

## Renewable energy

### Analysis of the latest data on energy from renewable sources

**The share of energy from renewable sources in gross final energy consumption in the EU-27 reached 12.5 % in 2010 and is showing steady progress towards the Europe 2020 target (20 %).**

**During 2009 and 2010 the share of energy from renewable sources continued to grow despite the financial and economic crisis. The year-to-year growth in the gross inland energy consumption of all renewables was in 2010 at the highest level since 1990.**

**Electricity production from biofuels (liquid and gaseous) as well as wind based electricity generation more than doubled between 2005 and 2010.**

**Wood and wood waste continues to make the largest contribution to the share of energy from renewable sources in gross final energy consumption.**

#### Renewables in 2010

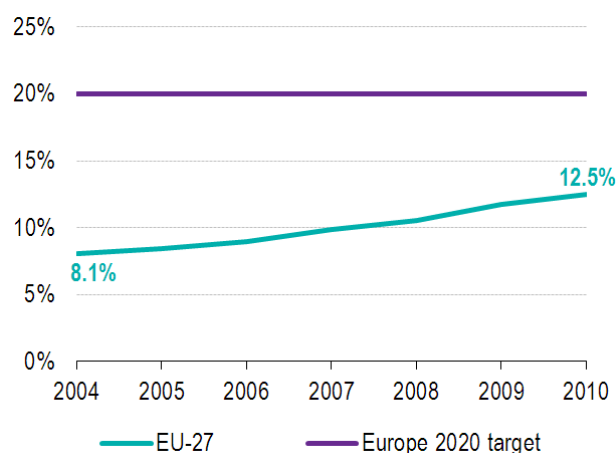
The flagship initiative for a resource-efficient Europe under the Europe 2020 strategy supports the shift towards a resource-efficient, low-carbon economy to achieve sustainable growth. Increasing the share of energy from renewable sources is part of a decisive move towards a low-carbon economy.

In the EU-27 the share of energy from renewable sources in gross final energy consumption increased from 8.1 % in 2004 to 12.5 % in 2010 (Figure 1). No Member State has so far reported any arrangements for the statistical transfer of a specified amount of energy from renewable sources nor has reported any joint projects relating to the production of electricity, heating or cooling from renewable energy sources. For reasons of consistency with previously published figures no account is taken of the aviation energy consumption cap in the figures presented here. If account is taken of the cap, the effect on the values presented in Figure 1 and Table 1 would be an increase of roughly 0.2 percentage points (the value for 2010 would be 12.7 %).

The year 2010 marks the end of the first third of the time period running from the base year 2005 until 2020, for which the Directive has set the 20 %

target at EU level. At the same time, we can observe an increase from the base year value of 8.5 % to 12.5 % in 2010 – which is roughly one third of the gap between the base year share of renewables and the 20% target. Thus, at the aggregated EU level, progress towards the 2020 target is in line with the expected linear trajectory of progress towards the target.

**Figure 1: Share of energy from renewable sources in gross final consumption of energy (expressed in percentage terms)**



Source: Eurostat (online data code: [t2020\\_31](#))

Each Member State shall ensure that the share of energy from renewable sources in gross final consumption of energy in 2020 is at least its national overall target for the share of energy from renewable sources in that year (see last column in Table 1).

In Romania and Estonia, the actual share of energy from renewable sources in gross final consumption of energy in 2010 was less than a percentage point from their targets; they were closely followed by Sweden. On the opposite end of the spectrum there are the United Kingdom, Ireland, the Netherlands and France, with a distance to their 2020 targets of more than 10 percentage points, closely followed by Malta, with just below 10% percentage points distance to target.

