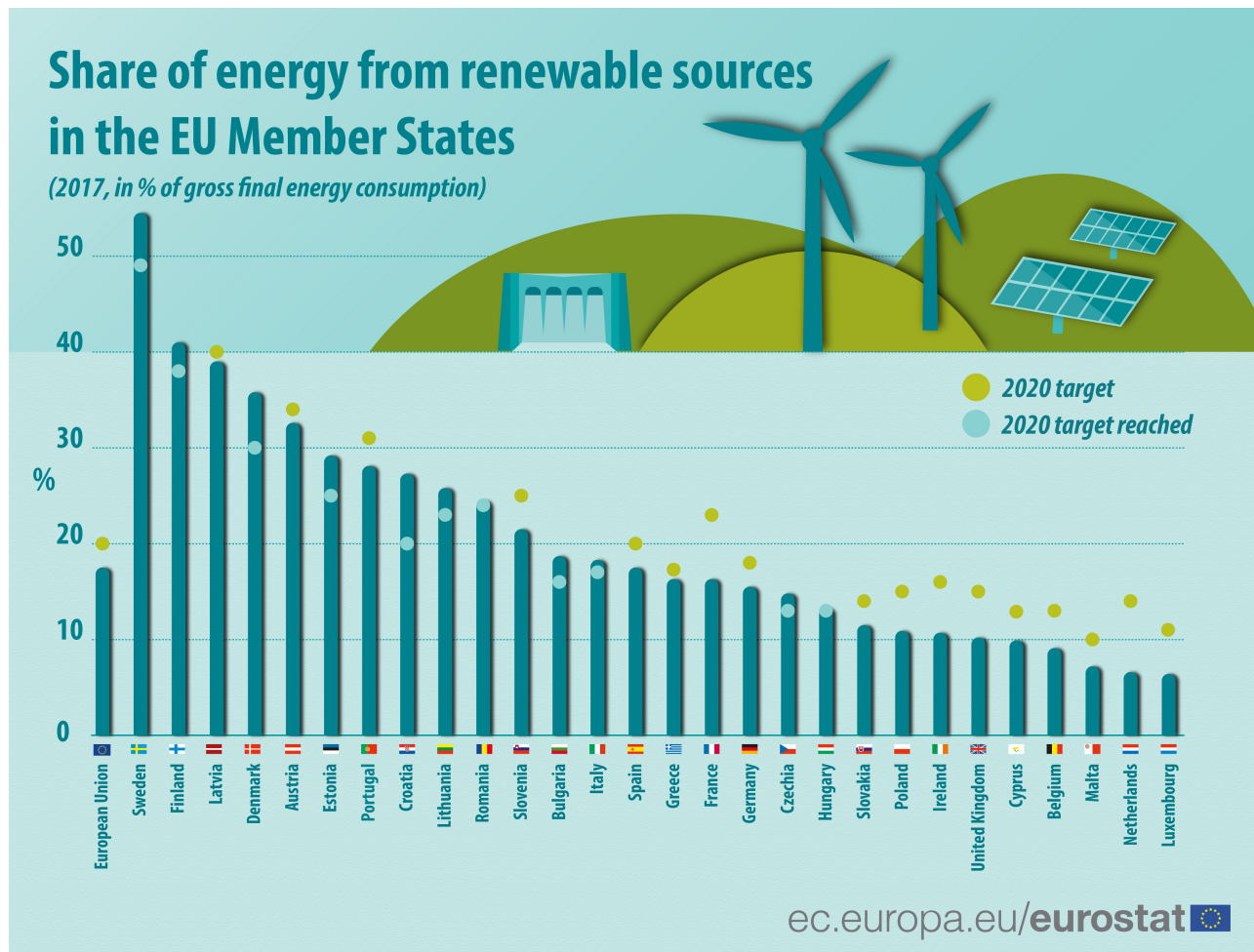


Figure 3: Share of energy from renewable sources, 2017(in % of gross final energy consumption)Source: Eurostat (nrg_ind_ren)

