



Renewable Energy Projections as Published in the National Renewable Energy Action Plans of the European Member States

Executive summary

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The ECN number of the project resulting in this report is 6.00289. The authors can be contacted for enquiries, corrections or other remarks at nreap@ecn.nl.

This document has been typeset in L^AT_EX (<http://www.latex-project.org>).

Disclaimer

This report has been compiled with great care. However, since the underlying NREAP documents have originally been published in the language of the respective Member State subtleties might have been lost in the process. Moreover, the data have been entered into the database manually: although checked, it is possible that typing errors have occurred. The original NREAP documents remain the authentic versions. The Energy research Centre of the Netherlands (ECN) and the European Environment Agency (EEA) cannot assure any responsibility for any remaining errors, if and when applicable, of the data in the this report and in the underlying database.

Abstract

This executive summary presents a selection of the tables in the original report, which provides an extensive overview of all data that have been published in the National Renewable Energy Action Plans (NREAPs), including graphs and derived indicators. This executive summary only presents data tables of all 27 European Union Member States. The countries considered are: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, Sweden and the United Kingdom.

The executive summary highlights a selection of cross-sections of the database that has been compiled from the NREAP documents. The underlying database and the figures from the report are publicly available at <http://www.ecn.nl/nreap>. Moreover a separate executive summary is available from this location.

Keywords

National Renewable Energy Action Plans (NREAPs), renewable energy in the European Union



Scanning the two-dimensional barcode (QR) at the left with a camera phone equipped with appropriate software will open the URL <http://www.ecn.nl/nreap>, which redirects to the ECN Policy Studies project pages (<http://www.ecn.nl/units/ps/themes/renewable-energy/projects/nreap>). From this location the original report, the executive summary, the database and the image files are available for download.

Summary

The Renewable Energy Directive (2009/28/EC)¹ addresses various subjects related to the development of renewable energies in the European Member States, among others the legally binding share of renewable energy in gross final energy consumption. In Article 4 of the Directive each Member State is requested to provide a National Renewable Energy Action Plan (NREAP) by 30 June 2010. In order to draft this plan, a template² was published by the Commission. Each Member State is requested to complete a set of tables in this template on how it expects to meet its 2020 target, including the technology mix and the trajectory to reach it. The current report makes use of the fact that these tables have been defined in a consistent way. All data have been collected from the NREAP documents and they are available as a data report (this report), a database containing all data from the NREAPs (in text format) and a set of figures from the datareport (in PDF and PNG). The purpose has been to allow easy comparison for further analysis by the audience³.

The focus of this work is on the numbers and figures of the renewable energy projections. All other subjects addressed in the documents, such as renewable energy policies, costs and benefits and grid integration issues have not been considered in the current analysis. Moreover, it was not the objective of this analysis to check whether the proposed policies indeed result in the projections made.

Whereas the data report focuses on the projections for the individual Member States, this summary section focuses on the aggregate results for all European Member States: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, Sweden and the United Kingdom.

The charts and tables in this report present primary data (numbers directly taken from the NREAP documents) and secondary data (data derived from the primary data). For the secondary data, four parameters have been presented consistently throughout the report: an indicator on full load hours (applies to electricity options only), an indicator on growth rates calculated from the projected energy production (for electricity options also for changes in capacity), and indicators on per capita and per surface area achievement. Although for the two latter indicators a bias exists between countries depending on their population density, these indicators enable comparison of large and small countries in a more meaningful manner.

All renewable energy sources (RES)

Table 1 indicates that the total gross production from renewable energy sources (RES) amounts to 244.5 Mtoe in the year 2020. The largest contributions of renewable energy originate from heating and cooling (RES-H/C, 46% in 2020) and from renewable electricity (RES-E, 42% in 2020). Renewable transport (RES-T) contributes 13% to the overall renewable energy in 2020. On average this projection results in an annual growth for overall renewables of approximately 6% annually for the period 2010 - 2020. The presented data have been taken from the aggregate table in the individual NREAPs⁴.

Looking at the overall growth rates per renewable energy type, it can be observed that the growth rates are smallest for renewable heating and cooling (between 4.4% and 5.7% annually, depending on the period), and that renewable transport is growing fastest (7.1% to 8.5% annually, with a very

¹At <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0028:EN:NOT> the Renewable Energy Directive is available for download in all European languages.

² The Template is available from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>.

³At <http://www.ecn.nl/nreap> the report, the database and the image files are available for download.

⁴The aggregate table mentioned here refers to the NREAP Template Table 4a, see footnote 2 .

high growth rate for the period 2005 - 2010 (31.2% per year, caused by the relatively low energy contribution of 3.9 Mtoe for 2005). Renewable electricity has a growth rate of 6.0% to 6.7% annually. It should be noted however that these growth rates are *average* values, and that the conventional renewable technologies (hydropower electricity, solid biomass heating) constitute a large part of the renewable energy stock. From the summary section on detailed RES-specific projections (starting on page 7) it can be observed that average growth rates for new renewables (wind power, solar electricity and solar thermal energy, heat pumps and biofuels for example) are significantly higher (Tables 6, 8 and 10).

Gross final energy consumption

The NREAPs all provide projections for gross final energy consumption in the period 2010 – 2020. Most Member States have specified two scenarios: a ‘*reference*’ and an ‘*additional energy efficiency scenario*’. Gross final energy consumption has been reported for electricity, heating and cooling and transport separately.

The gross final energy consumption according to these two scenarios for some Member States has been reduced in order to compensate for a relatively large share of aviation in their gross final consumption of energy (see Article 5.6 in the Renewable Energy Directive (2009/28/EC) and the introduction section on page 91. This results in a value ‘*before aviation reduction*’ and an a value ‘*after aviation reduction*’. Table 2 presents for the reference scenario the resulting EU-27 consumption data, relative shares and average annual growth rates. Table 3 presents the same for the additional energy efficiency scenario.

For the purpose of calculating the overall renewable share the relevant parameter is the gross final energy consumption after aviation reduction (in Table 3 the last row, indicating ‘*Total after aviation*’. In the year 2020 this value amounts to 1180 Mtoe.

Table 1: *Total contribution from renewable energy sources (RES) for all 27 European Union Member States. This table has been compiled based on the aggregate RES values as specified in the NREAPs. See report Tables 54 to 57 (pages 38 to 41) for country-specific details.*

	Energy				Share 2020 [%] ^a	Average annual growth		
	2005 [Mtoe]	2010 [Mtoe]	2015 [Mtoe]	2020 [Mtoe]		2005 – 2010 [%/year]	2010 – 2015 [%/year]	2015 – 2020 [%/year]
RES-E	41.1	55.0	76.2	103.1	42	6.0	6.7	6.2
RES-H/C	54.7	67.9	84.8	111.6	46	4.4	4.5	5.7
RES-T	3.9	15.1	21.3	32.0	13	31.2	7.1	8.5
RES-T* ^b	4.1	15.8	22.8	35.3	-	30.8	7.6	9.1
Total RES	98.7	137.0	180.9	244.5	100	6.8	5.7	6.2

^a The percentage refers to the share of the renewable energy types (electricity, heating and cooling and transport) in total renewable energy in the year 2020.

^b In ‘RES-T*’ the amount of renewable energy in transport is reported according to the Renewable Energy Directive (2009/28/EC). Renewable electricity in electric road vehicles is to be accounted for 2.5 times the energy content of the input of electricity from renewable energy sources (Article 3.4c). Moreover, the contribution made by biofuels produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material is to be considered twice that made by other biofuels (Article 21.2).

All 27 European Union Member States are considered in this table. This concerns the following countries: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, Sweden and the United Kingdom.

Table 2: *Total gross final energy consumption in the reference scenario for all demand sectors for the aggregate of all 27 European Union Member States. See Tables 44, 46, 48, 50 and 52 for details.*

	Energy				Share [%] ^a	Average annual growth		
	2005 [Mtoe]	2010 [Mtoe]	2015 [Mtoe]	2020 [Mtoe]		'05 – '10 [%/year]	'10 – '15 [%/year]	'15 – '20 [%/year]
Electricity	268	286	307	329	25	1.3	1.4	1.4
Heating and cooling	552	556	569	581	44	0.1	0.5	0.4
Transport	299	321	336	349	27	1.5	0.9	0.7
Total before aviation	1166	1213	1266	1317	100	0.8	0.9	0.8
Total after aviation	1162	1208	1259	1307	99	0.8	0.8	0.8

^a The percentage refers to the share of the demand sectors (electricity, heating and cooling and transport) in total gross final energy consumption before aviation reduction in the year 2020.

Table 3: *Total gross final energy consumption in the additional energy efficiency scenario for all demand sectors for the aggregate of all 27 European Union Member States. See Tables 45, 47, 49, 51 and 53 for details.*

	Energy				Share [%] ^a	Average annual growth		
	2005 [Mtoe]	2010 [Mtoe]	2015 [Mtoe]	2020 [Mtoe]		'05 – '10 [%/year]	'10 – '15 [%/year]	'15 – '20 [%/year]
Electricity	268	283	293	304	26	1.1	0.7	0.7
Heating and cooling	552	543	532	520	44	-0.3	-0.4	-0.4
Transport	299	313	315	312	26	0.9	0.1	-0.2
Total before aviation	1166	1189	1191	1189	100	0.4	0.0	0.0
Total after aviation	1162	1184	1184	1180	99	0.4	0.0	-0.1

^a The percentage refers to the share of the demand sectors (electricity, heating and cooling and transport) in total gross final energy consumption before aviation reduction in the year 2020.

The share of renewable energy in gross final energy consumption

Based on the abovementioned parameters, Table 4 integrates the EU-27 contribution from renewable energy sources (the denominator in the quotient for calculating the share of renewables, available from Table 1) and the gross final energy consumption (the numerator, available from Tables 2 and 3). From this table it can be seen that in the year 2020 the overall share of renewables in the ‘additional energy efficiency scenario’ after applying the aviation reduction slightly overshoots the target, arriving at 20.7%. In the reference scenario the EU-27 target of 20% renewable energy in the year 2020 is not being met; this is a logical result of the fact that all projections have been designed to meet the target for the additional energy efficiency scenario. The ‘aviation reduction’ applied to the gross final energy consumption results in an increase of the overall renewable share of 0.1%-point (from 20.6% to 20.7%).

Table 4 also presents the share of renewables in transport according to the Directive definition (see table footnote *b*). For the year 2020 the target largely surpasses the target of 10%: a share of 11.3% is being reached.

Table 4: Overall renewable energy share in the aggregate of all 27 European Union Member States. Data calculated from Table 11 on renewable energy and Tables 2 and 3 on gross final energy consumption according to the two scenarios. The ‘additional efficiency scenario’ after aviation reduction is leading for calculating the renewable energy share.

	Reference scenario				Additional efficiency scenario			
	2005 [%]	2010 [%]	2015 [%]	2020 [%]	2005 [%]	2010 [%]	2015 [%]	2020 [%]
Electricity	15.3	19.3	24.9	31.3	15.3	19.4	26.0	34.0
Heating and cooling	9.9	12.2	14.9	19.2	9.9	12.5	15.9	21.4
Transport ^a	1.3	4.7	6.3	9.2	1.3	4.8	6.8	10.2
Transport target ^b	1.4	4.9	6.8	10.1	1.4	5.0	7.2	11.3
Total before aviation reduction	8.5	11.3	14.3	18.6	8.5	11.5	15.2	20.6
Total after aviation reduction	8.5	11.3	14.4	18.7	8.5	11.6	15.3	20.7

^a The share for transport simply expresses the share of RES-T (excluding double counting of renewable electricity, hydrogen and biogas in transport, as specified in Article 5.8 in the Directive) in gross final energy consumption and is not to be interpreted as the renewable share in transport.

^b In ‘Transport target’ the share of renewable energy in transport is reported according to the Renewable Energy Directive (2009/28/EC). See footnote *b* in Table 1.

Detailed information from RES-specific projections

Renewable electricity (RES-E)

Table 5 shows the breakdown of the renewable electricity technologies into subcategories (where applicable) and Table 6 shows calculated growth rates. For new renewables such as wind power, solar PV and tidal, wave and ocean energy double-digit growth rates occur. It is interesting to note that the growth rates decline over time: for most technologies the average annual growth rate is higher for the period 2010 – 2015 than for 2015 – 2020. For individual countries data can be found in the tables on growth rates in the technology-specific chapters of the report.

Taking a closer look at the mix of renewable electricity technologies for the year 2020 (Table 5), it can be observed that the most important contribution is expected from wind power (40.6% of which onshore wind power contributes 28.2%-point). The second largest technology is expected to be hydropower (30.4% of all RES-E in 2020, of which large hydropower takes 25.0%-point). Biomass electricity is responsible for 19.1% and solar electricity for 8.5% (6.9%-point from photovoltaics).

Renewable heating and cooling (RES-H/C)

Table 7 shows the contribution of the renewable heating and cooling technologies in detail and Table 8 shows calculated growth rates. For renewable heating and cooling the largest share in the year 2020 is from biomass (77.6%), notably solid biomass (69.2%). Second is renewable energy from heat pumps (10.9%), followed by solar thermal (5.6%) and deep geothermal heat (2.3%). For Romania the technology breakdown of renewable heating and cooling is not available from the NREAP. The Romanian total RES-H/C value has been added in the value for 'Total renewable heating and cooling' in order to make sure to have a correct value for the total contribution of RES-H/C. Looking at Table 8 it can be seen that growth rates generally are higher for the non-biomass options (except biogas).