### Gross inland energy consumption of renewable sources

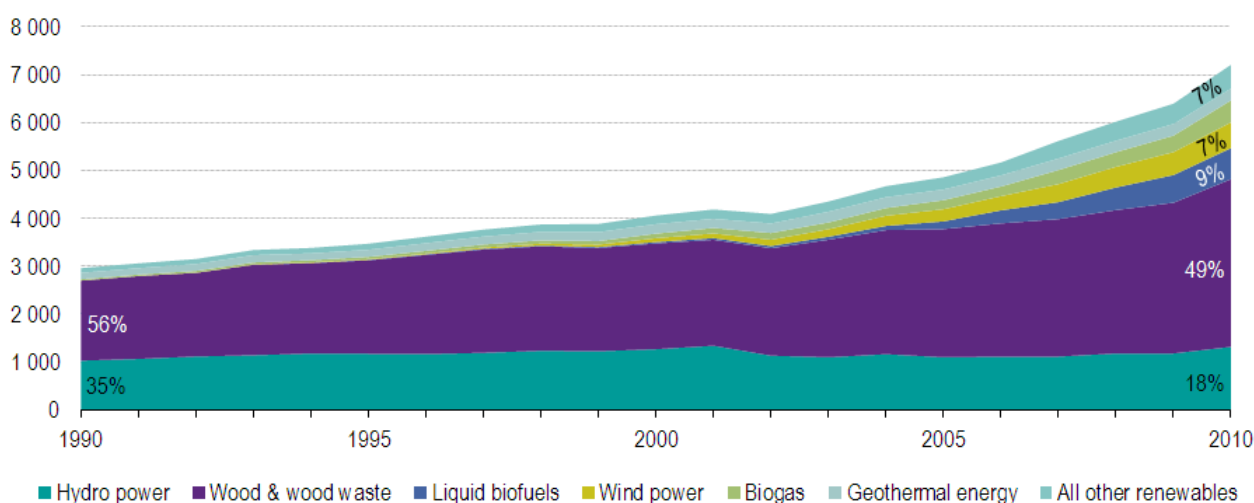
The gross inland energy consumption of renewable sources continues to grow despite the financial and economic crisis of recent years (Figure 2). In 2010, the year-to-year growth was 13%, which is the highest-ever recorded growth for renewable energy sources since energy data for all EU-27 countries have been available (i.e. since 1990). It was even higher than the previous record growth, observed during a period of economic growth, between 2006 and 2007 (+9% on a year-to-year basis).

**Table 1: Share of renewables in final consumption of energy**  
(share calculated according to Directive 2009/28/EC and expressed in percentage terms)

	2004	2005	2006	2007	2008	2009	2010	2020 target
<b>EU-27</b>	8.1	8.5	9.0	9.9	10.5	11.7	12.5	20
Belgium	1.9	2.3	2.6	2.9	3.3	4.5	5.1	13
Bulgaria	9.6	9.5	9.6	9.3	9.8	11.9	13.8	16
Czech Republic	6.1	6.1	6.5	7.4	7.6	8.5	9.2	13
Denmark	15.1	16.2	16.5	18.0	18.8	20.2	22.2	30
Germany	5.1	5.9	6.9	9.0	9.1	9.5	11.0	18
Estonia	18.4	17.5	16.1	17.1	18.9	23.0	24.3	25
Ireland	2.2	2.7	2.9	3.3	3.9	5.1	5.5	16
Greece	6.9	7.0	7.0	8.1	8.0	8.1	9.2	18
Spain	8.2	8.3	9.0	9.5	10.6	12.8	13.8	20
France	9.3	9.5	9.6	10.2	11.3	12.3	12.9	23
Italy	5.3	5.3	5.8	5.7	7.1	8.9	10.1	17
Cyprus	2.4	2.4	2.5	3.1	4.1	4.6	4.8	13
Latvia	32.8	32.3	31.1	29.6	29.8	34.3	32.6	40
Lithuania	17.1	16.9	16.9	16.6	17.9	20.0	19.7	23
Luxembourg	0.9	1.4	1.4	2.7	2.8	2.8	2.8	11
Hungary	4.4	4.5	5.1	5.9	6.6	8.1	8.7	13
Malta	0.1	0.1	0.2	0.2	0.2	0.2	0.4	10
Netherlands	1.9	2.3	2.7	3.1	3.4	4.1	3.8	14
Austria	22.9	25.0	26.6	28.9	29.2	31.0	30.1	34
Poland	7.0	7.0	7.0	7.0	7.9	8.9	9.4	15
Portugal	19.2	19.6	20.8	22.0	23.0	24.6	24.6	31
Romania	16.8	17.6	17.1	18.3	20.3	22.4	23.4	24
Slovenia	16.2	16.0	15.5	15.6	15.1	18.9	19.8	25
Slovakia	6.1	6.2	6.6	8.2	8.4	10.4	9.8	14
Finland	29.1	28.7	29.9	29.5	31.1	31.1	32.2	38
Sweden	38.7	40.6	42.7	44.2	45.2	48.1	47.9	49
United Kingdom	1.1	1.3	1.5	1.8	2.3	2.9	3.2	15
Norway	58.4	60.1	60.6	60.5	62.0	65.1	61.1	67.5
Croatia	15.2	14.1	13.8	12.4	12.2	13.2	14.6	20