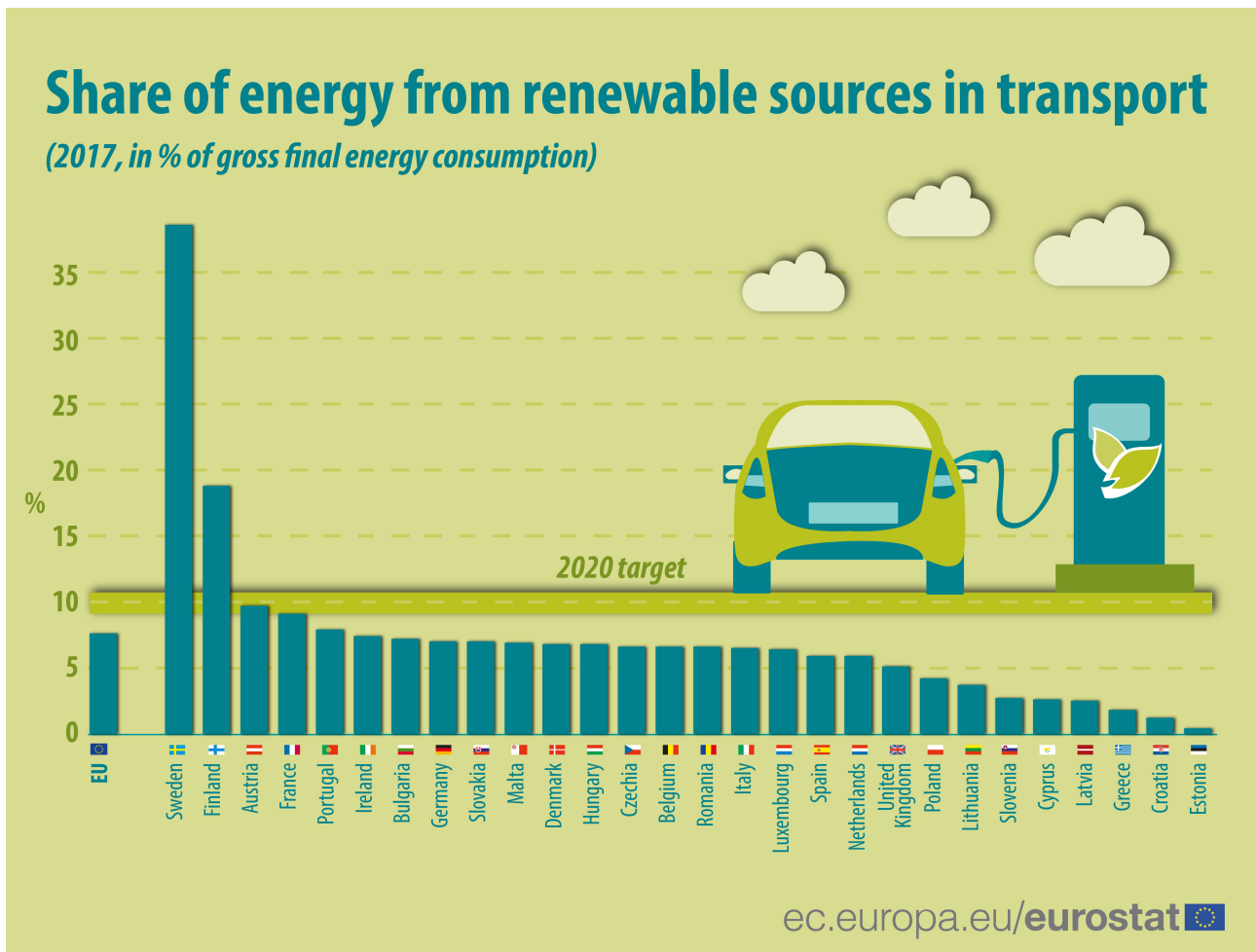


Figure 4: Share of renewable energy sources in transport, 2017 (in % of gross final energy consumption) Source: Eurostat (nrg_ind_ren)

With more than half (54.5 %) of energy from renewable sources in its gross final consumption of energy, Sweden had by far the highest share among the EU Member States in 2017, ahead of Finland (41.0 %), Latvia (39.0 %), Denmark (35.8 %) and Austria (32.6 %). At the opposite end of the scale, the lowest proportions of renewables were registered in Luxembourg (6.4 %), the Netherlands (6.6 %), Malta (7.2 %), Belgium (9.1 %), Cyprus (9.9 %) and the United Kingdom (10.2 %). Compared with the most recent data available for 2017, the targets for France, the Netherlands and Ireland require each of these Member States to increase their share of renewable energy in final energy consumption by at least 5.0 percentage points. By contrast, eleven of the Member States had already surpassed their target for 2020; the extent to which the targets have been exceeded was particularly large in Croatia, Sweden, Denmark and Estonia.

Table 2 presents data for all reporting countries and also the values of the indicative trajectory.

Share of energy from renewable sources in gross final consumption of energy, 2004-2017
(%)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2011-2012 average	2013-2014 average	2015-2016 average	S2005(*)	2011-2012	Indicative trajectory 2013-2014	trajectory 2015-2016	2017-2018	2020 target
EU-28	8.5	9.1	9.7	10.6	11.3	12.6	13.1	13.4	14.7	15.4	16.2	16.7	17.0	17.5	14.0	15.8	16.9	-	-	-	-	-	20.0
Belgium	1.9	2.3	2.6	3.1	3.6	4.7	5.6	6.3	7.2	7.5	8.0	7.9	8.6	9.1	6.7	7.6	8.3	2.2	4.4	5.4	7.1	9.2	13.0
Bulgaria	9.4	9.4	9.6	9.2	10.5	12.1	14.1	14.3	16.0	19.0	18.0	18.2	18.8	18.7	15.2	18.5	18.5	9.4	10.7	11.4	12.4	13.7	16.0
Czechia	6.9	7.1	7.4	8.0	8.6	9.9	10.5	11.0	12.8	13.9	15.0	15.0	14.9	14.8	11.9	14.5	14.9	6.1	7.5	8.2	9.2	10.6	13.0
Denmark	14.9	16.0	16.3	17.8	18.6	20.0	22.1	23.5	25.7	27.4	29.7	31.4	32.6	35.8	24.6	28.6	32.0	17.0	19.6	20.9	22.9	25.5	30.0
Germany	6.2	7.1	8.4	10.0	10.0	10.8	11.7	12.5	13.6	13.8	14.4	14.9	14.9	15.5	13.0	14.1	14.9	5.8	8.2	9.5	11.3	13.7	18.0
Estonia	18.4	17.4	15.9	17.0	18.6	22.9	24.6	25.4	25.5	25.4	26.2	28.4	28.6	29.2	25.5	25.8	28.5	18.0	19.4	20.1	21.2	22.6	25.0
Ireland	2.4	2.8	3.1	3.5	4.0	5.2	5.6	6.6	7.1	7.6	8.7	9.1	9.3	10.7	6.8	8.2	9.2	3.1	5.7	7.0	8.9	11.5	16.0
Greece	6.9	7.0	7.2	8.1	8.0	8.5	9.8	10.9	13.5	15.0	16.4	15.4	15.1	16.3	12.2	15.2	15.2	6.9	9.1	10.2	11.9	14.1	18.0
Spain	8.3	8.4	9.1	9.7	10.7	13.0	13.8	13.2	14.3	15.3	16.1	16.2	17.4	17.5	13.8	15.7	16.8	8.7	11.0	12.1	13.8	16.0	20.0
France	9.5	9.6	9.3	10.2	11.2	12.2	12.7	11.1	13.6	14.2	14.8	15.2	15.9	16.3	12.4	14.5	15.6	10.3	12.8	14.1	16.0	18.6	23.0