Renewable energy in transport (RES-T)

Table 9 shows the contribution of the renewable transport energy carriers and Table 10 shows calculated growth rates. According to this table, biodiesel has the largest contribution in 2020 (64.8%), followed by bio-ethanol / bio-ETBE (21.7%). For Romania the technology breakdown of renewable transport is not available from the NREAP. The total RES-T value has been added in the value for 'Total renewable transport' in order to make sure to have a correct value for the total contribution of RES-T. The tables in the report (see the page numbers in the last column of Table 9) provide more information about the shares of Article 21.2 biofuels and imported biofuels. Renewable electricity also has a significant contribution, but this does not count towards the overall renewable energy production as specified in Article 5.1 of the Directive. None of the 27 European Member States project a contribution from renewable hydrogen in transport.

Table 5: Total renewable electricity (RES-E) capacity and energy for all 27 European Union Member States

		2005	2010	2015	2020	[%] ^a	[%] ^b	Page
Hydropower < 1MW	[GW]	2.6	2.7	3.0	3.2			42
	[TWh]	10.9	10.5	11.1	11.9			43
	[Mtoe]	0.9	0.9	1.0	1.0	1.0	0.4	-
Hydropower 1MW – 10 MW	[GW]	9.0	9.5	10.7	11.9			42
	[TWh]	33.1	33.1	35.2	38.7			43
	[Mtoe]	2.8	2.8	3.0	3.3	3.2	1.4	-
Hydropower >10MW	[GW]	96.0	96.4	101.9	109.3			42
	[TWh]	294.8	290.1	296.0	304.0			43
	[Mtoe]	25.3	24.9	25.4	26.1	25.0	10.6	-
Pumped storage hydropower	[GW]	18.7	23.4	27.3	34.8			42
	[TWh]	23.5	22.9	27.0	31.9			43
	[Mtoe]	2.0	2.0	2.3	2.7	n.a.	n.a.	-
Hydropower (subtotal excluding pumped storage)	[GW]	115.1	118.0	125.6	135.6			42
	[TWh]	346.6	345.7	355.6	370.1			43
	[Mtoe]	29.8	29.7	30.6	31.8	30.4	12.9	-
Geothermal	[GW]	0.7	0.8	1.0	1.6			44
	[TWh]	5.5	6.0	7.3	10.9			45
	[Mtoe]	0.5	0.5	0.6	0.9	0.9	0.4	-
Solar photovoltaic	[GW]	2.2	25.5	54.4	84.4			46
	[TWh]	1.5	20.1	51.7	83.4			47
	[Mtoe]	0.1	1.7	4.4	7.2	6.9	2.9	-
Concentrated solar power	[GW]	0.0	0.6	3.6	7.0			46
	[TWh]	0.0	1.2	9.0	20.0			47
	[Mtoe]	0.0	0.1	0.8	1.7	1.6	0.7	-
Solar (subtotal)	[GW]	2.2	26.1	57.9	91.4			46
	[TWh]	1.5	21.3	60.8	103.3			47
	[Mtoe]	0.1	1.8	5.2	8.9	8.5	3.6	-
Tidal, wave and ocean energy	[GW]	0.2	0.2	0.4	2.1			48
	[TWh]	0.5	0.5	0.9	6.0			49
	[Mtoe]	0.0	0.0	0.1	0.5	0.5	0.2	-
Onshore wind	[GW]	39.6	81.5	125.7	164.7			50
	[TWh]	66.5	154.7	255.0	343.7			51
	[Mtoe]	5.7	13.3	21.9	29.6	28.2	12.0	-
Offshore wind	[GW]	0.7	2.5	14.3	41.3			50
	[TWh]	1.9	8.5	45.9	133.3			51
	[Mtoe]	0.2	0.7	3.9	11.5	11.0	4.7	-
Wind power (subtotal)	[GW]	40.4	84.9	142.9	213.4			50
	[TWh]	70.4	164.6	308.5	494.6			51
	[Mtoe]	6.1	14.1	26.5	42.5	40.6	17.3	-
Solid biomass	[GW]	10.6	14.4	20.8	27.4			52
	[TWh]	55.1	76.8	113.7	154.9			53
	[Mtoe]	4.7	6.6	9.8	13.3	12.7	5.4	-
Biogas	[GW]	2.7	5.4	7.9	11.2			52
	[TWh]	12.5	28.7	43.9	64.0			53
	[Mtoe]	1.1	2.5	3.8	5.5	5.3	2.2	-
Bioliquids	[GW]	0.4	1.0	1.4	1.7			52
	[TWh]	1.5	8.6	10.9	12.7			53
	[Mtoe]	0.1	0.7	0.9	1.1	1.0	0.4	-
Biomass (subtotal)	[GW]	15.7	22.6	32.3	43.3			52
	[TWh]	67.2	114.3	168.8	231.9			53
	[Mtoe]	5.8	9.8	14.5	19.9	19.1	8.1	-
Total renewable electricity	[TWh]	491.7	652.4	901.9	1216.8			-
	[Mtoe]	42.3	56.1	77.6	104.6	100.0	42.6	-

^a The percentage refers to the share of the individual technologies in total renewable electricity in the year 2020

^b The percentage refers to the share of the individual technologies in total renewable energy (electricity, heating and cooling and transport) in the year 2020

Table 6: Average annual growth of renewable electricity (RES-E) capacity and energy for all 27 European Union Member States

		2005 – 2010 [%/year]	2010 – 2015 [%/year]	2015 – 2020 [%/year]
Hydropower < 1MW	Capacity	0.6	1.8	1.6
	Energy	-0.8	1.1	1.4
Hydropower 1MW – 10 MW	Capacity	1.1	2.5	2.1
	Energy	0.0	1.3	1.9
Hydropower >10MW	Capacity	0.1	1.1	1.4
	Energy	-0.3	0.4	0.5
Pumped storage hydropower	Capacity	4.6	3.1	5.0
	Energy	-0.5	3.4	3.4
Hydropower (subtotal excluding pumped storage)	Capacity	0.5	1.3	1.5
	Energy	-0.1	0.6	0.8
Geothermal	Capacity	1.9	5.0	9.1
	Energy	1.8	4.2	8.2
Solar photovoltaic	Capacity	62.9	16.3	9.2
	Energy	68.8	20.8	10.0
Concentrated solar power	Capacity	n.a.	41.2	14.5
	Energy	n.a.	51.0	17.2
Solar (subtotal)	Capacity	63.7	17.3	9.5
	Energy	70.7	23.3	11.2
Tidal, wave and ocean energy	Capacity	0.4	8.7	41.7
	Energy	-1.3	11.5	47.3
Onshore wind	Capacity	15.5	9.1	5.6
	Energy	18.4	10.5	6.2
Offshore wind	Capacity	30.0	41.3	23.6
	Energy	34.7	40.1	23.8
Wind power (subtotal)	Capacity	16.0	11.0	8.3
	Energy	18.5	13.4	9.9
Solid biomass	Capacity	6.3	7.7	5.7
	Energy	6.9	8.2	6.4
Biogas	Capacity	15.2	7.8	7.4
	Energy	18.1	8.8	7.8
Bioliquids	Capacity	23.1	6.7	3.5
	Energy	42.5	4.9	3.1
Biomass (subtotal)	Capacity	7.5	7.4	6.0
	Energy	11.2	8.1	6.6
Average renewable electricity	Energy	5.8	6.7	6.2

The growth rates for subcategories of technologies in this table have been calculated from the projections in Table 5

Table 7: Total renewable heating and cooling (RES-H/C) energy for all 27 European Union Member States

	2005 [Mtoe]	2010 [Mtoe]	2015 [Mtoe]	2020 [Mtoe]	Share [%] ^a	Share [%] ^b	Page
Geothermal	0.4	0.7	1.3	2.6	2.3	1.0	54
Solar thermal	0.7	1.4	3.0	6.3	5.6	2.6	55
Solid biomass	47.7	53.8	63.3	77.2	69.2	31.4	56
Biogas ^c	0.6	1.5	2.9	5.0	4.5	2.0	56
Bioliqids	1.1	3.6	4.1	4.4	3.9	1.8	56
Biomass (subtotal)	49.4	58.9	70.2	86.5	77.6	35.2	56
Aerothermal heat pumps	0.1	2.3	3.7	6.1	5.5	2.5	57
Geothermal heat pumps	0.2	1.2	2.3	4.1	3.7	1.7	57
Hydrothermal heat pumps	0.0	0.2	0.3	0.5	0.5	0.2	57
Renewable energy from heat pumps (subtotal)	0.6	4.0	7.2	12.1	10.9	4.9	57
Total renewable heating and cooling ^d	54.6	67.8	84.7	111.5	100.0	45.4	-

^a The percentage refers to the share of the individual technologies in total renewable heating and cooling in the year 2020.

^b The percentage refers to the share of the individual technologies in total renewable energy (electricity, heating and cooling and transport) in the year 2020.

^c In 'biogas' the value for 'Bio-SNG for grid feed-in' as specified in the Dutch NREAP has been included.

^d The Romanian total RES-H/C value has been added in the value for Total renewable heating and cooling. The percentages of the technology breakdown therefore sum to 96.4% instead of 100%.

Table 8: Average annual growth for renewable heating and cooling (RES-H/C) energy for all 27 European Union Member States

	2005 – 2010 [%/year]	2010 – 2015 [%/year]	2015 – 2020 [%/year]
Geothermal	9.9	14.3	14.5
Solar thermal	16.0	15.7	15.9
Solid biomass	2.4	3.3	4.0
Biogas ^a	18.7	13.8	11.8
Bioliqids	26.3	2.3	1.5
Biomass (subtotal)	3.6	3.6	4.3
Aerothermal heat pumps	75.1	10.2	10.7
Geothermal heat pumps	36.9	14.9	12.1
Hydrothermal heat pumps	50.6	9.0	9.3
Renewable energy from heat pumps (subtotal)	45.5	12.5	10.9
Average renewable heating and cooling	4.4	4.6	5.7

^a In 'biogas' the value for 'Bio-SNG for grid feed-in' as specified in the Dutch NREAP has been included. The growth rates for subcategories of technologies in this table have been calculated from the projections in Table 7

Table 9: Total renewable transport (RES-T) energy for all 27 European Union Member States

	2005 [Mtoe]	2010 [Mtoe]	2015 [Mtoe]	2020 [Mtoe]	Share [%] ^a	Share [%] ^b	Page
Bioethanol / bio-ETBE	0.5	2.8	4.8	7.1	21.7	2.9	58
Biodiesel	2.4	10.8	14.3	21.3	64.8	8.6	59
Hydrogen from renewables	0.0	0.0	0.0	0.0	0.0	-	60
Renewable electricity ^c	1.1	1.3	1.9	3.1	9.5	-	??
Other biofuels	0.2	0.2	0.3	0.8	2.4	0.3	62
Total renewable transport ^{d,e}	4.2	15.3	21.7	32.8	100.0	-	-
Total renewable transport Article 5.1 ^f	3.1	14.1	19.8	29.7	90.5	12.1	-

^a The percentage refers to the share of the individual technologies in total renewable transport in the year 2020.

^b The percentage refers to the share of the individual technologies in total renewable energy (electricity, heating and cooling and transport) in the year 2020. This value is not available for electricity and hydrogen from renewable energy, see footnote *d*.

^c In 'Renewable electricity' the 'non-road electricity consumption' has not been included for Romania.

^d The value 'Total renewable transport' has not been corrected as indicated in Article 5.1 of Directive 2009/28/EC.

^e For Romania the technology breakdown of renewable transport is not available from the NREAP. The total value for RES-T from the Romanian NREAP (Template Table 4b) has been added in the value for 'Total renewable transport', corrected for the 'road electricity consumption' already included in 'Renewable electricity'. The percentages of the technology breakdown therefore sum to 98.4% instead of 100%.

^f The 'Total renewable transport Article 5.1' has been calculated by subtracting electricity and hydrogen from renewable energy values from 'Total renewable transport'. This is to avoid double counting as indicated in Article 5.1 of Directive 2009/28/EC. The category 'other biofuels' has not been applied for the correction. The resulting values are used for determining the overall renewable energy production in Table 11.