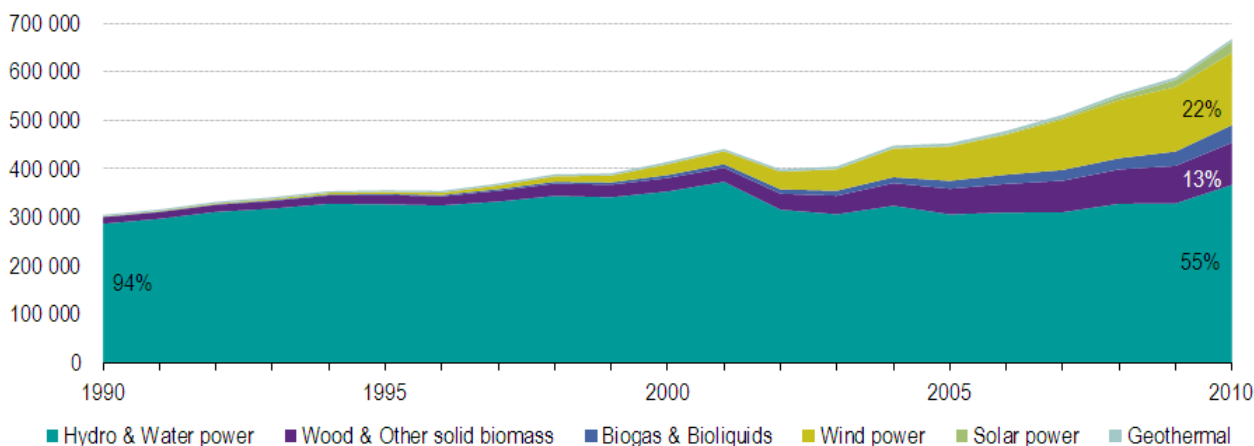
Source: Eurostat (online data code: [t2020\\_31](#))

**Figure 2: Gross inland energy consumption from renewable sources**  
(in petajoules)



Source: Eurostat (online data codes: [nrg\\_1071a](#), [nrg\\_1072a](#), [nrg\\_1073a](#))

**Figure 3: Gross electricity generation from renewable energy sources**  
(in gigawatt hours)



Source: Eurostat (online data code: [nrg\\_105a](#))

Wood and wood waste continues to be the largest contributor to the mix of renewable energy sources in gross inland energy consumption.<sup>1</sup> While wood and wood waste energy doubled (+110%) between 1990 and 2010, its share in total renewable energy sources decreased from 56% to 49% as other renewable energy sources grew even faster. For the same reason, the share of hydro power decreased from 35% to 18%, although in absolute terms it increased by 28% between 1990 and 2010.

Liquid biofuels, biogas and wind-based electricity generation have expanded rapidly over the last 20 years. All these fuels were hardly present at all in 1990, when they together accounted for 1.0% of total renewables. By 2000 their combined share reached 5.0% and by 2005 it was 12.4%. Over the following five years their contribution nearly doubled and in 2010 it reached 22.8% of the total gross inland energy consumption of all renewables. The use of geothermal energy has also expanded significantly over the last 20 years (+84%), although as this increase was much lower than for other renewable sources its share decreased from 4.5% in 1990 to 3.4% in 2010.

## Renewable electricity

Hydro power plants<sup>2</sup> account for by far the largest share of electricity generation from renewable energy sources. While between 1990 and 2010 electricity generation from hydro increased by

<sup>1</sup> Eurostat's data on renewable energy sources cover wood and wood waste statistics in the energy balances only for energy use. Wood for non-energy use (for example for building construction or for furniture) is outside the scope of energy statistics.

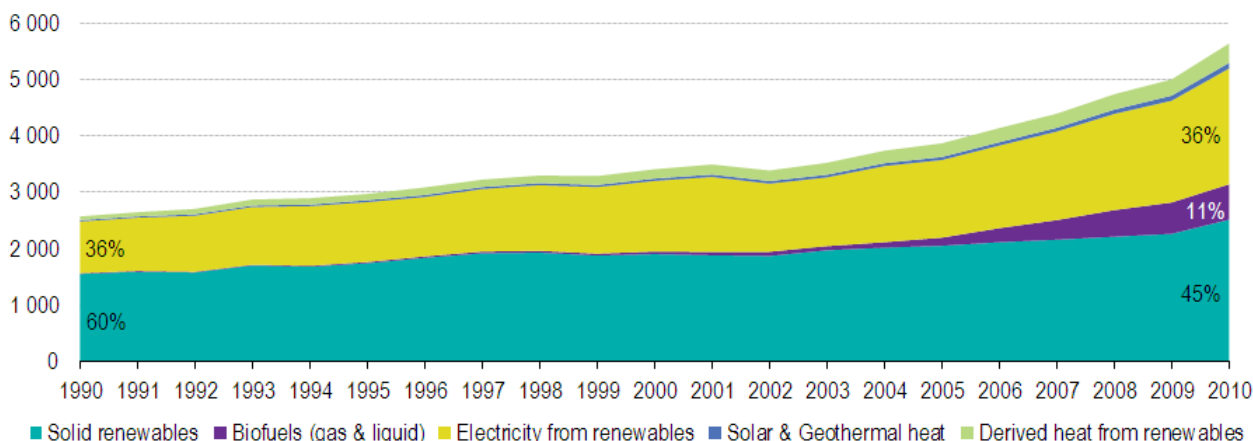
<sup>2</sup> Hydro includes tide, wave and ocean energy; pumped hydro storage is excluded for water previously pumped uphill.