Croatia	23.4	23.7	22.7	22.2	22.0	23.6	25.1	25.4	26.8	28.0	27.8	29.0	28.3	27.3	26.1	27.9	28.6	12.6	14.1	14.8	15.9	17.4	20.0
Italy	6.3	7.5	8.3	9.8	11.5	12.8	13.0	12.9	15.4	16.7	17.1	17.5	17.4	18.3	14.2	16.9	17.5	5.2	7.6	8.7	10.5	12.9	17.0
Cyprus	3.1	3.1	3.3	4.0	5.1	5.6	6.0	6.0	6.8	8.1	8.9	9.4	9.3	9.9	6.4	8.5	9.4	2.9	4.9	5.9	7.4	9.5	13.0
Latvia	32.8	32.3	31.1	29.6	29.8	34.3	30.4	33.5	35.7	37.0	36.6	37.5	37.1	39.0	34.6	37.8	37.3	32.6	34.1	34.8	35.9	37.4	40.0
Lithuania	17.2	16.8	16.9	16.5	17.8	19.8	19.6	19.9	21.4	22.7	23.6	25.8	25.6	25.8	20.7	23.1	25.7	15.0	16.6	17.4	18.6	20.2	23.0
Luxembourg	0.9	1.4	1.5	2.7	2.8	2.9	2.9	2.9	3.1	3.5	4.5	5.0	5.4	6.4	3.0	4.0	5.2	0.9	2.9	3.9	5.4	7.5	11.0
Hungary	4.4	6.9	7.4	8.6	8.6	11.7	12.7	14.0	15.5	16.2	14.6	14.4	14.3	13.3	14.8	15.4	14.3	4.3	6.0	6.9	8.2	10.0	13.0
Malta	0.1	0.1	0.1	0.2	0.2	0.2	0.8	1.8	2.8	3.7	4.7	5.1	6.2	7.2	2.3	4.2	5.7	0.0	2.0	3.0	4.5	6.5	10.0
Netherlands	2.0	2.5	2.8	3.3	3.6	4.3	3.9	4.5	4.7	4.7	5.5	5.7	5.9	6.6	4.6	5.1	5.8	2.4	4.7	5.9	7.6	9.9	14.0
Austria	22.7	23.7	25.3	27.0	27.9	29.8	29.9	30.1	31.0	32.0	33.2	32.8	33.0	32.6	30.6	32.6	32.9	23.3	25.4	26.5	28.1	30.3	34.0
Poland	6.9	6.9	6.9	6.9	7.6	8.7	9.3	10.3	10.9	11.4	11.5	11.7	11.3	10.9	10.6	11.4	11.5	7.2	8.8	9.5	10.7	12.3	15.0
Portugal	19.2	19.5	20.8	21.9	22.9	24.4	24.2	24.6	24.6	25.7	27.0	28.0	28.4	28.1	24.6	26.3	28.2	20.5	22.6	23.7	25.2	27.3	31.0
Romania	16.2	17.2	17.1	18.3	20.5	22.7	23.1	21.2	22.8	23.9	24.8	24.8	25.0	24.5	22.0	24.4	24.9	17.8	19.0	19.7	20.6	21.8	24.0
Slovenia	16.1	16.0	15.6	15.6	15.0	20.1	20.4	20.3	20.8	22.4	21.5	21.9	21.3	21.5	20.5	22.0	21.6	16.0	17.8	18.7	20.1	21.9	25.0
Slovakia	6.4	6.4	6.6	7.8	7.7	9.4	9.1	10.3	10.4	10.1	11.7	12.9	12.0	11.5	10.4	10.9	12.5	6.7	8.2	8.9	10.0	11.4	14.0
Finland	29.2	28.8	30.0	29.6	31.3	31.3	32.4	32.8	34.4	36.7	38.8	39.3	39.0	41.0	33.6	37.8	39.2	28.5	30.4	31.4	32.8	34.7	38.0
Sweden	38.7	40.5	42.6	44.1	45.2	48.1	47.2	48.7	51.1	51.9	52.4	53.6	53.8	54.5	49.9	52.2	53.7	39.8	41.6	42.6	43.9	45.8	49.0
United Kingdom	1.1	1.3	1.5	1.8	2.7	3.3	3.7	4.2	4.2	5.3	6.5	8.4	9.2	10.2	4.2	5.9	8.8	1.3	4.0	5.4	7.5	10.2	15.0
Montenegro	-	35.7	34.8	32.9	32.3	39.4	40.6	40.6	41.5	43.7	44.1	43.1	41.5	40.0	41.1	43.9	42.3	-	27.6	28.3	29.3	30.7	33.0
North Macedonia	15.7	16.5	16.5	15.0	15.6	17.2	16.5	16.4	18.1	18.5	19.6	19.5	18.0	19.7	17.3	19.0	18.8	-	23.1	23.7	24.6	25.9	28.0
Albania	29.6	31.4	32.1	32.7	32.4	31.4	31.9	31.2	35.2	33.2	31.5	34.4	37.1	34.6	33.2	32.3	35.7	-	32.6	33.2	34.3	35.6	38.0
Serbia	12.7	14.3	14.5	14.3	15.9	21.0	19.8	19.1	20.8	21.1	22.9	21.9	21.0	20.6	20.0	22.0	21.4	-	22.4	22.9	23.8	25.0	27.0
Turkey	16.2	15.5	14.1	13.2	13.5	14.1	14.0	12.8	13.2	13.9	13.6	13.6	13.7	13.2	13.0	13.8	13.7	-	-	-	-	-	-
Kosovo (*)	20.8	20.0	19.8	19.0	18.6	18.4	18.3	17.7	18.7	18.9	19.5	18.5	24.4	22.9	18.2	19.2	21.4	-	20.1	20.7	21.6	22.9	25.0