Table 10: Average annual growth for renewable transport (RES-T) for all 27 European Union Member States

	2005 – 2010 [%/year]	2010 – 2015 [%/year]	2015 – 2020 [%/year]
Bioethanol / bio-ETBE	39.5	11.6	8.0
Biodiesel	35.4	5.7	8.3
Hydrogen from renewables	n.a.	n.a.	n.a.
Renewable electricity	3.9	8.9	9.8
Other biofuels	1.2	5.0	23.7
Average renewable transport	29.6	7.2	8.6

Table 11: *Total contribution from renewable energy sources (RES) for all 27 European Union Member States. These values have been calculated from the detailed NREAP projections and differ slightly from the values presented in Table 1, which has been compiled based on aggregate RES values as available from the NREAPs as well. See Tables 7 to 10 for details.*

	Energy				Share [%] ^a	Average annual growth		
	2005 [Mtoe]	2010 [Mtoe]	2015 [Mtoe]	2020 [Mtoe]		2005 – 2010 [%/year]	2010 – 2015 [%/year]	2015 – 2020 [%/year]
RES-E	42.3	56.1	77.6	104.6	43	5.8	6.7	6.2
RES-H/C	54.6	67.8	84.7	111.5	45	4.4	4.6	5.7
RES-T ^b	3.1	14.1	19.8	29.7	12	35.0	7.1	8.5
Total RES	100.0	138.0	182.0	245.8	100	6.6	5.7	6.2

^a The percentage refers to the share of the renewable energy types (electricity, heating and cooling and transport) in total renewable energy in the year 2020

^b Total renewable energy for transport has been corrected for electricity and hydrogen from renewable energy sources as indicated in Article 5.1 of Directive 2009/28/EC. See Table 9.

All 27 European Union Member States are considered in this table. This concerns the following countries: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, Sweden and the United Kingdom.

Renewable energy share according to detailed projections

Table 11 indicates that the total gross production from renewable energy sources (RES) (excluding pumped storage hydropower and for renewable transport corrected for double counting according to Article 5.1 of the Directive) amounts to 245.8 Mtoe in the year 2020⁵. Note that this value, calculated from the detailed renewable energy projections for RES-E, RES-H/C and RES-T, differs from the value reported in Table 1 (244.5 Mtoe). As the deviations are relatively small, it can be observed that the different contributions from renewable energy largely are in line with the data presented in Table 1. Renewable heating and cooling contributes 45% in 2020 instead of 46% and from renewable electricity 43% in 2020 instead of 42%. Renewable transport (RES-T) remains unchanged with a 12% contribution to the overall renewable target, as does the value for the average annual growth.

Using these slightly different RES projections as input to calculate the shares in gross final energy consumption, the resulting shares also will be different. This is displayed in Table 12. For the year 2020 the ‘additional efficiency scenario after aviation reduction’ results in a share of 20.8%, slightly higher than the 20.7% reported in Table 4. The reason for this is that some NREAP documents have internal inconsistencies, i.e. aggregate values do not match between tables. This can be observed also from the country tables in this report (pages 63 to 89).

Based on the detailed projections no share of renewable transport has been calculated.

Derived data in this report

The secondary data as depicted in the report show the merits of presenting the data using derived indicators: large countries with high projections for certain renewables countries are averaged out when presented on a per capita or a per surface area basis. The indicator on full load hours shows expected deviations between Southern European countries and Northern European countries for solar electricity technologies.

⁵The NREAP for Romania doesn’t pronounce on detailed projections for renewable heating and cooling and renewable transport (Template Tables 11 and 12 are missing), these projections have been taken from the data overview presented in Tables 54 to 57 for the purpose of this overview table.

Table 12: Overall renewable energy share in the aggregate of all 27 European Union Member States. Data calculated from Table 1 on renewable energy (based on detailed projections) and Tables 2 and 3 on gross final energy consumption according to the two scenarios. The 'additional efficiency scenario' after aviation reduction is leading for calculating the renewable energy share. Note that the value 20.8% differs slightly from the value 20.7% from Table 4. This is caused by internal inconsistencies in the NREAPs.

	Reference scenario				Additional efficiency scenario			
	2005 [%]	2010 [%]	2015 [%]	2020 [%]	2005 [%]	2010 [%]	2015 [%]	2020 [%]
Electricity	15.8	19.6	25.3	31.8	15.8	19.8	26.5	34.5
Heating and cooling	9.9	12.2	14.9	19.2	9.9	12.5	15.9	21.4
Transport ^a	1.0	4.4	5.9	8.5	1.0	4.5	6.3	9.5
Total before aviation reduction	8.6	11.4	14.4	18.7	8.6	11.6	15.3	20.7
Total after aviation reduction	8.6	11.4	14.5	18.8	8.6	11.7	15.4	20.8

^a The share for transport simply expresses the share of RES-T (excluding double counting of renewable electricity, hydrogen and biogas in transport, as specified in Article 5.8 in the Directive) in gross final energy consumption and is not to be interpreted as the renewable share in transport. Based on the detailed projections no share of renewable transport has been calculated.

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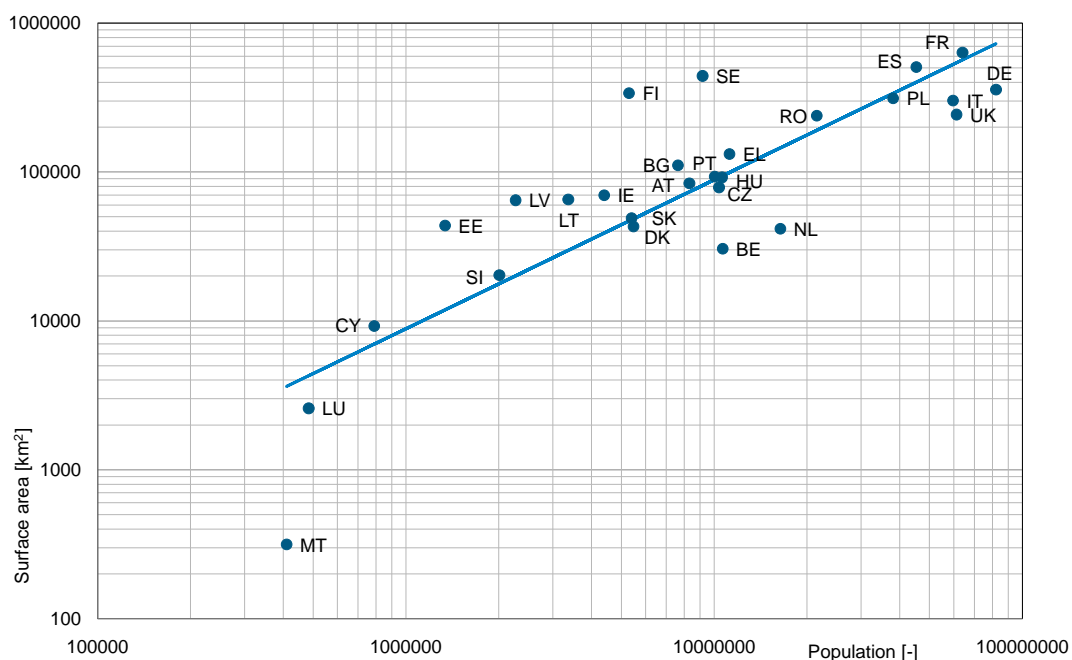


Figure 1: *Bias in countries based on population and surface area from Table 13. More densely populated countries can be found to the right of the line indicating the average population density*

Table 13: *Country data used for calculating indicators*

Country	Country code	Population 2008 [-]	Surface area [km ²]
Belgium	BE	10666866	30528
Bulgaria	BG	7640238	111002
Czech Republic	CZ	10381130	78867
Denmark	DK	5475791	43098
Germany	DE	82217837	357030
Estonia	EE	1340935	43698
Ireland	IE	4401335	69797
Greece	EL	11213785	131957
Spain	ES	45283259	505997
France	FR	63982881	632834
Italy	IT	59619290	301336
Cyprus	CY	789269	9250
Latvia	LV	2270894	64589
Lithuania	LT	3366357	65300
Luxembourg	LU	483799	2586
Hungary	HU	10045401	93030
Malta	MT	410290	316
Netherlands	NL	16405399	41528
Austria	AT	8318592	83871
Poland	PL	38115641	312685
Portugal	PT	10617575	92002
Romania	RO	21528627	238391
Slovenia	SI	2010269	20273
Slovakia	SK	5400998	49034
Finland	FI	5300484	338145
Sweden	SE	9182927	441370
United Kingdom	UK	61179256	243069
European Union (27 countries, total)	EU-27	497649125	4401582

Source: Eurostat, July 2010 (*Population on 1 January 2008 and Area of the regions (2004)* respectively)

Table 14: *Renewable energy shares from Annex I of the Directive [%]*

	Reference	Indicative trajectory				Target
	2005 [%]	2011-2012 [%]	2013-2014 [%]	2015-2016 [%]	2017-2018 [%]	2020 [%]
Belgium	2.2	4.4	5.4	7.1	9.2	13
Bulgaria	9.4	10.7	11.4	12.4	13.7	16
Czech Republic	6.1	7.5	8.2	9.2	10.6	13
Denmark	17.0	19.6	20.9	22.9	25.5	30
Germany	5.8	8.2	9.5	11.3	13.7	18
Estonia	18.0	19.4	20.1	21.2	22.6	25
Ireland	3.1	5.7	7.0	8.9	11.5	16
Greece	6.9	9.1	10.2	11.9	14.1	18
Spain	8.7	11.0	12.1	13.8	16.0	20
France	10.3	12.8	14.1	16.0	18.6	23
Italy	5.2	7.6	8.7	10.5	12.9	17
Cyprus	2.9	4.9	5.9	7.4	9.5	13
Latvia	32.6	34.1	34.8	35.9	37.4	40
Lithuania	15.0	16.6	17.4	18.6	20.2	23
Luxembourg	0.9	2.9	3.9	5.4	7.5	11
Hungary	4.3	6.0	6.9	8.2	10.0	13
Malta	0.0	2.0	3.0	4.5	6.5	10
Netherlands	2.4	4.7	5.9	7.6	9.9	14
Austria	23.3	25.4	26.5	28.1	30.3	34
Poland	7.2	8.8	9.5	10.7	12.3	15
Portugal	20.5	22.6	23.7	25.2	27.3	31
Romania	17.8	19.0	19.7	20.6	21.8	24
Slovenia	16.0	17.8	18.7	20.1	21.9	25
Slovakia	6.7	8.2	8.9	10.0	11.4	14
Finland	28.5	30.4	31.4	32.8	34.7	38
Sweden	39.8	41.6	42.6	43.9	45.8	49
United Kingdom	1.3	4.0	5.4	7.5	10.2	15

All percentages originate from Annex I of Directive 2009/28/EC. The indicative trajectory has been calculated from Part B of the Annex

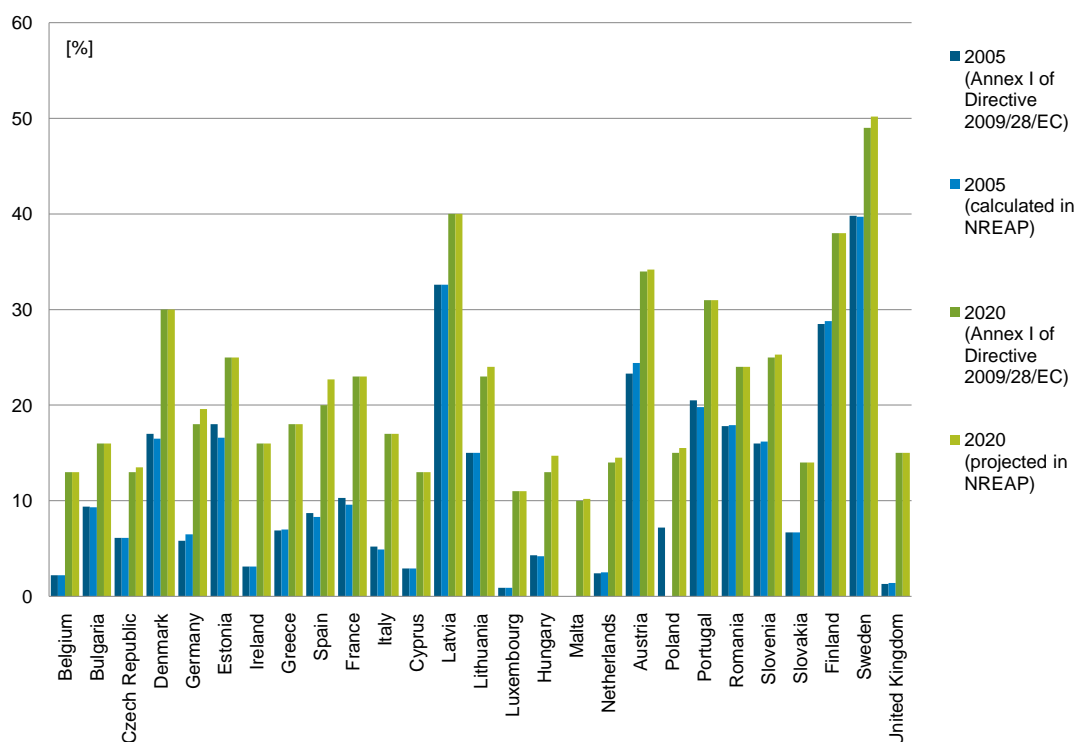


Figure 2: Renewable energy shares according to Annex I of Directive 2009/28/EC and according to the NREAP documents (Table 3 of the Template)

Table 15: Renewable energy shares according to Annex I of Directive 2009/28/EC and according to the NREAP documents (Table 3 of the Template)