28%, its share of total renewable electricity shrank from 94% in 1990 to 55% in 2010. This is due to the more rapid expansion of electricity generation from other renewable sources (Figure 3). Wind generation doubled over the period 2005-2010. In fact, since 2002 wind power has been the second largest contributor to renewable electricity, replacing solid biomass that had been in second position since 1990. Solar-based electricity generation increased more than 10 times in the same period, although in 2010 solar power contributed only 3% to total renewable electricity. Combustible renewables are also used in conventional thermal generation power plants. Since 1990, when the contribution of solid renewables was 4% and that of bioliquids and biogas negligible, their shares grew to 13% and 5% respectively in 2010.

## Final consumption of renewable energy

Renewable energy available for final consumption follows a very similar pattern to gross inland energy consumption from renewable sources (Figure 4). Rapid expansion of certain technologies caused the share of energy from solid renewables (including wood and renewable waste) to decrease from 60% in 1990 to 45% in 2010. However, in absolute terms it increased by 62% during this period. Electricity generated from renewable sources available for final consumption more than doubled between 1990 and 2010, although its share stayed roughly the same (36%). Gaseous and liquid biofuels accounted for 11% of the total in 2010. The effect of the financial and economic crisis up to 2010 is not visible at all in the quantities of renewable energy available for final consumption.

**Figure 4: Renewable energy available for final consumption**  
(in petajoules)

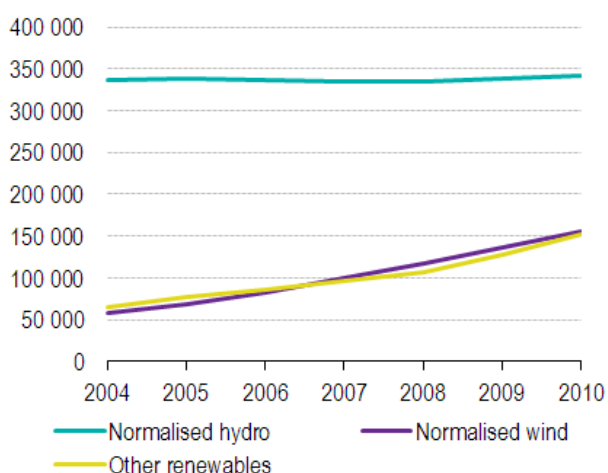


Source: Eurostat (online data codes: [nrg\\_1071a](#), [nrg\\_1073a](#), [nrg\\_105a](#), [nrg\\_106a](#))

### Accounting for electricity generation from renewable sources

In 2010, electricity generation from renewable sources, with normalised<sup>3</sup> wind power and hydro power, contributed 19.6% to total EU-27 electricity generation. There is a huge variation between countries in Europe: for Malta the level of this indicator is negligible, while for Norway it is around 100%<sup>4</sup>. In the EU-27 the highest share is in Austria, followed by Sweden (Table 2).

**Figure 5: Renewable electricity generation with normalised hydro and wind**  
(in gigawatt hours)



Source: Eurostat ([SHARES 2010 application](#))