(*) S₂₀₀₅ is the share of energy from renewable sources in 2005, baseline used for the calculation of the indicative trajectory (in accordance with Directive 2009/28/EC on the promotion of the use of energy from renewable sources).
(*) 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: SHARES_summary_results in <http://ec.europa.eu/eurostat/web/energy/data/shares>



Table 2: Share of energy from renewable sources in gross final consumption of energy, 2004-2017(%)Source: Eurostat (nrg_ind_ren)

The share of energy from renewable sources is divided in three different components: share in electricity, share in heating and cooling and share in transport. The rest of the this article’s statistical findings deals with the developments from 1990 to 2017 within each of these components.

Wind power becomes the most important renewable source of electricity

In 2017, electricity generation from renewable sources contributed more than one quarter (30.7 %) to total EU-28 [gross electricity consumption](#) . Wind power is for the first time the most important source, followed closely by hydro power (see Figure 5).

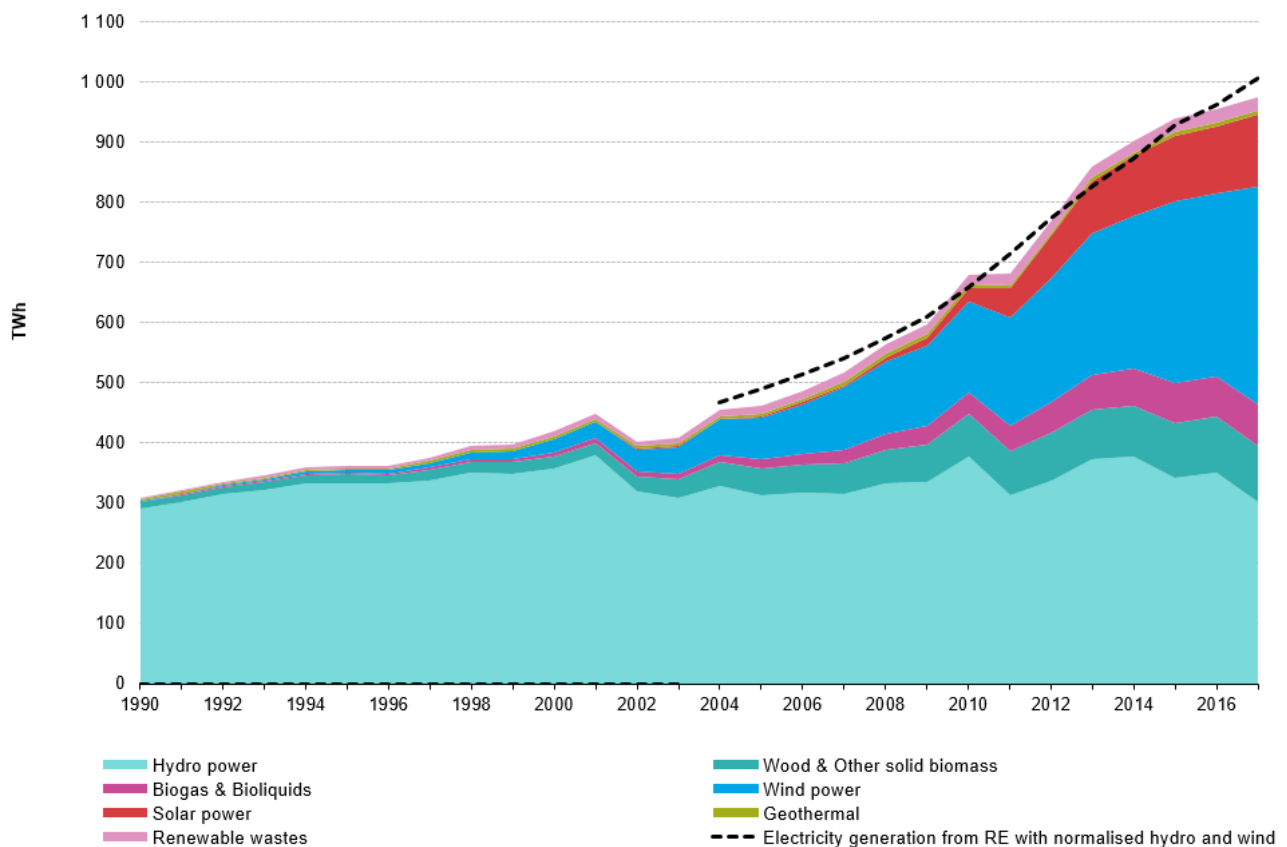


Figure 5: Gross electricity generation from renewable sources, EU-28, 1990-2017(TWh)Source: Eurostat (nrg_bal_c)

The accounting rules in Directive 2009/28/EC 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). The growth in electricity generated from renewable energy sources during the period 2007 to 2017 largely reflects an expansion in three renewable energy sources across the EU, principally wind power, but also solar power and solid biofuels (including renewable wastes). In 2017 hydro power has been replaced for the first time by wind power as the single largest source for renewable electricity generation in the EU-28. Indeed, the amount of electricity generated from hydro was relatively similar to the level recorded a decade earlier. By contrast, the quantity of electricity generated in the EU-28 from solar and from wind turbines was 31.6 times and 3.5 times as high in 2017 as it had been in 2007. As a result, the shares of wind power and solar power in the total quantity of electricity generated from renewable energy sources rose to 37.2 % and 12.3 % in 2017, respectively. The growth in electricity from solar power has been dramatic, rising from just 3.8 TWh in 2007 to overtake geothermal energy in 2008, reaching a level of 119.5 TWh in 2017. Over this 10-year period, the contribution of solar power to all electricity generated in the EU-28 from renewable energy sources rose from 0.7 % to 12.3 %.

There is a significant variation between EU Member States. In Austria (72.2 %), Sweden (65.9 %) and Denmark (60.4 %) at least three fifths of all the electricity consumed was generated from renewable energy sources — largely as a result of hydro power and solid biofuels — while more than half the electricity used in Portugal (54.2 %) and Latvia (54.4 %) came from renewable energy sources. On the other hand, in Cyprus, Hungary, Luxembourg and Malta the share of electricity generated from renewable sources was less than 10 % (see Table 3).

Share of electricity from renewable sources in gross electricity consumption, 2004-2017

(%)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EU-28	14.3	14.8	15.4	16.1	17.0	19.0	19.7	21.7	23.5	25.3	27.4	28.8	29.6	30.7
Belgium	1.7	2.4	3.1	3.6	4.6	6.2	7.1	9.1	11.3	12.5	13.4	15.5	15.8	17.2
Bulgaria	9.1	9.3	9.3	9.4	10.0	11.3	12.7	12.9	16.1	18.9	18.9	19.1	19.2	19.1
Czechia	3.7	3.8	4.1	4.6	5.2	6.4	7.5	10.6	11.7	12.8	13.9	14.1	13.6	13.7
Denmark	23.8	24.6	24.0	25.0	25.9	28.3	32.7	35.9	38.7	43.1	48.5	51.4	53.9	60.4
Germany	9.4	10.5	11.8	13.6	15.0	17.3	18.2	20.9	23.6	25.3	28.1	30.8	32.2	34.4
Estonia	0.5	1.0	1.3	1.3	1.9	5.8	10.2	12.1	15.4	12.7	13.8	14.9	15.2	17.0
Ireland	6.0	7.2	8.5	9.7	10.8	14.0	15.6	18.3	19.8	21.3	23.5	25.5	26.8	30.1
Greece	7.8	8.2	8.9	9.3	9.6	11.0	12.3	13.8	16.4	21.2	21.9	22.1	22.7	24.5
Spain	19.0	19.1	20.0	21.7	23.7	27.8	29.8	31.6	33.5	36.7	37.8	37.0	36.6	36.3
France	13.8	13.7	14.1	14.3	14.4	15.1	14.8	16.2	16.5	16.9	18.4	18.8	19.2	19.9
Croatia	35.0	35.4	35.0	34.0	33.8	35.9	37.5	37.6	38.7	42.1	45.2	45.4	46.6	46.4
Italy	16.1	16.3	15.9	16.0	16.6	18.8	20.1	23.5	27.4	31.3	33.4	33.5	34.0	34.1
Cyprus	0.0	0.0	0.0	0.1	0.3	0.6	1.4	3.4	4.9	6.6	7.4	8.4	8.6	8.9
Latvia	46.0	43.0	40.4	38.6	38.7	41.9	42.1	44.7	44.9	48.7	51.0	52.2	51.3	54.4
Lithuania	3.6	3.8	4.0	4.7	4.9	5.9	7.4	9.0	10.9	13.1	13.7	15.5	16.9	18.3
Luxembourg	2.8	3.2	3.2	3.3	3.6	4.1	3.8	4.1	4.7	5.3	6.0	6.2	6.7	8.1
Hungary	2.2	4.4	3.5	4.2	5.3	7.0	7.1	6.4	6.1	6.6	7.3	7.3	7.3	7.5
Malta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.1	1.6	3.3	4.3	5.7	6.6
Netherlands	4.4	6.3	6.5	6.0	7.5	9.1	9.6	9.7	10.4	9.9	9.9	11.0	12.5	13.8
Austria	61.6	61.9	62.8	64.7	65.0	67.8	65.6	66.0	66.5	68.0	70.1	70.6	73.3	72.2
Poland	2.2	2.7	3.0	3.5	4.4	5.8	6.6	8.2	10.7	10.7	12.4	13.4	13.4	13.1
Portugal	27.4	27.7	29.3	32.3	34.1	37.6	40.6	45.8	47.5	49.1	52.1	52.6	54.0	54.2
Romania	25.0	26.9	28.1	28.1	28.1	30.9	30.4	31.1	33.6	37.5	41.7	43.2	42.7	41.6
Slovenia	29.3	28.7	28.2	27.7	30.0	33.8	32.2	31.0	31.6	33.1	33.9	32.7	32.1	32.4
Slovakia	15.4	15.7	16.6	16.5	17.0	17.8	17.8	19.3	20.1	20.8	22.9	22.7	22.5	21.3
Finland	26.7	26.9	26.4	25.5	27.3	27.3	27.7	29.4	29.5	30.9	31.4	32.5	32.9	35.2
Sweden	51.2	50.9	51.8	53.2	53.6	58.3	56.0	59.9	60.0	61.8	63.2	65.8	64.9	65.9
United Kingdom	3.5	4.1	4.5	4.8	5.5	6.7	7.5	8.9	10.8	13.8	17.8	22.3	24.6	28.1
Montenegro	:	39.1	37.7	37.6	38.3	46.6	45.7	41.6	42.8	49.1	51.4	49.6	51.0	50.1
North Macedonia	14.5	14.0	14.0	13.7	13.8	15.5	15.8	14.8	16.7	18.2	19.3	21.7	24.1	24.8
Albania	70.0	76.1	74.2	79.6	73.3	70.7	74.6	66.1	72.4	62.7	71.0	79.2	86.0	90.7
Serbia	18.5	22.4	23.6	24.8	25.9	28.3	28.2	27.5	28.5	28.0	30.3	28.9	29.2	28.7
Turkey	27.9	26.4	24.7	23.2	22.8	24.7	25.3	25.1	27.1	30.0	30.5	33.2	34.8	35.1
Kosovo (*)	1.2	1.3	1.6	1.6	1.4	1.5	1.7	1.6	1.6	1.7	1.9	1.8	3.7	3.2