	2005		2020	
	Target [%]	NREAP [%]	Target [%]	NREAP [%]
Belgium	2.2	2.2	13.0	13.0
Bulgaria	9.4	9.3	16.0	16.0
Czech Republic	6.1	6.1	13.0	13.5
Denmark	17.0	16.5	30.0	30.0
Germany	5.8	6.5	18.0	19.6
Estonia	18.0	16.6	25.0	25.0
Ireland	3.1	3.1	16.0	16.0
Greece	6.9	7.0	18.0	18.0
Spain	8.7	8.3	20.0	22.7
France	10.3	9.6	23.0	23.0
Italy	5.2	4.9	17.0	17.0
Cyprus	2.9	2.9	13.0	13.0
Latvia	32.6	32.6	40.0	40.0
Lithuania	15.0	15.0	23.0	24.0
Luxembourg	0.9	0.9	11.0	11.0
Hungary	4.3	4.2	13.0	14.7
Malta	0.0	n.a.	10.0	10.2
Netherlands	2.4	2.5	14.0	14.5
Austria	23.3	24.4	34.0	34.2
Poland	7.2	n.a.	15.0	15.5
Portugal	20.5	19.8	31.0	31.0
Romania	17.8	17.9	24.0	24.0
Slovenia	16.0	16.2	25.0	25.3
Slovakia	6.7	6.7	14.0	14.0
Finland	28.5	28.8	38.0	38.0
Sweden	39.8	39.7	49.0	50.2
United Kingdom	1.3	1.4	15.0	15.0

Both reference (due to problems in reproducing the historic value) and target (for example by not reaching or by exceeding it) may vary between Annex I of the Directive and the data from the NREAP documents

Table 16: Belgium: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	4.4	4.4	4.4	5.2	4.8
2013-2014	5.4	5.4	5.8	6.8	6.3
2015-2016	7.1	7.1	7.5	8.6	8.1
2017-2018	9.2	9.2	9.5	10.7	10.1
2020	13.0	13.0	13.0		13.0

For more detail on Belgium see the country factsheet on page 63. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 17: Bulgaria: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	10.7	10.7	10.7	10.7	10.7
2013-2014	11.4	11.4	11.4	11.4	11.4
2015-2016	12.4	12.4	12.4	12.4	12.4
2017-2018	13.7	13.7	13.7	13.7	13.7
2020	16.0	16.0	16.0		16.0

For more detail on Bulgaria see the country factsheet on page 64. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 18: Czech Republic: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	7.5	7.5	9.4	10.1	9.8
2013-2014	8.2	8.2	10.8	11.3	11.1
2015-2016	9.2	9.2	11.8	12.1	12.0
2017-2018	10.6	10.6	12.5	12.9	12.7
2020	13.0	13.0	13.5		13.5

For more detail on Czech Republic see the country factsheet on page 65. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 19: Denmark: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	19.6	19.6	19.2	19.2	19.2
2013-2014	20.9	20.9	20.5	20.5	20.5
2015-2016	22.9	22.9	22.6	22.6	22.6
2017-2018	25.5	25.5	25.3	25.3	25.3
2020	30.0	30.0	30.0		30.0

For more detail on Denmark see the country factsheet on page 66. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 20: *Germany: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	8.2	8.2	10.8	11.4	11.1
2013-2014	9.5	9.5	12.0	12.8	12.4
2015-2016	11.3	11.3	13.5	14.4	14.0
2017-2018	13.7	13.7	15.7	16.7	16.2
2020	18.0	18.0	19.6		19.6

For more detail on Germany see the country factsheet on page 67. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 21: *Estonia: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	19.4	19.4	21.2	22.0	21.6
2013-2014	20.1	20.1	23.3	23.4	23.4
2015-2016	21.2	21.2	23.6	23.7	23.7
2017-2018	22.6	22.6	24.2	24.5	24.4
2020	25.0	25.0	25.0		25.0

For more detail on Estonia see the country factsheet on page 68. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 22: *Ireland: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	5.7	5.7	8.1	9.0	8.6
2013-2014	7.0	7.0	10.5	11.0	10.8
2015-2016	8.9	8.9	11.8	12.2	12.0
2017-2018	11.5	11.5	12.9	14.0	13.5
2020	16.0	16.0	16.0		16.0

For more detail on Ireland see the country factsheet on page 69. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 23: *Greece: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	9.1	9.1	8.8	9.5	9.2
2013-2014	10.2	10.2	9.9	10.5	10.2
2015-2016	11.9	11.9	11.4	12.4	11.9
2017-2018	14.1	14.1	13.7	14.6	14.2
2020	18.0	18.0	18.0		18.0

For more detail on Greece see the country factsheet on page 70. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 24: *Spain: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	11.0	11.0	14.2	14.8	14.5
2013-2014	12.1	12.1	15.4	16.5	16.0
2015-2016	13.8	13.8	17.4	18.3	17.9
2017-2018	16.0	16.1	19.4	20.4	19.9
2020	20.0	20.0	22.7		22.7

For more detail on Spain see the country factsheet on page 71. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 25: *France: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	12.8	12.2	13.5	14.0	13.8
2013-2014	14.1	13.5	15.0	16.0	15.5
2015-2016	16.0	15.5	17.0	18.0	17.5
2017-2018	18.6	18.3	19.5	20.5	20.0
2020	23.0	23.0	23.0		23.0

For more detail on France see the country factsheet on page 72. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 26: *Italy: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	7.6	7.6	8.7	9.2	9.0
2013-2014	8.7	8.7	9.9	10.5	10.2
2015-2016	10.5	10.5	11.2	12.0	11.6
2017-2018	12.9	12.9	12.9	13.8	13.4
2020	17.0	17.0	17.0		17.0

For more detail on Italy see the country factsheet on page 73. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 27: *Cyprus: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	4.9	4.9	6.8	7.1	7.0
2013-2014	5.9	5.9	7.8	8.4	8.1
2015-2016	7.4	7.5	9.0	9.7	9.4
2017-2018	9.5	9.5	10.4	11.2	10.8
2020	13.0	13.0	13.0		13.0

For more detail on Cyprus see the country factsheet on page 74. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 28: *Latvia: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	34.1	34.1	33.8	34.3	34.1
2013-2014	34.8	34.8	34.7	35.0	34.9
2015-2016	35.9	35.9	35.6	36.3	36.0
2017-2018	37.4	37.4	37.0	37.7	37.4
2020	40.0	40.0	40.0		40.0

For more detail on Latvia see the country factsheet on page 75. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 29: *Lithuania: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	16.6	16.6	17.0	18.0	17.5
2013-2014	17.4	17.4	19.0	20.0	19.5
2015-2016	18.6	18.6	21.0	22.0	21.5
2017-2018	20.2	20.2	24.0	24.0	24.0
2020	23.0	23.0	24.0		24.0

For more detail on Lithuania see the country factsheet on page 76. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 30: *Luxembourg: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	2.9	2.9	2.9	2.9	2.9
2013-2014	3.9	3.9	3.9	3.9	3.9
2015-2016	5.4	5.5	5.4	5.4	5.4
2017-2018	7.5	7.5	7.5	7.5	7.5
2020	11.0	11.0	11.0		11.0

For more detail on Luxembourg see the country factsheet on page 77. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 31: *Hungary: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	6.0	6.0	7.3	7.4	7.4
2013-2014	6.9	6.9	7.5	8.0	7.8
2015-2016	8.2	8.2	8.3	9.3	8.8
2017-2018	10.0	10.0	10.7	12.3	11.5
2020	13.0	13.0	14.7		14.7

For more detail on Hungary see the country factsheet on page 78. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 32: *Malta: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	2.0	2.0	2.3	2.6	2.5
2013-2014	3.0	3.0	3.8	5.4	4.6
2015-2016	4.5	4.5	5.5	6.8	6.2
2017-2018	6.5	6.5	9.7	9.6	9.7
2020	10.0	10.0	10.2		10.2

For more detail on Malta see the country factsheet on page 79. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 33: *Netherlands: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	4.7	4.7	4.6	5.6	5.1
2013-2014	5.9	5.9	6.6	7.7	7.2
2015-2016	7.6	7.6	8.5	9.7	9.1
2017-2018	9.9	9.9	10.9	12.1	11.5
2020	14.0	14.0	14.5		14.5

For more detail on Netherlands see the country factsheet on page 80. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 34: *Austria: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	25.4	25.4	31.1	31.4	31.3
2013-2014	26.5	26.5	31.6	31.9	31.8
2015-2016	28.1	28.1	32.1	32.4	32.3
2017-2018	30.3	30.3	32.8	33.2	33.0
2020	34.0	34.0	34.2		34.2

For more detail on Austria see the country factsheet on page 81. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 35: *Poland: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	8.8	8.8	10.1	10.6	10.3
2013-2014	9.5	9.5	11.1	11.5	11.3
2015-2016	10.7	10.7	11.9	12.5	12.2
2017-2018	12.3	12.3	13.1	13.8	13.5
2020	15.0	15.0	15.5		15.5

For more detail on Poland see the country factsheet on page 82. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 36: *Portugal: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	22.6	22.0	25.2	26.9	26.1
2013-2014	23.7	23.1	27.1	27.4	27.3
2015-2016	25.2	24.8	28.4	28.9	28.7
2017-2018	27.3	27.1	29.7	30.6	30.2
2020	31.0	31.0	31.0		31.0

For more detail on Portugal see the country factsheet on page 83. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 37: *Romania: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	19.0	19.0	18.0	19.0	18.5
2013-2014	19.7	19.7	19.4	19.7	19.6
2015-2016	20.6	20.6	20.1	20.6	20.4
2017-2018	21.8	21.8	21.2	21.8	21.5
2020	24.0	24.0	24.0		24.0

For more detail on Romania see the country factsheet on page 84. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 38: *Slovenia: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	17.8	17.8	18.2	18.7	18.5
2013-2014	18.7	18.7	19.5	20.1	19.8
2015-2016	20.1	20.0	21.2	21.8	21.5
2017-2018	21.9	21.8	22.4	23.6	23.0
2020	25.0	25.0	25.3		25.3

For more detail on Slovenia see the country factsheet on page 85. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 39: *Slovakia: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	8.2	8.2	8.2	8.2	8.2
2013-2014	8.9	8.9	8.9	8.9	8.9
2015-2016	10.0	10.0	10.0	10.0	10.0
2017-2018	11.4	11.4	11.4	11.4	11.4
2020	14.0	14.0	14.0		14.0

For more detail on Slovakia see the country factsheet on page 86. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 40: *Finland: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	30.4	30.4	30.1	31.0	30.6
2013-2014	31.4	31.4	31.6	32.2	31.9
2015-2016	32.8	32.8	32.6	33.6	33.1
2017-2018	34.7	34.7	34.7	35.7	35.2
2020	38.0	38.0	38.0		38.0

For more detail on Finland see the country factsheet on page 87. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 41: *Sweden: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	41.6	41.6	44.2	44.9	44.6
2013-2014	42.6	42.6	45.6	46.3	46.0
2015-2016	43.9	43.9	47.0	47.7	47.4
2017-2018	45.8	45.8	48.3	49.0	48.7
2020	49.0	49.0	50.2		50.2

For more detail on Sweden see the country factsheet on page 88. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 42: *United Kingdom: indicative trajectory for the overall renewable energy share [%] for the reference years as mentioned in Annex I part B of Directive 2009/28/EC*

Period	Annex I part B [%]	NREAP			
		Template Table 3 [%]	First year [%]	Second year [%]	Average [%]
2011-2012	4.0	4.0	4.0	4.0	4.0
2013-2014	5.4	5.4	5.0	6.0	5.5
2015-2016	7.5	7.5	7.0	8.0	7.5
2017-2018	10.2	10.2	9.0	11.0	10.0
2020	15.0	15.0	15.0		15.0

For more detail on United Kingdom see the country factsheet on page 89. The reference to Table 3 is to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Table 44: Total final energy consumption [ktoe] electricity for the reference scenario