**Table 2: Share of electricity from renewable sources in gross electricity consumption**  
(in percentage terms)

	2004	2005	2006	2007	2008	2009	2010
<b>EU-27</b>	14.1	14.7	15.2	15.9	16.7	18.8	19.6
Belgium	1.7	2.3	2.9	3.4	4.4	5.8	6.9
Bulgaria	9.0	9.3	9.4	9.4	10.0	11.3	12.9
Czech Republic	3.9	3.9	4.2	4.7	5.2	6.4	7.5
Denmark	23.9	24.8	24.1	25.2	26.1	28.3	32.9
Germany	8.8	10.2	11.5	13.0	14.0	17.2	18.1
Estonia	0.6	1.2	1.5	1.5	2.1	6.1	10.4
Ireland	5.5	6.7	8.3	9.8	10.9	13.7	14.8
Greece	7.8	8.1	8.9	9.3	9.6	10.5	11.9
Spain	18.7	18.9	19.8	21.5	23.6	27.8	29.5
France	13.8	13.8	14.1	14.3	14.4	15.0	14.9
Italy	16.1	16.3	15.9	16.0	16.6	18.8	20.1
Cyprus	0.0	0.0	0.0	0.1	0.3	0.6	1.4
Latvia	46.0	43.0	40.4	38.6	38.7	42.0	42.0
Lithuania	3.5	3.8	4.0	4.6	4.8	5.9	7.4
Luxembourg	2.8	3.2	3.2	3.3	3.6	4.1	3.8
Hungary	2.2	4.4	3.5	4.2	5.3	7.0	7.1
Malta	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Netherlands	4.4	6.3	6.6	6.0	7.5	9.1	9.7
Austria	62.2	62.3	62.3	64.6	65.2	68.0	65.5
Poland	2.3	2.8	3.1	3.5	4.4	5.9	6.7
Portugal	28.2	28.9	30.0	32.7	34.6	38.2	41.2
Romania	28.4	28.8	28.1	28.1	28.1	30.9	30.5
Slovenia	29.5	28.7	28.2	27.7	30.0	33.8	32.2
Slovakia	13.5	14.4	15.9	16.4	17.1	17.8	17.8
Finland	26.7	26.9	26.4	25.5	27.2	27.2	27.6
Sweden	51.2	50.9	51.8	53.2	53.6	58.3	56.0
United Kingdom	3.5	4.1	4.5	4.8	5.4	6.6	7.4
Norway	97.6	97.0	100.5	98.7	99.8	104.8	97.3
Croatia	41.8	38.5	36.5	32.6	31.5	33.5	35.7

Source: Eurostat ([SHARES 2010 application](#))

Normalised electricity generation (Figure 5) from hydro power accounts for the bulk of electricity generation from renewable sources (53% in 2010), followed by normalised wind power (24% in 2010). However, the share of normalised hydro power has been steadily decreasing since 2004, when it stood at 73%. This is due to the rapid expansion of other renewable sources, not to any

<sup>3</sup> The accounting rules in Directive 2009/28/EC prescribe that electricity generated by hydro power and wind power have to be normalised for annual variations (hydro 15 years and wind 5 years).

<sup>4</sup> Shares above 100% are due to normalization of hydro and wind electricity production as well as due to net exports of electricity when share of electricity production from renewable sources is very high.



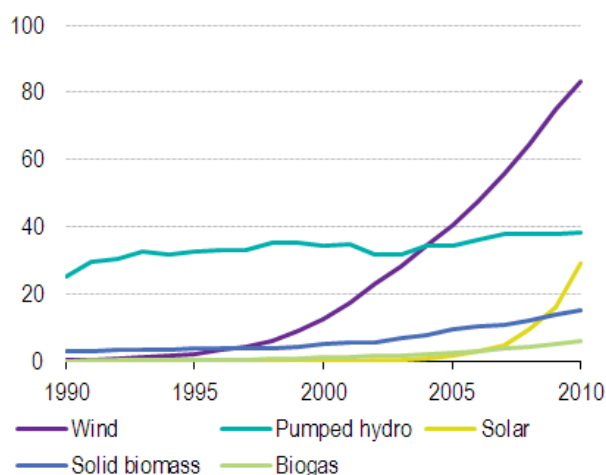
decline in hydro electricity generation, which actually increased slightly in normalised terms.

While the average annual growth rate between 2004 and 2010 for electricity generation from solar energy is roughly 80% p.a., its share is still only very small compared with hydro power (6% in 2010).

Renewable fuels used in thermal power stations (for example biogas or biomass such as wood) are also used increasingly over time and prior to 2004 the electricity generated from these sources was actually higher than wind generation. However, in 2010 their contribution was 17% lower than that of wind.

The available capacity of renewable electricity generation has increased significantly over the last 20 years (Figure 6). Wind power capacity started to increase rapidly already in the late 1990s and after 2005 we observe a boom in solar generation capacities. Additional capacity increases for other renewables were much more modest than for wind and solar.