(*) 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: SHARES_summary_results in <http://ec.europa.eu/eurostat/web/energy/data/shares>

eurostat 

Table 3: Share of electricity from renewable sources in gross electricity consumption, 2004-2017(%)Source: Eurostat (nrg_ind_ren)

Almost one fifth of energy used for heating and cooling from renewable sources

In 2017, renewable energy accounted for 19.5 % of total energy use for heating and cooling in the EU-28. This is a significant increase from 10.4 % in 2004. Increases in industrial sectors, services and households (building sector) contributed to this growth. Aerothermal, geothermal and hydrothermal heat energy captured by heat pumps is taken into account, to the extent reported by countries. The share of energy from renewable sources in heating and cooling is presented in Table 4.

Share of renewable energy sources in heating and cooling, 2004-2017

(%)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EU-28	10.4	11.1	11.8	13.2	13.8	15.2	15.4	16.0	17.0	17.5	18.4	18.8	19.0	19.5
Belgium	2.8	3.4	3.7	4.6	5.0	5.9	6.1	6.6	7.3	7.4	7.7	7.7	8.1	8.0
Bulgaria	14.1	14.3	14.8	13.9	17.3	21.7	24.4	24.9	27.5	29.2	28.3	28.6	30.0	29.9
Czechia	9.9	10.9	11.2	12.4	12.9	14.3	14.1	15.4	16.3	17.7	19.5	19.7	19.8	19.7
Denmark	20.6	22.8	23.8	26.9	28.1	29.5	31.0	32.3	33.6	35.1	38.5	40.7	42.2	46.5
Germany	7.1	7.7	8.4	10.2	10.3	11.2	12.1	12.6	13.5	13.5	13.5	13.5	13.1	13.4
Estonia	33.2	32.2	30.7	32.7	35.5	41.8	43.3	44.1	43.1	43.2	45.2	49.6	51.2	51.6
Ireland	2.9	3.4	3.7	3.8	3.5	4.2	4.3	4.7	4.9	5.2	6.3	6.3	6.3	6.9
Greece	12.8	12.8	12.4	14.4	14.2	16.5	17.9	19.4	23.4	26.5	27.0	25.8	24.6	26.6
Spain	9.5	9.4	11.3	11.2	11.6	13.3	12.6	13.6	14.1	14.1	15.7	17.0	17.1	17.5
France	12.5	12.4	11.7	12.6	13.3	15.0	16.1	16.0	17.5	18.6	19.1	19.9	21.1	21.3
Croatia	29.4	30.0	29.1	29.2	28.6	31.2	32.8	33.7	36.5	37.2	36.1	38.5	37.6	36.5
Italy	5.7	8.2	10.1	13.3	15.3	16.4	15.6	13.8	17.0	18.1	18.9	19.3	18.9	20.1
Cyprus	9.3	10.0	10.4	13.1	14.5	16.3	18.2	19.2	20.7	21.6	21.6	22.5	23.0	24.5
Latvia	42.5	42.7	42.6	42.4	42.9	47.9	40.7	44.7	47.3	49.7	52.2	51.7	51.8	54.6
Lithuania	30.4	29.3	29.2	29.1	32.0	33.7	32.5	32.8	34.5	36.9	40.6	46.1	46.6	46.5
Luxembourg	1.8	3.6	3.6	4.4	4.6	4.7	4.7	4.8	5.0	5.5	7.2	7.1	7.3	8.1
Hungary	6.4	9.9	11.4	13.5	12.0	17.0	18.1	20.0	23.3	23.7	21.2	21.2	20.9	19.6
Malta	1.0	1.0	1.4	1.5	1.7	2.0	5.7	11.8	13.1	14.7	14.8	14.8	16.5	20.2
Netherlands	2.2	2.4	2.7	3.0	3.1	3.4	3.1	3.7	3.8	4.1	5.1	5.4	5.4	5.9
Austria	20.2	21.9	22.9	25.1	25.1	27.4	28.7	28.9	30.0	31.9	32.9	32.0	32.2	32.0
Poland	10.2	10.2	10.2	10.5	10.8	11.5	11.7	13.1	13.4	14.1	14.0	14.5	14.7	14.5
Portugal	32.5	32.1	34.2	35.0	37.5	38.0	33.9	35.2	33.2	34.6	34.0	33.5	35.1	34.4
Romania	17.3	17.9	17.6	19.5	23.2	26.4	27.2	24.3	25.7	26.2	26.7	25.9	26.9	26.6
Slovenia	18.4	18.9	18.5	20.4	19.2	27.6	28.1	30.3	31.5	33.4	32.4	33.9	34.0	33.2
Slovakia	5.1	5.0	4.5	6.2	6.1	8.2	7.9	9.3	8.8	7.9	8.9	10.8	9.9	9.8
Finland	39.5	39.1	41.4	41.4	43.3	43.1	44.2	45.9	48.4	50.8	52.0	52.6	53.7	54.8
Sweden	46.6	51.8	56.3	58.7	61.0	63.6	60.9	62.2	65.8	67.1	67.9	68.6	68.5	69.1
United Kingdom	0.7	0.8	0.9	1.0	1.9	2.3	2.6	3.0	3.2	4.0	4.7	6.1	7.0	7.5
Montenegro	.	52.9	51.4	49.1	46.0	62.1	76.5	81.3	79.8	68.5	67.6	68.5	69.2	67.5
North Macedonia	23.3	24.7	24.9	22.5	24.6	29.2	26.5	27.3	29.6	31.8	35.0	34.5	30.9	36.4
Albania	33.1	37.8	31.0	33.1	37.1	34.7	31.3	31.4	39.1	37.8	31.0	34.6	33.8	24.9
Serbia	14.0	15.6	15.8	13.2	16.7	26.5	23.2	21.1	23.2	25.1	28.8	26.5	24.7	24.4
Turkey	17.6	17.0	15.2	14.6	15.0	15.4	14.4	12.0	12.1	12.6	12.3	12.1	11.7	10.3
Kosovo (*)	51.9	49.5	48.9	49.2	47.8	47.8	45.5	44.7	49.3	49.7	51.8	46.7	51.8	50.5