	Scenario	Year																			2020 [%]
		2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020								
Belgium	Reference scenario	7912	8670	8822	8973	9125	9276	9428	9539	9651	9762	9874	9985	3							
Bulgaria	Reference scenario	3129	3130	3174	3218	3263	3309	3355	3402	3450	3498	3547	3597	1							
Czech Republic	Reference scenario	6014	6151	6338	6480	6621	6761	6903	7039	7189	7309	7427	7563	2							
Denmark	Reference scenario	3166	3144	3199	3247	3308	3367	3418	3454	3483	3507	3536	3564	1							
Germany	Reference scenario	51813	51973	52063	52232	52331	52454	52534	52689	52728	52767	52733	52627	16							
Estonia	Reference scenario	842	829	842	856	869	883	896	892	907	921	936	951	0							
Ireland	Reference scenario	2341	2311	2525	2574	2632	2697	2764	2806	2840	2872	2904	2937	1							
Greece	Reference scenario	5486	5061	5348	5376	5429	5456	5480	5586	5727	5842	5963	6179	2							
Spain	Reference scenario	25080	25056	25616	26428	27571	28589	29647	30926	32072	33271	34517	35816	11							
France	Reference scenario	45317	47378	47790	48202	48615	49027	49439	49851	50265	50676	51088	51500	16							
Italy	Reference scenario	29749	29505	29908	30344	30814	31317	31853	32423	33025	33662	34331	35034	11							
Cyprus	Reference scenario	374	464	486	508	530	551	573	595	617	639	661	683	0							
Latvia	Reference scenario	581	588	603	618	636	657	686	733	764	795	827	860	0							
Lithuania	Reference scenario	985	913	940	973	1005	1029	1053	1075	1097	1133	1168	1204	0							
Luxembourg	Reference scenario	567	553	556	559	562	565	568	574	581	588	595	602	0							
Hungary	Reference scenario	3609	3682	3801	3922	4001	4089	4169	4245	4316	4383	4444	4506	1							
Malta	Reference scenario	n.a.	226	231	238	245	251	258	265	271	277	284	291	0							
Netherlands	Additional efficiency	10347	10627	10743	10860	10976	11093	11210	11304	11398	11493	11587	11681	4							
Austria	Reference scenario	5725	5634	5709	5795	5892	5991	6091	6199	6308	6425	6545	6666	2							
Poland	Reference scenario	n.a.	12900	13400	14000	14400	14900	15300	15700	16200	16600	17100	17400	5							
Portugal	Reference scenario	4588	4730	4748	4783	4825	4847	4873	4906	4937	4968	4999	5030	2							
Romania	Reference scenario	4601	4550	5710	5864	5994	6066	6189	6445	6740	6980	7211	7439	2							
Slovenia	Additional efficiency	1272	1196	1216	1235	1254	1274	1293	1303	1312	1322	1332	1342	1							
Slovakia	Reference scenario	2412	2460	2603	2650	2698	2747	2796	2846	2898	2950	3003	3057	1							
Finland	Additional efficiency	7530	7770	7770	7880	7990	8100	8210	8310	8400	8500	8640	8740	3							
Sweden	Reference scenario	12987	13650	13783	13915	14048	14181	14314	14446	14579	14712	14844	14977	5							
United Kingdom	Reference scenario	32100	31800	32000	32300	32600	32900	33100	33300	33500	33700	33900	34200	10							
All Member States (total)	Mixed scenarios	268393	285731	289924	294030	298234	302377	306623	311148	315643	320177	324742	329122	100							

For the Netherlands, Slovenia and Finland the 'Reference scenario' is not available. For these Member States, projections have been taken as reported for the 'Additional efficiency scenario', see Table 45.

For Malta and Poland no data are available for the year 2005. Consequently, the value reported here as EU total in 2005 is actually the value for the EU minus Malta and Poland (together 13.1 Mtoe).

Table 45: Final energy consumption [ktoe] for electricity for the additional energy efficiency scenario

Scenario	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[%]
Belgium	7912	8371	8462	8554	8646	8737	8829	8968	9108	9247	9387	9526	3
Bulgaria	3129	3130	3164	3182	3181	3175	3171	3163	3155	3148	3144	3148	1
Czech Republic	6014	6036	6210	6329	6449	6568	6697	6807	6927	7022	7118	7232	2
Denmark	3166	3108	3130	3148	3179	3214	3234	3237	3235	3233	3238	3247	1
Germany	51813	51925	51830	51615	51352	51089	50588	50229	49799	49346	48844	48317	16
Estonia	738	829	840	851	862	873	884	880	899	909	923	938	0
Ireland	2341	2473	2469	2500	2540	2587	2636	2677	2713	2746	2779	2813	1
Greece	5486	5061	5215	5209	5227	5217	5285	5345	5490	5583	5752	5887	2
Spain	25080	25056	25513	26051	26951	27593	28264	29140	29863	30625	31421	32269	11
France	45317	45849	45955	46062	46168	46275	46381	46487	46594	46700	46807	46913	15
Italy	29749	30701	30856	31009	31161	31313	31465	31618	31770	31922	32075	32227	11
Cyprus	374	463	480	497	514	531	548	564	581	598	615	633	0
Latvia	581	584	596	608	620	633	646	665	684	704	725	746	0
Lithuania	985	911	937	970	1002	1025	1048	1069	1090	1124	1158	1193	0
Luxembourg	567	549	548	547	546	545	544	549	554	559	564	569	0
Hungary	3609	3675	3785	3898	3969	4047	4118	4185	4247	4308	4363	4418	1
Malta	n.a.	215	220	226	232	238	244	249	254	259	265	270	0
Netherlands	10347	10627	10743	10860	10976	11093	11210	11304	11398	11493	11587	11681	4
Austria	5725	5634	5656	5684	5719	5763	5817	5885	5971	6077	6210	6377	2
Poland	n.a.	12100	12300	12500	12700	12900	13100	13400	13700	14000	14300	14600	5
Portugal	4558	4730	4748	4783	4825	4847	5076	5169	5262	5491	5518	5547	2
Romania	4601	5350	5383	5432	5527	5568	5655	5790	5975	6098	6216	6334	2
Slovenia	1272	1196	1216	1235	1254	1274	1293	1303	1312	1322	1332	1342	0
Slovakia	2412	2460	2556	2586	2617	2649	2681	2713	2745	2778	2812	2866	1
Finland	7530	7770	7770	7880	7990	8100	8210	8310	8400	8500	8640	8740	3
Sweden	12987	13089	13109	13130	13150	13170	13191	13211	13231	13252	13273	13293	4
United Kingdom	32100	31700	31700	31800	31900	32000	32100	32100	32100	32200	32300	32400	11
All Member States (total)	268393	283372	285391	287200	289257	291024	292915	295017	297053	299244	301366	303526	100

For the 'additional energy efficiency' scenario all Member States have provided data. For Malta and Poland no data are available for the year 2005. Consequently, the value reported here as EU total in 2005 is actually the value for the EU minus Malta and Poland (together 12.3 Mtoe).

Table 46: Total final energy consumption [ktoe] heating and cooling for the reference scenario

	Scenario	Year																			2020 [%]
		2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020								
Belgium	Reference scenario	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	4
Bulgaria	Reference scenario	4543	4851	4854	5036	5258	5461	5640	5765	5898	5984	6008	6105	6193	6284	6370	6452	6530	6603	6671	1
Czech Republic	Reference scenario	17644	18326	18417	18419	18514	18645	18856	19008	19170	19342	19514	19686	19858	20030	20202	20374	20546	20718	20890	3
Denmark	Reference scenario	8071	8161	8232	8320	8400	8467	8512	8542	8576	8614	8652	8690	8728	8766	8804	8842	8880	8918	8956	2
Germany	Reference scenario	116842	111661	111063	110132	108794	107528	106215	105164	103420	101748	100172	98667	97244	95821	94398	92975	91552	90129	88706	17
Estonia	Reference scenario	1615	1592	1601	1610	1619	1628	1637	1649	1661	1673	1686	1698	1710	1722	1734	1746	1758	1770	1782	0
Finland	Reference scenario	5516	5184	5233	5216	5248	5307	5388	5477	5566	5654	5743	5832	5921	6010	6099	6188	6277	6366	6455	1
Greece	Reference scenario	8355	8644	8401	8439	8464	8743	8743	8875	9070	9228	9423	9613	9724	9835	9946	10057	10168	10279	10390	2
Ireland	Reference scenario	40254	33340	32649	32559	32393	32318	32315	32259	32180	32067	31932	31837	31742	31647	31552	31457	31362	31267	31172	5
France	Reference scenario	68949	72333	73009	73686	74363	75040	75716	76393	77070	77747	78423	79100	79777	80454	81131	81808	82485	83162	83839	14
Italy	Reference scenario	68301	64194	64491	64774	65041	65294	65532	65755	65963	66157	66335	66499	66653	66807	66961	67115	67269	67423	67577	11
Cyprus	Reference scenario	530	480	483	489	499	508	517	525	533	540	546	551	556	561	566	571	576	581	586	0
Latvia	Reference scenario	2607	2271	2316	2416	2416	2493	2604	2779	2962	3144	3326	3508	3690	3872	4054	4236	4418	4600	4782	1
Lithuania	Reference scenario	2583	2417	2448	2477	2545	2621	2697	2724	2750	2779	2811	2841	2872	2903	2934	2965	2996	3027	3058	0
Malta	Reference scenario	1189	10392	1303	1313	1334	1334	1344	1363	1381	1399	1417	1436	1456	1476	1496	1516	1536	1556	1576	2
Hungary	Reference scenario	12192	10392	10626	10940	11322	11116	11008	10887	10759	10625	10476	10312	10157	10002	9847	9692	9537	9382	9227	2
Netherlands	Additional efficiency	n.a.	46	56	58	60	63	66	68	70	72	74	76	78	80	82	84	86	88	90	0
Netherlands	Reference scenario	28436	24612	24614	24615	24616	24617	24618	24619	24620	24621	24622	24623	24624	24625	24626	24627	24628	24629	24630	4
Austria	Reference scenario	13206	12007	12172	12360	12572	12788	13009	13245	13485	13743	14005	14274	14543	14812	15081	15350	15619	15888	16157	2
Poland	Reference scenario	n.a.	31600	33000	34700	35900	37300	38800	40300	41800	43200	44700	46200	47700	49200	50700	52200	53700	55200	56700	8
Portugal	Reference scenario	7927	7286	7370	7454	7538	7622	7706	7789	7873	7957	8041	8125	8209	8293	8377	8461	8545	8629	8713	1
Romania	Reference scenario	18779	16056	16106	16443	17303	18093	18943	19179	19460	19790	20164	20606	21048	21490	21932	22374	22816	23258	23700	4
Slovenia	Additional efficiency	2291	1996	2008	2019	2031	2043	2054	2069	2084	2099	2114	2129	2144	2159	2174	2189	2204	2219	2234	1
Slovakia	Reference scenario	6162	5971	6019	6067	6114	6162	6210	6258	6306	6354	6401	6449	6497	6545	6593	6641	6689	6737	6785	0
Finland	Additional efficiency	13970	14010	14380	14540	14670	14830	15000	15080	15170	15260	15350	15440	15530	15620	15710	15800	15890	15980	16070	3
Sweden	Reference scenario	13190	15339	15769	16199	16628	17058	17488	17918	18347	18777	19207	19637	20067	20497	20927	21357	21787	22217	22647	3
United Kingdom	Reference scenario	66900	60000	59200	58600	58100	57500	56900	56300	55800	55300	54800	54300	53800	53300	52800	52300	51800	51300	50800	9
All Member States (total)	Mixed scenarios	552056	555866	557624	560850	563536	566235	569322	571897	573913	576155	578417	581160	583903	586646	589389	592132	594875	597618	600361	100

For the Netherlands, Slovenia and Finland the 'Reference scenario' is not available. For these Member States, projections have been taken as reported for the 'Additional efficiency scenario', see Table 47.

For Malta and Poland no data are available for the year 2005. Consequently, the value reported here as EU total in 2005 is actually the value for the EU minus Malta and Poland (together 31.6 Mtoe).

Final consumption heating and cooling (additional energy efficiency) [ktoe]

Table 47: Final energy consumption [ktoe] for heating and cooling for the additional energy efficiency scenario

Scenario	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[%]
Belgium	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	21804	4
Bulgaria	4543	4492	4413	4462	4509	4538	4539	4494	4557	4611	4626	4638	1
Czech Republic	17644	17805	17837	17778	17778	17821	17963	18083	18205	18560	18742	18680	4
Denmark	8071	8042	8021	8021	8012	7991	7929	7858	7795	7732	7690	7653	1
Germany	116842	111597	110681	109081	107361	105498	103588	101581	99551	97449	95276	93139	18
Estonia	1615	1572	1573	1574	1575	1576	1577	1577	1578	1578	1579	1579	0
Ireland	5516	5160	5139	5065	5041	5043	5069	5102	5066	5029	4980	4931	1
Greece	8355	8655	8675	8376	8474	8517	8658	8859	9013	9166	9401	9674	2
Spain	40254	33340	32465	31984	31984	31671	31452	31181	30894	30546	30189	29849	6
France	68949	65966	65369	64773	64176	63580	62983	62386	61790	61193	60597	60000	12
Italy	68501	58976	59197	59418	59639	59860	60081	60301	60522	60743	60964	61185	12
Cyprus	530	480	480	484	492	499	509	512	517	521	525	527	0
Latvia	2607	2251	2285	2319	2354	2389	2425	2461	2497	2535	2573	2612	1
Lithuania	2583	2417	2428	2454	2481	2514	2601	2618	2634	2650	2667	2684	1
Luxembourg	1189	1235	1235	1234	1234	1234	1234	1241	1248	1255	1262	1268	0
Hungary	12192	10347	10520	10774	11094	10817	10636	10434	10251	10069	9874	9719	2
Malta	n.a.	45	55	56	58	60	63	65	67	69	71	73	0
Netherlands	28436	24612	24614	24615	24616	24617	24618	24692	24766	24840	24914	24989	5
Austria	13206	12007	12031	12061	12099	12145	12203	12276	12367	12481	12624	12802	2
Poland	n.a.	32400	32500	32700	32800	32900	33100	33400	33800	34100	34400	34700	7
Portugal	7927	7286	7370	7454	7538	7622	7706	7807	7906	8004	8101	8197	2
Romania	18779	15788	16184	16525	16840	17210	17572	17708	17818	17973	18140	18316	4
Slovenia	2291	1996	2008	2019	2031	2043	2054	2049	2044	2039	2034	2029	0
Slovakia	6162	5971	5923	5876	5828	5780	5732	5685	5637	5589	5541	5493	1
Finland	13970	14010	14380	14540	14670	14830	15000	15080	15120	15170	15260	15300	3
Sweden	13190	14448	14700	14951	15203	15455	15706	15958	16209	16461	16713	16964	3
United Kingdom	66900	60000	58900	58000	57100	56200	55300	54400	53500	52900	52200	51500	10
All Member States (total)	552056	542702	540787	538751	536791	534214	532102	529612	527180	525115	522819	520425	100

For the 'additional energy efficiency' scenario all Member States have provided data. For Malta and Poland no data are available for the year 2005. Consequently, the value reported here as EU total in 2005 is actually the value for the EU minus Malta and Poland (together 32.4 Mtoe).