**Figure 6: Electricity generating capacities** (in gigawatts)



Source: Eurostat (online data code: [nrg\\_113a](#))

Solar and wind generation are intermittent type of electricity generation. The utilisation rate for solar and wind is much lower than for those renewables that are used in conventional thermal power stations (as well as compared with fossil fuels and nuclear). For example, in 2010 the maximum net generation capacity of wind was 110 times higher than that of geothermal electricity generation. However, gross electricity generation was only 27 times higher. This indicates that the utilisation factor for geothermal capacity is roughly four times higher than for wind capacity.

Pumped hydro storage power plants can be relatively easily used to deal with surplus electricity generation from intermittent sources. The capacity of pumped hydro storage power

plants did not increase at rates comparable to the magnitude of increases for solar and wind.

To put electricity generation capacities from renewable sources into perspective with regard to the whole electricity generation system in the EU, total electricity generation capacities in 2010 were the following: nuclear 132 GW, hydro power 145 GW and combustible fuels 475 GW.

## Accounting for renewable energy for heating and cooling

In 2010, renewable energy for heating and cooling in the EU-27 accounted for 14.3% of total energy used for heating and cooling. This is a significant increase from 9.6% in 2004. Increases in industrial sectors as well as in services and residential use (the buildings sector) contributed to this growth.

**Table 3: Share of renewable energy sources in heating and cooling** (in percentage terms)

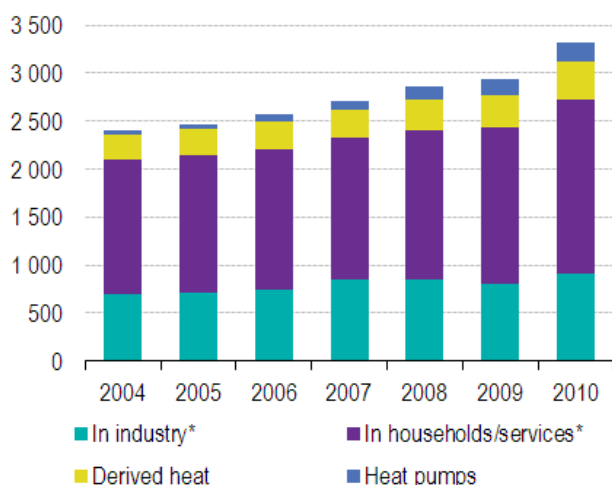
	2004	2005	2006	2007	2008	2009	2010
<b>EU-27</b>	9.6	10.0	10.6	11.8	12.3	13.6	14.3
Belgium	2.9	3.4	3.7	3.7	4.1	5.1	5.2
Bulgaria	14.7	14.7	14.9	14.2	15.9	21.0	23.7
Czech Republic	8.6	9.2	9.6	11.5	11.2	11.9	12.0
Denmark	21.3	23.5	24.5	27.8	29.0	30.8	31.9
Germany	5.3	5.6	5.7	8.5	8.5	8.5	10.5
Estonia	33.3	32.2	30.7	32.7	35.5	41.8	42.8
Ireland	2.8	3.4	3.3	3.5	3.3	3.9	4.0
Greece	12.8	12.8	12.5	14.5	14.4	15.9	16.2
Spain	9.2	9.1	10.9	10.8	11.2	12.8	12.7
France	12.1	12.3	12.2	12.7	13.6	15.4	16.9
Italy	3.5	3.5	4.6	4.4	6.1	8.2	9.5
Cyprus	8.4	8.7	9.3	11.7	12.7	14.6	16.3
Latvia	42.5	42.7	42.6	42.4	42.9	47.9	43.8
Lithuania	30.3	29.9	29.4	29.6	32.7	34.5	33.0
Luxembourg	1.9	3.9	3.8	4.5	4.8	4.6	5.0
Hungary	6.5	6.0	7.5	8.9	8.3	10.5	11.1
Malta	1.1	2.2	2.6	3.2	3.6	2.1	3.1
Netherlands	1.9	2.1	2.5	2.6	2.7	3.1	2.8
Austria	20.5	24.8	26.7	30.2	28.9	31.2	30.8
Poland	10.4	10.4	10.4	10.6	11.2	11.9	12.0
Portugal	32.2	31.9	34.1	34.8	37.3	37.9	34.5
Romania	17.4	17.9	17.6	19.4	23.2	26.4	27.2
Slovenia	18.4	19.0	18.6	20.4	19.2	24.9	26.6
Slovakia	5.3	5.2	4.6	6.5	6.3	8.5	8.0
Finland	39.4	39.0	41.3	41.7	43.2	43.3	44.4
Sweden	48.5	54.2	59.4	62.4	64.9	68.1	66.2
United Kingdom	0.8	0.9	1.0	1.1	1.4	1.7	1.8
Norway	29.6	33.3	32.9	34.3	36.1	37.3	36.9
Croatia	11.7	10.8	11.4	10.6	10.4	11.6	13.0