(*) 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: SHARES_summary_results in <http://ec.europa.eu/eurostat/web/energy/data/shares>

eurostat 

Table 4: Share of renewable energy sources in heating and cooling, 2004-2017(%)Source: Eurostat (nrg_ind_ren)

7.6% of renewable energy used in transport activities in 2016

The EU agreed to set a common target of 10 % for the share of renewable energy (including liquid biofuels, hydrogen, biomethane, 'green' electricity, etc.) in the transport sector by 2020.

The average share of energy from renewable sources in transport increased from 1.4 % in 2004 to 7.6 % in 2017. Among the EU Member States the relative share of renewable energy in transport fuel consumption ranged from highs of 38.6 % in Sweden, 18.8 % in Finland and 9.7 % in Austria down to less than 2.0 % in Croatia, Greece and Estonia (see Figure 2).

In some of the EU Member States there was a rapid take-up in the use of renewable energy as a transport fuel. This was particularly true in Ireland, Luxembourg, Malta, Finland and Sweden.

More details on the share of energy from renewable sources in transport can be found in Table 5.

Share of renewable energy sources in transport, 2004-2017

(%)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2020 target
EU-28	1.4	1.8	2.4	3.1	3.9	4.6	5.2	4.0	5.3	5.7	6.1	6.6	7.2	7.6	10.0
Belgium	0.5	0.6	0.6	0.6	0.6	2.1	4.7	4.7	4.8	5.0	5.8	3.9	6.0	6.6	10.0
Bulgaria	0.9	0.8	1.0	0.9	0.9	1.0	1.4	0.8	0.6	5.8	5.7	6.4	7.2	7.2	10.0
Czechia	1.6	0.9	1.2	1.4	2.7	4.1	5.1	1.2	6.1	6.3	6.9	6.5	6.4	6.6	10.0
Denmark	0.4	0.4	0.5	0.5	0.5	0.7	1.1	3.6	6.4	6.6	6.7	6.7	6.8	6.8	10.0
Germany	2.2	4.0	6.8	7.5	6.4	5.9	6.4	6.5	7.4	7.3	6.9	6.6	7.0	7.0	10.0
Estonia	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	10.0
Ireland	0.0	0.1	0.1	0.5	1.3	2.0	2.5	5.4	4.9	5.7	5.3	5.9	5.2	7.4	10.0
Greece	0.1	0.1	0.7	1.3	1.1	1.1	1.9	0.6	0.9	1.0	1.3	1.1	1.6	1.8	10.0
Spain	1.0	1.3	0.8	1.4	2.2	3.7	5.0	0.8	0.9	1.1	1.1	1.3	5.3	5.9	10.0
France	1.5	2.1	2.3	4.0	6.2	6.6	6.5	1.0	7.4	7.6	8.2	8.4	8.7	9.1	10.0
Croatia	1.0	1.0	1.0	1.1	1.1	1.3	1.1	1.0	1.1	4.4	4.3	3.6	1.3	1.2	10.0
Italy	1.2	1.0	1.0	1.0	2.6	3.8	4.7	5.0	6.1	5.4	5.0	6.5	7.4	6.5	10.0
Cyprus	0.0	0.0	0.0	0.0	1.9	2.0	2.0	0.0	0.0	1.1	2.7	2.5	2.7	2.6	10.0
Latvia	2.1	2.4	2.2	1.7	1.7	1.9	4.0	4.1	4.0	4.0	4.1	3.9	2.8	2.5	10.0
Lithuania	0.4	0.6	1.9	3.8	4.3	4.5	3.8	3.8	4.9	4.8	4.3	4.6	3.6	3.7	10.0
Luxembourg	0.1	0.1	0.2	2.2	2.2	2.2	2.1	2.3	2.8	4.0	5.5	6.7	5.9	6.4	10.0
Hungary	0.9	0.9	1.1	1.5	5.1	5.8	6.1	6.1	5.9	6.2	6.9	7.1	7.6	6.8	10.0
Malta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.2	3.5	4.6	4.7	5.5	6.9	10.0
Netherlands	0.5	0.4	0.8	3.1	2.9	4.5	3.3	5.0	5.2	5.3	6.5	5.4	4.9	5.9	10.0
Austria	4.5	5.1	7.5	8.2	9.5	11.1	10.7	10.0	10.0	9.8	11.0	11.4	10.6	9.7	10.0
Poland	1.4	1.6	1.6	1.6	3.5	5.3	6.6	6.8	6.5	6.6	6.2	5.6	3.9	4.2	10.0
Portugal	0.4	0.5	1.6	2.4	2.5	3.9	5.5	0.7	0.8	0.9	3.7	7.4	7.7	7.9	10.0
Romania	1.6	1.6	1.4	2.4	3.5	4.5	3.4	2.9	4.9	5.4	4.7	5.5	6.2	6.6	10.0
Slovenia	0.9	0.8	1.1	1.5	1.8	2.3	3.1	2.5	3.3	3.8	2.9	2.2	1.6	2.7	10.0
Slovakia	1.5	1.6	3.5	4.0	4.3	5.3	5.3	5.5	5.4	6.0	7.6	8.5	7.7	7.0	10.0
Finland	1.0	0.9	1.0	1.0	2.9	4.6	4.4	1.0	1.1	10.7	24.7	24.8	9.0	18.8	10.0
Sweden	6.3	6.2	7.1	8.0	8.3	8.9	9.2	11.8	15.2	20.0	21.9	25.1	33.8	38.6	10.0
United Kingdom	0.3	0.5	0.7	1.1	2.3	2.9	3.3	3.2	1.6	1.8	1.9	4.5	5.0	5.1	10.0
Montenegro	:	0.4	0.5	1.0	0.9	0.7	0.8	0.6	0.7	1.1	1.1	1.2	1.1	1.0	:
North Macedonia	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	:
Albania	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	:
Serbia	0.5	0.4	0.4	0.7	0.7	1.5	0.7	1.9	2.0	1.7	1.2	1.2	1.2	1.2	:
Turkey	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	:
Kosovo (*)	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	:

(*) 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: SHARES_summary_results in <http://ec.europa.eu/eurostat/web/energy/data/shares>

eurostat 

Table 5: Share of renewable energy sources in transport, 2004-2017(%) Source: Eurostat (nrg_ind_ren)

Concerning the use of renewable energy in transport, the most widely used energy source are liquid biofuels, which are usually blended with fossil fuels. Figure 6 presents the evolution of the production of liquid biofuels in the [European Union](#) in the last years.

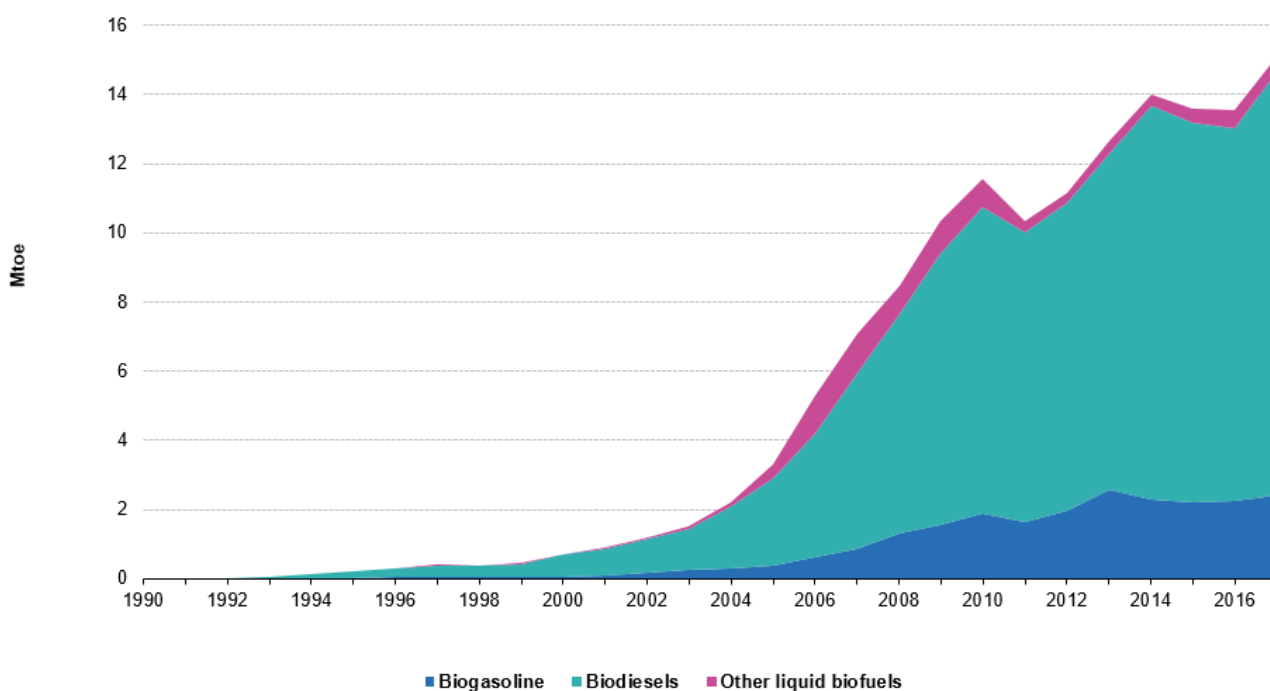


Figure 6: Primary production of liquid biofuels, EU-28, 1990-2017(Mtoe)Source: Eurostat (nrg_bal_c)

Due to the binding 2020 target, the production of liquid biofuels in the EU has increased significantly, being biodiesel the liquid biofuel most widely produced, followed by biogasoline and other liquid biofuels.

Source data for tables and graphs

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

Data sources

The statistics presented in this article are based on data compiled in accordance with accounting rules set down in the [Directive 2009/28/EC](#) on the promotion of the use of energy from renewable sources and calculated on the basis of energy statistics covered by [Regulation 1099/2008](#) on energy statistics, most recently amended in November 2017 by [Regulation 2017/2010](#).

The most recent data available on the share of energy from renewable sources are for the reference year 2017. Data are available for all EU Member States, as well as Albania, Montenegro, Serbia, Turkey, Kosovo¹ and North Macedonia. In general, data are complete, recent and reliably comparable across countries.

The share of renewable energy in gross final energy consumption is identified as a key indicator for measuring progress under the [Europe 2020 strategy](#) for smart, sustainable and inclusive growth. This indicator may be considered as an [estimate](#) for the purpose of monitoring [Directive 2009/28/EC](#) on the promotion of the use of energy from renewable sources — however, the statistical system in some countries for specific renewable energy technologies is not yet fully developed to meet the requirements of this Directive; for example, ambient heat energy for heat pumps is not reported by many countries.

All calculations take into account specific provisions as in place in [Directive 2009/28/EC](#) following its amendment by [Directive \(EU\) 2015/1513](#) of the European Parliament and of the Council of 9 September 2015 amending [Directive 98/70/EC](#) relating to the quality of petrol and diesel fuels and amending [Directive 2009/28/EC](#) on the promotion of the use of energy from renewable sources.

¹This 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.