Table 48: Total final energy consumption [ktoe] transport for the reference scenario

	Scenario	Year																			2020 [ktoe]	2020 [%]
		2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020									
Belgium	Reference scenario	8493	9485	9522	9552	9589	9629	9661	9591	9530	9463	9399	9333	9301	9270	9239	9209	9179	9149	9119		
Bulgaria	Reference scenario	2642	2716	2716	2783	2872	2956	3033	3091	3151	3205	3254	3301	3350	3391	3435	3474	3513	3552	3591		
Czech Republic	Reference scenario	6007	6146	6169	6294	6389	6464	6506	6542	6577	6613	6649	6685	6721	6757	6793	6829	6865	6901	6937		
Denmark	Reference scenario	4145	4207	4293	4397	4397	4411	4428	4436	4443	4445	4445	4445	4445	4445	4445	4445	4445	4445	4445		
Germany	Reference scenario	53602	52427	52331	52268	52232	52221	52187	52150	52112	52073	52035	51996	51958	51920	51882	51844	51806	51768	51730		
Estonia	Reference scenario	746	789	809	828	847	867	886	900	913	927	940	954	968	982	996	1010	1024	1038	1052		
Ireland	Reference scenario	3912	4605	4430	4578	4740	4828	4916	5004	5092	5180	5268	5356	5444	5532	5620	5708	5796	5884	5972		
Latvia	Reference scenario	982	1133	1119	1145	1165	1190	1212	1231	1253	1274	1297	1320	1343	1366	1389	1412	1435	1458	1481		
Lithuania	Reference scenario	1133	1336	1376	1418	1461	1506	1554	1603	1654	1707	1761	1817	1874	1931	1989	2047	2105	2163	2221		
Malta	Reference scenario	n.a.	152	154	155	156	158	159	160	162	163	164	165	166	167	168	169	170	171	172		
Netherlands	Additional efficiency	11351	11699	11643	11587	11531	11475	11419	11262	11105	10948	10791	10634	10477	10320	10163	10006	9849	9692	9535		
Austria	Reference scenario	8945	8336	8453	8587	8739	8895	9055	9228	9407	9603	9809	10065	10321	10577	10833	11089	11345	11601	11857		
Poland	Reference scenario	n.a.	16800	17000	17500	17500	17700	17900	18200	18400	18600	18800	19000	19200	19400	19600	19800	20000	20200	20400		
Portugal	Reference scenario	6223	6040	6028	6016	6003	5992	5980	5968	5956	5944	5932	5920	5908	5896	5884	5872	5860	5848	5836		
Romania	Reference scenario	4139	4856	5112	5259	5408	5556	5707	5814	5921	6027	6134	6239	6346	6453	6560	6667	6774	6881	6988		
Slovenia	Additional efficiency	1526	1735	1756	1777	1798	1819	1839	1862	1885	1907	1930	1953	1976	1999	2022	2045	2068	2091	2114		
Slovakia	Reference scenario	1744	2221	2269	2341	2436	2508	2556	2627	2699	2794	2866	2938	3010	3082	3154	3226	3298	3370	3442		
Finland	Additional efficiency	4220	4030	4060	4060	4080	4090	4100	4110	4120	4130	4140	4150	4160	4170	4180	4190	4200	4210	4220		
Sweden	Reference scenario	7473	7923	8013	8103	8193	8283	8373	8463	8553	8643	8733	8823	8913	9003	9093	9183	9273	9363	9453		
United Kingdom	Reference scenario	41704	40485	40935	41427	41746	41936	42002	42030	42013	41957	41878	41799	41720	41641	41562	41483	41404	41325	41246		
All Member States (total)	Mixed scenarios	299104	321430	323385	327067	330174	333520	336433	339125	341661	344198	346466	349069	351672	354275	356878	359481	362084	364687	367290		

For the Netherlands, Slovenia and Finland the 'Reference scenario' is not available. For these Member States, projections have been taken as reported for the 'Additional efficiency scenario', see Table 49.

For Malta and Poland no data are available for the year 2005. Consequently, the value reported here as EU total in 2005 is actually the value for the EU minus Malta and Poland (together 17.0 Mtoe).

Table 49: Final energy consumption [ktoe] for transport for the additional energy efficiency scenario

Scenario	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[%]
Belgium	8493	9304	9306	9301	9304	9308	9306	9187	9077	8963	8852	8740	3
Bulgaria	2642	2569	2555	2577	2592	2600	2599	2581	2600	2600	2620	2625	1
Czech Republic	6007	6128	6139	6255	6342	6407	6429	6443	6456	6436	6416	6418	2
Denmark	4145	4191	4267	4361	4350	4353	4353	4355	4353	4344	4342	4332	1
Germany	53602	52355	52188	52021	51806	51575	51279	50655	50034	49414	48857	48302	15
Estonia	746	789	805	821	837	852	868	881	895	908	921	934	0
Ireland	3912	4564	4358	4482	4621	4905	5308	5430	5542	5542	5658	5747	2
Greece	6568	6528	6436	6324	6233	6214	6253	6279	6267	6279	6309	6336	2
Spain	32407	30875	30795	30746	31068	31180	31222	31292	31410	31502	31609	31681	10
France	45080	45700	45300	45000	44700	44300	44000	43700	43400	43000	42800	42100	13
Italy	39000	37054	36745	36437	36129	35821	35513	35205	34897	34589	34281	33972	11
Cyprus	682	720	716	720	727	736	744	750	756	761	765	768	0
Latvia	982	1096	1116	1136	1157	1178	1199	1218	1237	1257	1278	1299	0
Lithuania	1133	1333	1368	1405	1444	1484	1527	1566	1606	1648	1691	1734	1
Luxembourg	2416	2086	2111	2136	2161	2186	2211	2236	2260	2285	2309	2334	1
Hungary	3964	4083	4369	4544	4685	4825	4922	5020	5121	5223	5286	5349	2
Malta	n.a.	152	154	155	156	158	159	160	161	163	164	165	0
Netherlands	11351	11699	11643	11587	11531	11475	11419	11262	11105	10948	10791	10634	3
Austria	8945	8336	8341	8348	8356	8364	8374	8385	8396	8407	8414	8414	3
Poland	n.a.	16800	17000	17200	17400	17600	17800	18200	18600	19000	19500	19900	6
Portugal	6223	6040	6028	6016	6003	5992	5980	5932	5884	5836	5789	5743	2
Romania	4139	4725	4873	4999	5125	5252	5379	5434	5485	5536	5592	5628	2
Slovenia	1526	1735	1756	1777	1798	1819	1839	1862	1885	1907	1930	1953	1
Slovakia	1744	2221	2245	2293	2341	2409	2449	2491	2532	2603	2675	2747	1
Finland	4220	4030	4060	4060	4080	4090	4100	4110	4150	4150	4120	4080	1
Sweden	7473	7686	7728	7771	7813	7856	7898	7941	7983	8026	8068	8111	3
United Kingdom	41704	40485	40935	41427	41746	41936	42002	42030	42013	41957	41878	41779	13
All Member States (total)	299104	313284	313337	313899	314505	314875	314976	314483	313993	313284	312915	312025	100

For the 'additional energy efficiency' scenario all Member States have provided data. For Malta and Poland no data are available for the year 2005. Consequently, the value reported here as EU total in 2005 is actually the value for the EU minus Malta and Poland (together 17.0 Mtoe).

Table 51: Total final energy consumption [ktoe] before aviation reduction for the additional energy efficiency scenario

Scenario	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[%]
Belgium	38209	40517	40630	40736	41121	40967	41076	41116	41164	41207	41254	41301	3
Additional efficiency													
Without reduction	10314	10191	10132	10221	10282	10313	10309	10238	10312	10359	10390	10411	1
Bulgaria	29665	29969	30186	30350	30568	30796	31089	31333	31587	32018	32275	32531	3
Additional efficiency													
Without reduction	16475	16324	16432	16576	16600	16629	16596	16553	16510	16458	16438	16419	1
Czech Republic	229092	223584	222461	220479	218234	215869	213122	210089	206984	203760	200463	197178	17
Additional efficiency													
Without reduction	3098	3190	3218	3246	3273	3301	3329	3358	3386	3395	3423	3451	0
Estonia	12807	13024	12633	12700	12867	13220	13575	13784	13887	14076	14142	14142	1
Additional efficiency													
Without reduction	21643	22428	21964	21864	21917	21960	22251	22596	22903	23216	23614	24114	8
Ireland	101845	93226	92503	92974	93634	94116	94593	95078	95562	96055	96544	97041	2
Additional efficiency													
Without reduction	16689	164349	163400	162553	161704	160758	159909	159060	158213	157264	156517	155268	13
France	141226	131801	131925	132049	132174	132298	132422	132546	132670	132794	132918	133042	11
Additional efficiency													
Without reduction	1884	1919	1934	1963	2002	2041	2080	2116	2149	2180	2210	2240	0
Cyprus	4241	4033	4101	4170	4240	4311	4383	4462	4542	4624	4709	4796	0
Additional efficiency													
Without reduction	4907	5031	5111	5229	5347	5479	5610	5692	5773	5877	5980	6084	1
Lithuania	4605	4273	4296	4318	4341	4364	4386	4415	4444	4472	4501	4530	0
Additional efficiency													
Without reduction	19099	18255	18878	19360	19849	19792	19782	19746	19728	19712	19677	19644	2
Hungary	n.a.	506	522	532	542	551	561	570	578	587	595	603	0
Additional efficiency													
Without reduction	54010	51008	51146	51284	51422	51560	51698	51776	51854	51932	52010	52088	4
Netherlands	27610	25726	25775	25836	25910	26001	26113	26248	26412	26608	26839	27109	2
Additional efficiency													
Without reduction	n.a.	61300	61800	62400	62900	63400	64000	65000	66100	67100	68200	69200	6
Poland	19582	18592	18690	18782	18887	18989	19094	19175	19252	19318	19392	19467	2
Additional efficiency													
Without reduction	27519	25863	26439	26956	27493	28030	28606	28932	29278	29607	29949	30278	3
Romania	5090	4927	4979	5031	5083	5135	5186	5241	5241	5269	5296	5323	0
Additional efficiency													
Without reduction	10199	10653	10724	10755	10786	10838	10888	10938	10988	11018	11100	11226	1
Slovenia	26260	25730	26330	26610	26860	27140	27420	27600	27770	27910	28080	28170	2
Additional efficiency													
Without reduction	34519	36089	36404	36718	37032	37346	37660	37974	38288	38603	38917	39231	3
Finland	154500	146500	146200	146200	146100	145900	145600	145100	144800	144600	144300	144100	12
Additional efficiency													
Without reduction	1165898	1189008	1188813	1189892	1191168	1191104	1191312	1190639	1190305	1189927	1189667	1188987	100
All Member States (total)													

This dataset presents gross final energy consumption. It is the only cross-section of the NREAP data that is complete, so in this table no corrections have been applied (see also the footnotes in Tables 50, 52 and 53).

For Malta and Poland no data are available for the year 2005. Consequently, the value reported here as EU total in 2005 is actually the value for the EU minus Malta and Poland (together 61.8 Mtoe).