Source: Eurostat ([SHARES 2010 application](#))

Aerothermal, geothermal and hydrothermal heat energy captured by heat pumps should be taken into account and included in this subsection of total renewable energy. The reporting of renewable energy related to heat pumps is not yet up to the quality and completeness already achieved for other energy carriers and flows. Based on the rules

and criteria laid down in the Directive, renewable energy captured by heat pumps does not include cooling energy (this is especially important for the correct accounting of energy with respect to reversible heat pumps in warm climates). Nevertheless, the available data reported by Member States indicate that between 2006 and 2010 the capture of this energy tripled. Out of the total renewable energy for heating and cooling in the EU-27, in 2010 this accounted for 5.7 %.

**Figure 7: Energy from renewable sources for heating and cooling**  
(in petajoules)



\* excludes derived heat and heat pumps

Source: Eurostat ([SHARES 2010 application](#))

## Accounting for renewable energy in transport

For all countries there is a common 2020 target of 10% for the share of renewable energy in the transport sector. Directive 2009/28/EC stipulates that only biofuels/bioliquids that fulfil sustainability criteria should be included. Statistical systems in some countries have yet to be updated to take this aspect entirely into account. Therefore data in Figure 8 and Table 4 should be treated with this in mind and caution is recommended in drawing any specific conclusion from these data.

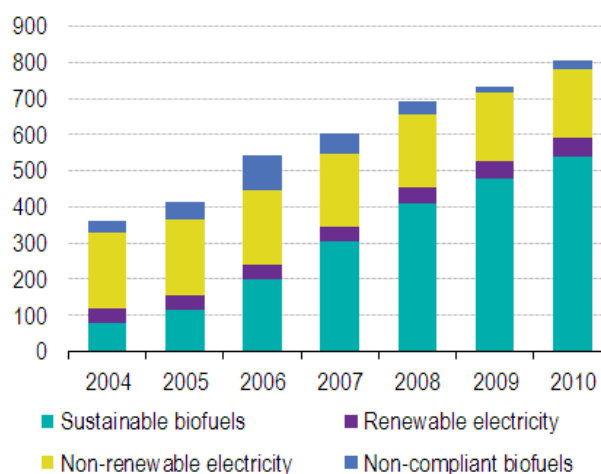
Total fuel consumption of road transport (as well as total transport) fell from its peak in 2007 and continued its downward trend to 2010. In 2010, based on the accounting principles described in the Directive, the share of energy from renewable sources in all modes of transport reached 4.7 % in the EU-27.

In 2010 total electricity use in transport was 3.4 % below its use in 2004. Consumption by electric road vehicles continued to increase but as such was still negligible. Non-road electricity consumption

decreased slightly more than total transport electricity use (-3.5 % during the period). Use of transport biofuels reported as sustainable (compliant with the rules in the Directive) increased considerably over the period 2004-2010.

Figure 8 shows the unadjusted consumption of energy sources in transport. The percentages in Table 4 are adjusted with respect to the rules in the Directive.

**Figure 8: Consumption of electricity and biofuels in transport**  
(in petajoules)



Source: Eurostat ([SHARES 2010 application](#))