An important aspect to take into account when interpreting data is statistical revisions. The latest data for 2005 shows a small variation with respect to data available during the preparation and adoption of the Directive in 2007-2008. Changes are due to revisions in data sets transmitted by reporting countries in response to annual energy questionnaires. Due to revision of data for biomass consumption in households, the updated data for Croatia indicates that its consumption of energy from renewable sources is above its 2020 target since 2004 (the first year for which values are available). But Croatia is not the only case. As a consequence of the Renewable Energy Directive, 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 allow them to capture more data on the final energy consumption of biomass. As a consequence, several countries are revising their data leading to an increase in their share of energy from renewable sources (e.g. Croatia, France, Lithuania and Hungary).

Gross inland energy consumption represents the total quantity of energy resources used for all purposes.

Energy available for final consumption represents the total quantity of energy resources available to consumers (private, commercial and industrial). It excludes energy used in transformation processes (for example electricity power plants, fuel refineries, blast furnaces). It also includes energy products that might be used for non-energy purposes (for example in chemical processes).

Gross final consumption of energy is defined in the Renewable Energy Directive 2009/28/EC 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.

Energy production from non-renewable municipal wastes was deducted 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 Commission has only recently established definitive guidelines for accounting of energy from heat pumps. Some countries have not yet improved their national statistical system to fully account for all renewable energy sources (for example for the renewable energy with respect to heat pumps). Despite the lack of an approved statistical methodology at the time of data collection and for reasons of completeness, the contribution of renewable energy from heat pumps was taken into account in cases where sufficient information was submitted by reporting countries. For these reasons, some small differences exist between data used for this article and those published in the energy balances.

Energy statistics and energy balances available from Eurostat do not distinguish between **sustainable and non-sustainable renewable sources of energy**. This split is possible in the accounting tool (SHARES tool²) developed by Eurostat, where reporting countries have to provide additional information in this respect. It should be borne in mind, therefore — unless explicitly stated — that renewables include all renewable energy sources, both those meeting sustainability criteria and those that do not comply with such criteria.

Data for the period 2004-2010 : Directive 2009/28/EC did not yet exist or was only very recently adopted. In most European countries, it had not been enacted 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. 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 onwards : 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

² [SHARES tool](#)

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 have not yet fully implemented all provisions of the Renewable Energy Directive, some biofuels and bioliquids are not counted as compliant (sustainable) in the period 2011-2015.

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 2009/28/EC, 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-28, starting from 1990), long time series of this indicator are not available.

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 [SHARES tool manual](#).

The share of renewable energies in the fuel consumed by the transport sector is calculated on the basis of energy statistics, according to the methodology as described in Directive 2009/28/EC. The contribution of all liquid biofuels is included within the calculation for this indicator until 2010. From 2011, the data for liquid biofuels in transport are restricted only to liquid biofuels compliant with Directive 2009/28/EC (in other words satisfying the sustainability criteria).

Context

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 energy supplies, greater diversity in energy supply, less air pollution, as well as the possibility for job creation in environmental and renewable energy sectors.

The [2020 climate and energy package](#) adopted in December 2008 provided a further stimulus for increasing the use of renewable energy sources to 20 % of total energy consumption by 2020, while calling for energy consumption and greenhouse gas emissions to both be cut by 20 %. Directive 2009/28/EC of the European Parliament and Council on the promotion of the use of energy from renewable sources set an overall goal across the EU for a 20 % share of energy consumption to be derived from renewable sources by 2020, while renewables should also account for a 10 % share of the fuel used in the transport sector by the same date. The Directive changes the legal framework for promoting renewable electricity, requires [national action plans](#) to show how renewable energies will be developed in each EU Member State, creates cooperation mechanisms, and establishes [sustainability](#) criteria for liquid biofuels (following concerns over their potential adverse effects on crop prices, food supply, forest protection, [biodiversity](#), water and soil resources). A report on the [sustainability of solid and gaseous biofuels used for electricity, heating and cooling](#) (SWD(2014) 259) was adopted in July 2014.

On 6 June 2012, the European Commission presented a Communication titled, ' [Renewable energy: a major player in the European energy market](#) ' (COM(2012) 271 final), outlining options for a renewable energy policy for the period beyond 2020. The Communication also called for a more coordinated European approach in the establishment and reform of support schemes and an increased use of renewable energy trading among EU Member States. In January 2014, the European Commission put forward a set of [energy and climate goals for 2030](#) with the aim of encouraging private investment in infrastructure and low-carbon technologies. One of the key targets proposed is for the share of renewable energy to reach at least 27 % by 2030. These objectives

are seen as a step towards meeting the greenhouse gas emissions targets for 2050 put forward in the [Roadmap for moving to a competitive low-carbon economy in 2050](#) (COM (2011) 112 final).

One of the [10 priorities of the European Commission](#) put forward in 2014 is an [energy union](#) . It is intended that a European energy union will ensure secure, sustainable, competitive and affordable energy. In February 2015, the European Commission set out its plans for a framework strategy for a resilient energy union with a forward-looking climate change policy in a Communication ([COM\(2015\) 80 final](#)). The Communication proposes five dimensions for the strategy, one of which is decarbonising the economy.

On 11 December 2018, the EU adopted [Directive 2018/2001/EU](#) on the promotion of the use of energy from renewable sources. The new regulatory framework includes a binding renewable energy target for the EU for 2030 of 32 % with an upwards revision clause by 2023. This will greatly contribute to the Commission's political priority as expressed by President Juncker in 2014 for the European Union to become the world number one in renewables. This will allow Europe to keep its leadership role in the fight against climate change, in the clean energy transition and in meeting the goals set by the Paris Agreement.

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](#)
- [The EU in the world - energy](#)

Publications

- [Shedding light on energy in the EU — A guided tour of energy statistics \(digital publication\) — 2018 edition](#)
- [Energy balance sheets — 2017 data — 2018 edition](#)
- [Energy, transport and environment indicators — 2018 edition](#)

Main tables

- [Energy \(t_nrg\)](#) , see:

[Energy statistics - main indicators \(t_nrg_ind\)](#)

[Energy statistics - quantities \(t_nrg_quant\)](#)

Database

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

[Energy statistics - quantities, annual data \(nrg_quanta\)](#)

Dedicated section

- [Energy](#)

Methodology

- [Energy Statistics Manual](#)
- [Energy statistics — quantities](#) (ESMS metadata file — nrg_quant_esms)
- [Share of energy from renewable sources \(nrg_ind_ren\)](#) (ESMS metadata file — nrg_ind_ren_esms)

External links

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

Notes

View this article online at https://ec.europa.eu/eurostat/statistics-explained/index.php/Renewable_energy_statistics