Table 52: Total final energy consumption [ktoe] after aviation reduction for the reference scenario

	Scenario	Aviation reduction										2020	2020 [%]		
		2005	2010	2011	2012	2013	2014	2015	2016	2017	2018			2019	
Belgium	Reference	38209	41012	41222	41426	41638	41852	42057	42119	42189	42311	42386	42386	3	
Bulgaria	Reference	10314	10671	10744	11037	11393	11726	12028	12258	12499	12711	12906	13091	1	
Czech Republic	Reference	29665	30623	30924	31193	31523	31870	32265	32589	32957	33385	33794	34128	3	
Denmark	Reference	16475	16495	16738	17011	17168	17324	17453	17553	17648	17740	17861	17984	1	
Germany	Reference	229092	223767	223249	222485	221243	220120	218926	218019	216347	214723	213122	211599	16	
Estonia	Reference	3098	3210	3252	3294	3336	3377	3419	3440	3481	3522	3562	3602	1	
Finland	Reference	12741	13106	12855	13020	13285	13732	14181	14469	14707	14939	15166	15367	1	
Greece	Reference	21643	22714	22424	22516	22670	22860	23150	23339	24007	24377	24826	25362	2	
Spain	Reference	101845	93379	93169	94635	96613	98743	100866	102998	105147	107343	109579	111882	9	
France	Reference	166689	179877	181423	182970	184518	186064	187610	189157	190704	192252	193798	195345	15	
Italy	Reference	141226	134643	135841	137016	138167	139295	140399	141480	142536	143570	144580	145566	11	
Cyprus	Reference	1661	1744	1771	1810	1857	1904	1952	1996	2039	2081	2121	2159	0	
Latvia	Reference	4241	4060	4141	4231	4325	4411	4461	4482	4510	4591	4500	4543	0	
Lithuania	Reference	4907	5034	5134	5273	5412	5555	5698	5797	5895	6029	6162	6296	0	
Luxembourg	Reference	4457	4426	4469	4512	4555	4598	4641	4696	4750	4805	4860	4915	0	
Hungary	Reference	190909	18332	19036	19598	20167	20205	20285	20355	20412	20462	20493	20525	2	
Malta	Reference	n.a.	517	534	545	555	566	577	586	596	606	616	625	0	
Netherlands	Additional efficiency	53717	50240	50303	50366	50428	50491	50554	50550	50545	50541	50536	50532	4	
Austria	Reference	27610	25726	26083	26489	26948	27416	27893	28402	28922	29477	30043	30622	2	
Poland	Reference	n.a.	61300	63400	66200	67800	69900	72000	74200	76400	78400	80700	82700	6	
Portugal	Reference	19582	18592	18690	18782	18887	18989	19094	19293	19490	19680	19879	20082	2	
Romania	Reference	27519	26261	26298	27766	28705	29716	30838	31438	32122	32797	33508	34374	3	
Slovenia	Additional efficiency	5090	4927	4979	5031	5083	5135	5186	5214	5241	5269	5296	5323	0	
Slovakia	Reference	10199	10653	10891	11058	11249	11417	11562	11731	11902	12098	12270	12443	1	
Finland	Additional efficiency	26260	25730	26330	26610	26860	27140	27420	27600	27770	27910	28080	28170	2	
Sweden	Reference	37826	37826	38487	39148	39810	40471	41132	41794	42455	43117	43778	44439	3	
United Kingdom	Reference	150900	142800	142700	143000	143100	143300	143000	142500	142300	142200	142100	142000	11	
All Member States (total)	Mixed scenarios	Mixed value	1161568	1207665	1215717	1227022	1237295	1248117	1258804	1268635	1278142	1288480	1297257	1307251	100

Not for all Member States the aviation reduction has been applied. This table presents all data for the total consumption after reduction for aviation limit for Denmark, Ireland, Spain (only for 2015 – 2020), Cyprus, Luxembourg, the Netherlands, and the United Kingdom. For the remaining countries, the values *before* the aviation reduction have been displayed. This regards Belgium, Bulgaria, the Czech Republic, Germany, Estonia, Greece, France, Italy, Latvia, Lithuania, Hungary, Malta, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden. . See also the third column in the table.

For the Netherlands, Slovenia and Finland the 'Reference scenario' is not available. For these Member States, projections have been taken as reported for the 'Additional efficiency scenario', see Tables 51 (Slovenia and Finland) and 53 (the Netherlands).

For Malta and Poland no data are available for the year 2005. Consequently, the value reported here as EU total in 2005 is actually the value for the EU minus Malta and Poland (together 61.8 Mtoe).

For Spain the aviation reduction only applies to the years 2015 – 2020 in the 'Reference scenario'.

Table 53: Total final energy consumption [ktoe] after aviation reduction for the additional energy efficiency

Scenario	Aviation reduction	2005 [ktoe]	2010 [ktoe]	2011 [ktoe]	2012 [ktoe]	2013 [ktoe]	2014 [ktoe]	2015 [ktoe]	2016 [ktoe]	2017 [ktoe]	2018 [ktoe]	2019 [ktoe]	2020 [ktoe]	2020 [%]
Belgium	Additional efficiency	38209	40517	40630	40736	41121	40967	41076	41116	41164	41207	41254	41301	4
Bulgaria	Without reduction	10314	10191	10132	10221	10282	10313	10309	10238	10312	10359	10390	10411	1
Czech Republic	Without reduction	29665	29969	30186	30350	30568	30796	31089	31333	31587	32018	32275	32531	3
Denmark	After reduction	16475	16324	16432	16576	16600	16629	16596	16553	16510	16443	16395	16346	1
Germany	Without reduction	229092	223584	222461	220479	218234	215869	213122	210089	206984	203760	200463	197178	17
Estonia	Without reduction	3098	3190	3218	3246	3273	3301	3329	3358	3386	3395	3423	3451	0
Ireland	After reduction	12741	12996	12633	12700	12867	13220	13575	13784	13984	14076	14142	14142	1
Greece	Without reduction	21643	22428	21964	21864	21917	21960	22251	22596	22903	23216	23614	24114	2
Spain	Without reduction	101845	93226	92503	92974	93634	94116	94593	95078	95562	96055	96544	97041	8
France	Without reduction	166689	164349	163400	162553	161704	160758	159909	159060	158213	157264	156517	155268	13
Italy	Without reduction	141226	131801	131925	132049	132174	132298	132422	132546	132670	132794	132918	133042	11
Cyprus	After reduction	1661	1742	1757	1782	1816	1850	1884	1915	1943	1971	1997	2023	0
Latvia	Without reduction	4241	4033	4101	4170	4240	4311	4383	4462	4542	4624	4709	4796	0
Lithuania	Without reduction	4907	5031	5111	5229	5347	5479	5610	5692	5773	5877	5980	6084	1
Luxembourg	After reduction	4457	4123	4147	4171	4195	4219	4243	4274	4304	4335	4365	4396	0
Hungary	Without reduction	19909	18255	18878	19360	19849	19792	19782	19746	19728	19712	19677	19644	2
Malta	After reduction	n.a.	434	450	460	470	480	490	499	507	517	526	534	0
Netherlands	After reduction	53717	50240	50303	50366	50428	50491	50554	50550	50545	50541	50536	50532	4
Austria	Without reduction	27610	25726	25775	25836	25910	26001	26113	26248	26412	26608	26839	27109	2
Poland	Without reduction	n.a.	61300	61800	62400	62900	63400	64000	65000	66100	67100	68200	69200	6
Portugal	Without reduction	19582	18592	18690	18782	18887	18989	19094	19175	19252	19318	19392	19467	2
Romania	Without reduction	27519	25863	26439	26956	27493	28030	28606	28932	29278	29607	29949	30278	3
Slovenia	Without reduction	5090	4927	4979	5031	5083	5135	5186	5214	5241	5269	5296	5323	0
Slovakia	Without reduction	10199	10653	10724	10755	10786	10838	10862	10888	10938	11018	11100	11226	1
Finland	Without reduction	26260	25730	26330	26610	26860	27140	27420	27600	27770	27910	28080	28170	2
Sweden	Without reduction	34519	36089	36404	36718	37032	37346	37660	37974	38288	38603	38917	39231	3
United Kingdom	After reduction	159000	142700	142100	141800	141400	140800	140200	139200	138500	137900	137300	136700	12
All Member States (total)	Mixed value	1161568	1184013	1183472	1184174	1185070	1184528	1184358	1183100	1182279	1181405	1180732	1179538	100

Not for all Member States the aviation reduction has been applied. This table presents all data for the total consumption after reduction for aviation limit for Denmark, Ireland, Cyprus, Luxembourg, Malta, the Netherlands and the United Kingdom. For the remaining countries, the values *before* the aviation reduction have been displayed. This regards Belgium, Bulgaria, the Czech Republic, Germany, Estonia, Greece, Spain, France, Italy, Latvia, Lithuania, Hungary, Austria, Poland, Portugal, Romania, Slovakia, Slovenia, Finland and Sweden. See also the third column in the table. For Malta and Poland no data are available for the year 2005. Consequently, the value reported here as EU total in 2005 is actually the value for the EU minus Malta and Poland (together 61.7 Mtoe).

Table 54: Aggregate RES according to NREAP for the year 2005 (Template Table 4a, Table 4b (RES-T for target) and Table 12 (RES-E in road vehicles))

	RES-E ^a [ktoe]	RES-H/C ^a [ktoe]	RES-T ^a [ktoe]	All RES ^a [ktoe]	All RES ^b [%]	RES-T target ^c [ktoe]	RES-E,H/C,T ^d [ktoe]	Difference ^e [ktoe]	RES-E ^f in transport [ktoe]	RES export ^a [ktoe]	RES import ^a [ktoe]	RES ^a after exchange [ktoe]	Page
Belgium	212	491	16	702	0.7	16	719	-17	16	0	0	702	63
Bulgaria	206	750	0	956	1.0	0	956	0	0	n.a.	n.a.	956	64
Czech Republic	269	1482	9	1760	1.8	9	1760	0	6	0	0	1760	65
Denmark	850	1869	9	2718	2.8	9	2728	-10	9	0	0	2718	66
Germany	5301	7706	2087	14926	15.1	2087	15094	-168	169	0	0	14926	67
Estonia	9	505	0	515	0.5	n.a.	514	1	0	n.a.	0	515	68
Ireland	180	193	1	373	0.4	1	374	-1	1	0	0	373	69
Greece	440	1066	1	1507	1.5	1	1507	0	n.a.	n.a.	n.a.	1507	70
Spain	4624	3550	366	8433	8.5	366	8540	-107	108	n.a.	n.a.	8433	71
France	6118	9397	544	15918	16.1	544	16059	-141	141	0	0	15918	72
Italy	4847	1916	179	6942	7.0	338	6942	0	139	n.a.	n.a.	6942	73
Cyprus	0	48	0	48	0.0	n.a.	48	0	0	0	0	48	74
Latvia	261	1114	7	1377	1.4	9	1382	-5	4	n.a.	n.a.	1377	75
Lithuania	38	688	4	730	0.7	4	730	0	0	0	0	730	76
Luxembourg	18	20	2	40	0.0	2	40	0	1	n.a.	n.a.	40	77
Hungary	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.	n.a.	0	n.a.	n.a.	n.a.	78
Malta	n.a.	n.a.	n.a.	n.a.	n.a.	8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	79
Netherlands	622	717	8	1339	1.4	8	1347	-8	8	n.a.	0	1339	80
Austria	3480	3213	205	6735	6.8	205	6898	-163	162	0	0	6735	81
Poland	n.a.	n.a.	n.a.	n.a.	n.a.	43	n.a.	n.a.	0	n.a.	n.a.	n.a.	82
Portugal	1337	2529	12	3866	3.9	12	3878	-12	12	0	0	3866	83
Romania	1347	3516	58	4921	5.0	58	4921	0	11	0	0	4921	84
Slovenia	362	465	0	828	0.8	4	827	1	4	0	0	828	85
Slovakia	404	361	8	772	0.8	8	773	-1	8	n.a.	n.a.	772	86
Finland	2030	5530	0	7560	7.7	20	7560	0	20	0	0	7560	87
Sweden	6605	7084	288	13689	13.9	301	13977	-288	121	n.a.	n.a.	13689	88
United Kingdom	1506	475	69	2050	2.1	69	2050	0	113	n.a.	n.a.	2050	89
European Union	41066	54685	3873	98705	100.0	4119	99624	-919	1053	0	0	98705	-

^a As reported in Template Table 4a. The Template is available from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>.

^b Calculated indicator: contribution of each Member State to 'All RES' as reported in Table 4a.

^c 'RES-T target' refers to the row indicated (J) in Template Table 4b and takes into account Article 4c of the Directive (applying a factor 2.5 to electricity from renewable energy sources consumed by electric road vehicles) and Article 21.2 (considering twice the contribution made by biofuels produced from wastes, residues, non-food cellulosic material and ligno-cellulosic material).

^d Calculated result: sum of columns 'RES-E', 'RES-H/C' and 'RES-T' as reported in Template Table 4a.

^e Difference between column 'All RES' and the sum of columns 'RES-E', 'RES-H/C' and 'RES-T' as reported in Template Table 4a (see also footnote d). Since none of the 27 Member States projected a contribution from renewable hydrogen in transport, the difference should be equal to the projection for renewable electricity in transport (Article 5.1 of the Renewable Energy Directive 2009/28/EC, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0028:EN:NOT>).

^f Renewable electricity in transport ('road transport' and 'non-road transport') as reported in Template Table 12 (for Romania only 'renewable electricity in road transport' from Template Table 4b has been considered).