**Table 4: Share of renewable energy sources in transport**  
(in percentage terms)

	2004	2005	2006	2007	2008	2009	2010
<b>EU-27</b>	1.0	1.2	1.9	2.7	3.5	4.2	4.7
Belgium	0.2	0.2	0.2	1.3	1.3	3.3	4.3
Bulgaria	0.4	0.3	0.6	0.4	0.5	0.6	1.0
Czech Republic	1.1	0.5	0.8	1.0	2.2	3.8	4.6
Denmark	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Germany	1.9	3.1	5.5	6.6	6.1	5.3	5.7
Estonia	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ireland	0.0	0.0	0.1	0.5	1.3	1.9	2.4
Greece	0.0	0.0	0.0	1.3	1.1	1.1	1.9
Spain	0.8	1.0	0.7	1.2	1.9	3.5	4.7
France	1.1	1.3	2.0	3.6	5.6	6.1	6.1
Italy	1.0	0.9	0.9	0.9	2.4	3.8	4.8
Cyprus	0.1	0.1	0.1	0.0	1.9	2.0	2.0
Latvia	1.1	1.3	1.1	0.8	0.9	1.2	3.3
Lithuania	0.2	0.5	1.7	3.6	4.1	4.2	3.6
Luxembourg	0.1	0.1	0.1	2.1	2.1	2.2	2.0
Hungary	0.3	0.3	0.4	1.0	4.1	4.2	4.7
Malta	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Netherlands	0.2	0.2	0.5	2.9	2.6	4.2	3.0
Austria	2.4	2.8	4.0	4.8	6.4	6.5	5.4
Poland	0.2	0.6	0.9	0.9	3.4	4.8	5.9
Portugal	0.2	0.2	1.3	2.4	2.4	3.9	5.6
Romania	0.9	1.0	0.8	1.7	1.7	1.6	3.2
Slovenia	0.4	0.3	0.4	1.1	1.5	2.0	2.9
Slovakia	0.6	1.1	3.0	5.0	6.4	9.2	7.8
Finland	0.5	0.4	0.4	0.4	2.4	4.1	3.9
Sweden	3.9	3.9	4.9	5.9	6.6	7.3	7.7
United Kingdom	0.1	0.3	0.5	0.9	2.0	2.6	3.0
Norway	1.2	1.2	1.5	1.9	3.3	3.7	3.9
Croatia	0.5	0.5	0.4	0.4	0.4	0.4	0.4

Source: Eurostat ([SHARES 2010 application](#))

## METHODOLOGICAL NOTES

Data presented in Tables 1, 2, 3, 4 and in Figures 1, 5, 7, 8 are calculated according to accounting rules prescribed in Directive 2009/28/EC.

**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 eventually used for non-energy purposes (for example in chemical processes).

**Gross final consumption of energy** is defined in 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, and 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 the renewable energy shares, national **calorific values for oil products** were used where available for converting quantities of petroleum products into energy units, instead of the default Eurostat values.

The Commission has not yet established the complete guidelines for accounting of **energy from heat pumps**. Despite the lack of an approved statistical methodology for heat pumps and for reasons of completeness, the contribution of renewable energy from heat pumps was taken into

account where sufficient information was submitted by Member States. For these reasons some small differences exist between data used for this publication and those published in the energy balances.

The energy statistics and energy balances available at Eurostat (as well as at international level at OECD/IEA and UNECE) cannot distinguish between **sustainable and non-sustainable renewable sources of energy**. This split is possible in the accounting tool ([SHARES application](#)) developed by Eurostat, where reporting countries have to provide additional information in this respect. Therefore it should be borne in mind that, unless explicitly stated, renewables include all renewable energy sources — those meeting sustainability criteria and those that do not comply with such criteria.

As stipulated in Directive 2009/28/EC, gross final consumption of **electricity from renewable sources** is the electricity produced from renewable energy sources, excluding hydro electricity produced from pumped storage plants for water previously pumped uphill. The Directive also requires electricity production from hydro and wind energy to be normalised. Given the 15-year normalisation requirement for hydro production and the availability of energy statistics (for the EU-27, 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 the heat losses in networks.

## Further information

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Eurostat website: <http://ec.europa.eu/eurostat>

Data on 'Energy statistics'

<http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/data/database>

Further information about 'Energy statistics'

<http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/introduction>

Detailed data from the SHARES application are available within the Energy section of the Eurostat website:

[http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/other\\_documents](http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/other_documents).

The methodology and definitions used here are in line with the following legal acts:

- [Regulation \(EC\) No 1099/2008 on energy statistics](#);
- [Directive 2009/28/EC on the promotion of the use of energy from renewable sources](#).

General principles, definitions and methodologies for energy statistics are described in the [Energy Statistics Manual](#).

EU Energy in figures — statistical pocketbook: [http://ec.europa.eu/energy/publications/doc/2012\\_energy\\_figures.pdf](http://ec.europa.eu/energy/publications/doc/2012_energy_figures.pdf).

Members States' progress reports on overall renewable energy policy developments and their compliance with the measures set out in Directive 2009/28/EC and the National Renewable Energy Action Plans are available on the website of DG Energy: [http://ec.europa.eu/energy/renewables/reports/2011\\_en.htm](http://ec.europa.eu/energy/renewables/reports/2011_en.htm).

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### European Statistical Data Support:

With the members of the 'European statistical system', Eurostat has set up a network of support centres in nearly every Member State and in some EFTA countries.

Their role is to provide help and guidance to Internet users of European statistics.

Contact details for this support network can be found on the Eurostat website at:

<http://ec.europa.eu/eurostat/>.

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