Table 55: Aggregate RES according to NREAP for the year 2010 (Template Table 4a, Table 4b (RES-T for target) and Table 12 (RES-E in road vehicles)

	RES-E ^a [ktoe]	RES-H/C ^a [ktoe]	RES-T ^a [ktoe]	All RES ^a [ktoe]	All RES ^b [%]	RES-T target ^c [ktoe]	RES-E, H/C, T ^d [ktoe]	Difference ^e [ktoe]	RES-E/ ^f in transport [ktoe]	RES export ^g [ktoe]	RES import ^g [ktoe]	RES ^g after exchange [ktoe]	Page
Belgium	401	766	353	1520	1.1	353	1520	0	24	0	0	1520	63
Bulgaria	333	741	30	1104	0.8	30	1104	0	0	79	n.a.	1025	64
Czech Republic	445	1811	250	2506	1.8	250	2506	0	7	0	0	2506	65
Denmark	1067	2480	42	3578	2.6	42	3589	-11	11	0	0	3578	66
Germany	9026	10031	3749	22588	16.5	3847	22806	-218	219	0	0	22588	67
Estonia	53	612	1	666	0.5	n.a.	666	0	0	n.a.	0	666	68
Ireland	504	220	135	859	0.6	138	859	0	1	0	0	859	69
Greece	671	1269	110	2050	1.5	111	2050	0	2	257	n.a.	1993	70
Spain	7227	3764	1802	12693	9.3	1852	12793	-100	99	n.a.	n.a.	12693	71
France	7073	11124	2898	20912	15.3	2948	21095	-183	183	0	0	20912	72
Italy	5744	3851	1020	10615	7.7	1295	10615	0	170	n.a.	n.a.	10615	73
Cyprus	20	78	16	114	0.1	n.a.	114	0	0	0	0	114	74
Latvia	261	1020	42	1320	1.0	44	1323	-3	3	n.a.	n.a.	1320	75
Lithuania	74	666	55	795	0.6	55	795	0	0	0	0	795	76
Luxembourg	22	26	43	89	0.1	43	91	-2	2	0	0	89	77
Hungary	244	949	150	1344	1.0	177	1343	1	6	0	0	1344	78
Malta	1	4	3	8	0.0	4	8	0	1	n.a.	n.a.	8	79
Netherlands	915	906	319	2128	1.6	475	2140	-12	12	0	0	2128	80
Austria	3902	3657	564	7952	5.8	567	8123	-171	171	0	0	7952	81
Poland	913	3980	981	5873	4.3	971	5874	-1	15	0	0	5873	82
Portugal	1956	2240	301	4476	3.3	305	4497	-21	20	0	0	4476	83
Romania	1435	2819	275	4529	3.3	275	4529	0	10	0	0	4529	84
Slovenia	388	445	40	874	0.6	46	873	1	5	0	0	874	85
Slovakia	471	452	90	1013	0.7	90	1013	0	8	n.a.	0	1013	86
Finland	1950	5210	220	7380	5.4	230	7380	0	20	0	0	7380	87
Sweden	7189	8237	528	15695	11.5	573	15954	-259	147	n.a.	n.a.	15695	88
United Kingdom	2720	518	1066	4304	3.1	1066	4304	0	136	n.a.	n.a.	4304	89
European Union	55005	67876	15083	136985	100.0	15787	137964	-979	1273	336	0	136849	-

^a As reported in Template Table 4a. The Template is available from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>.

^b Calculated indicator: contribution of each Member State to 'All RES' as reported in Table 4a.

^c 'RES-T target' refers to the row indicated (J) in Template Table 4b and takes into account Article 4c of the Directive (applying a factor 2.5 to electricity from renewable energy sources consumed by electric road vehicles) and Article 21.2 (considering twice the contribution made by biofuels produced from wastes, residues, non-food cellulosic material and ligno-cellulosic material).

^d Calculated result: sum of columns 'RES-E', 'RES-H/C' and 'RES-T' as reported in Template Table 4a.

^e Difference between column 'All RES' and the sum of columns 'RES-E', 'RES-H/C' and 'RES-T' as reported in Template Table 4a (see also footnote d). Since none of the 27 Member States projected a contribution from renewable hydrogen in transport, the difference should be equal to the projection for renewable electricity in transport (Article 5.1 of the Renewable Energy Directive 2009/28/EC, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0028:EN:NOT>).

^f Renewable electricity in transport ('road transport' and 'non-road transport') as reported in Template Table 12 (for Romania only 'renewable electricity in road transport' from Template Table 4b has been considered).

Table 56: Aggregate RES according to NREAP for the year 2015 (Template Table 4a, Table 4b (RES-T for target) and Table 12 (RES-E in road vehicles))

	RES-E ^a [ktoe]	RES-H/C ^a [ktoe]	RES-T ^a [ktoe]	All RES ^a [ktoe]	All RES ^b [%]	RES-T target ^c [ktoe]	RES-E,H/C,T ^d [ktoe]	Difference ^e [ktoe]	RES-E ^f in transport [ktoe]	RES export ^a [ktoe]	RES import ^a [ktoe]	RES ^a after exchange [ktoe]	Page
Belgium	1121	1435	541	3096	1.7	544	3097	-1	47	0	0	3096	63
Bulgaria	527	943	115	1585	0.9	115	1585	0	0	309	n.a.	1275	64
Czech Republic	864	2359	455	3677	2.0	455	3678	-1	16	0	0	3677	65
Denmark	1477	2855	266	4579	2.5	292	4598	-19	19	833	0	3746	66
Germany	13553	12163	3479	28822	15.9	3613	29195	-373	374	0	0	28822	67
Estonia	117	626	42	786	0.4	n.a.	785	1	0	81	0	704	68
Ireland	855	451	300	1605	0.9	304	1606	-1	1	211	0	1394	69
Greece	1459	1548	393	3393	1.9	395	3400	-7	7	856	n.a.	2537	70
Spain	9545	4404	2695	16419	9.1	2902	16644	-225	224	n.a.	n.a.	16419	71
France	9407	15040	3215	27402	15.1	3372	27662	-260	260	0	0	27402	72
Italy	7045	6062	1775	14882	8.2	2356	14882	0	265	n.a.	n.a.	14882	73
Cyprus	46	101	23	170	0.1	n.a.	170	0	0	0	0	170	74
Latvia	332	1179	53	1560	0.9	55	1564	-4	4	n.a.	n.a.	1560	75
Lithuania	182	849	111	1142	0.6	113	1142	0	2	0	0	1142	76
Luxembourg	49	57	84	186	0.1	85	190	-4	4	0	45	231	77
Hungary	333	1049	266	1648	0.9	310	1648	0	15	0	0	1648	78
Malta	17	5	5	27	0.0	7	27	0	17	n.a.	n.a.	27	79
Netherlands	2360	1380	591	4307	2.4	685	4331	-24	23	0	0	4307	80
Austria	4144	3808	631	8392	4.6	643	8583	-191	191	0	0	8392	81
Poland	1709	4532	1376	7617	4.2	1444	7617	0	23	0	0	7617	82
Portugal	2531	2462	466	5421	3.0	479	5459	-38	37	0	0	5421	83
Romania	2333	3000	436	5769	3.2	436	5769	0	15	0	0	5769	84
Slovakia	458	561	79	1099	0.6	86	1098	1	7	0	0	1099	85
Slovenia	617	627	147	1391	0.8	147	1391	0	10	305	0	1086	86
Finland	2200	6340	410	8950	4.9	510	8950	0	20	0	0	8950	87
Sweden	7772	9390	768	17702	9.8	844	17930	-228	173	n.a.	n.a.	17702	88
United Kingdom	5189	1537	2581	9307	5.1	2587	9307	0	192	n.a.	n.a.	9307	89
European Union	76242	84763	21303	180934	100.0	22779	182308	-1374	1946	2595	45	178382	-

^a As reported in Template Table 4a. The Template is available from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>.

^b Calculated indicator: contribution of each Member State to 'All RES' as reported in Table 4a.

^c 'RES-T target' refers to the row indicated (J) in Template Table 4b and takes into account Article 4e of the Directive (applying a factor 2.5 to electricity from renewable energy sources consumed by electric road vehicles) and Article 21.2 (considering twice the contribution made by biofuels produced from wastes, residues, non-food cellulosic material and ligno-cellulosic material).

^d Calculated result: sum of columns 'RES-E', 'RES-H/C' and 'RES-T' as reported in Template Table 4a.

^e Difference between column 'All RES' and the sum of columns 'RES-E', 'RES-H/C' and 'RES-T' as reported in Template Table 4a (see also footnote d). Since none of the 27 Member States projected a contribution from renewable hydrogen in transport, the difference should be equal to the projection for renewable electricity in transport (Article 5.1 of the Renewable Energy Directive 2009/28/EC, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0028:EN:NOT>).

^f Renewable electricity in transport ('road transport' and 'non-road transport') as reported in Template Table 12 (for Romania only 'renewable electricity in road transport' from Template Table 4b has been considered).

Table 57: Aggregate RES according to NREAP for the year 2020 (Template Table 4a, Table 4b (RES-T for target) and Table 12 (RES-E in road vehicles)

	RES-E ^a [ktoe]	RES-H/C ^a [ktoe]	RES-T ^a [ktoe]	All RES ^a [ktoe]	All RES ^b [%]	RES-T target ^c [ktoe]	RES-E, H/C, T ^d [ktoe]	Difference ^e [ktoe]	RES-E/ ^f in transport [ktoe]	RES export ^g [ktoe]	RES import ^g [ktoe]	RES ^g after exchange [ktoe]	Page
Belgium	1988	2588	798	5374	2.2	886	5374	0	97	0	0	5374	63
Bulgaria	648	1103	205	1956	0.8	217	1956	0	5	290	n.a.	1666	64
Czech Republic	1038	2672	691	4383	1.8	691	4383	-18	19	0	0	4383	65
Denmark	1685	3042	291	4989	2.0	439	5018	-29	29	63	0	4926	66
Germany	18653	14431	6140	38557	15.8	6390	39224	-667	667	0	0	38557	67
Estonia	165	607	92	863	0.4	n.a.	864	-1	1	0	0	863	68
Ireland	1196	591	482	2269	0.9	575	2269	0	37	0	0	2269	69
Greece	2345	1908	634	4870	2.0	641	4887	-17	16.5	529	n.a.	4341	70
Spain	12903	5654	3885	22057	9.0	4322	22442	-385	381	n.a.	n.a.	22057	71
France	12729	19732	4062	36121	14.8	4427	36523	-402	402	0	0	36121	72
Italy	8504	10456	2530	21490	8.8	3445	21490	0	369	n.a.	1127	22617	73
Cyprus	101	124	38	263	0.1	n.a.	263	0	0.56	0	0	263	74
Latvia	446	1395	83	1918	0.8	130	1924	-6	6	n.a.	n.a.	1918	75
Lithuania	254	1051	169	1474	0.6	173	1474	0	2.5	0	0	1474	76
Luxembourg	67	108	226	391	0.2	234	401	-10	10	0	93	484	77
Hungary	481	1863	535	2879	1.2	598	2879	0	24	0	0	2879	78
Malta	37	5	13	55	0.0	18	55	0	37.22	n.a.	n.a.	55	79
Netherlands	4326	2179	905	7340	3.0	1097	7410	-70	71	0	0	7340	80
Austria	4503	4179	856	9266	3.8	958	9538	-272	272	0	0	9266	81
Poland	2786	5921	2018	10725	4.4	2194	10725	0	50	0	0	10725	82
Portugal	3060	2507	535	6044	2.5	574	6102	-58	58	0	0	6044	83
Romania	2666	4038	564	7268	3.0	564	7268	0	14.4	0	0	7268	84
Slovenia	527	625	192	1344	0.5	204	1344	0	11	0	0	1344	85
Slovakia	688	820	207	1715	0.7	275	1715	0	17	143	0	1572	86
Finland	2870	7270	560	10700	4.4	800	10700	0	40	0	0	10700	87
Sweden	8356	10543	1008	19709	8.1	1116	19907	-198	198	n.a.	n.a.	19709	88
United Kingdom	10059	6199	4251	20510	8.4	4295	20509	1	267	n.a.	n.a.	20510	89
European Union	103081	111611	31970	244530	100.0	35263	246662	-2132	3102	1025	1220	244725	-

^a As reported in Template Table 4a. The Template is available from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>.

^b Calculated indicator: contribution of each Member State to 'All RES' as reported in Table 4a.

^c 'RES-T target' refers to the row indicated (J) in Template Table 4b and takes into account Article 4c of the Directive (applying a factor 2.5 to electricity from renewable energy sources consumed by electric road vehicles) and Article 21.2 (considering twice the contribution made by biofuels produced from wastes, residues, non-food cellulosic material and ligno-cellulosic material).

^d Calculated result: sum of columns 'RES-E', 'RES-H/C' and 'RES-T' as reported in Template Table 4a.

^e Difference between column 'All RES' and the sum of columns 'RES-E', 'RES-H/C' and 'RES-T' as reported in Template Table 4a (see also footnote d). Since none of the 27 Member States projected a contribution from renewable hydrogen in transport, the difference should be equal to the projection for renewable electricity in transport (Article 5.1 of the Renewable Energy Directive 2009/28/EC, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0028:EN:NOT>).

^f Renewable electricity in transport ('road transport' and 'non-road transport') as reported in Template Table 12 (for Romania only 'renewable electricity in road transport' from Template Table 4b has been considered).

Table 58: Projected hydropower electric capacity [MW] for the period 2005 - 2020, broken down into capacity ranges and pumped storage capacity

	Hydropower < 1 MW					Hydropower 1 MW – 10 MW					Hydropower > 10 MW					Pumped storage hydropower					Total hydropower				
	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	108.2	112.3	122.5	140	
Bulgaria	123	162	191	194	154	142	147	147	743	743	743	743	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2078	2090	2280	2549	
Czech Republic	0	0	0	0	10	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	
Denmark	641	507	534	564	1073	987	1012	1043	2615	2558	2620	2702	4012	6494	6494	6494	7900	4329	4052	4165	4329	4052	4165	4309	
Germany	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	7	8	8	
Estonia	18	18	18	18	20	20	20	20	196	196	196	196	0	0	0	0	0	0	0	0	234	234	234	234	
Ireland	34	29	34	39	63	54	54	54	3018	3054	3396	4276	700	700	700	700	1580	3107	3237	3615	3107	3237	3615	4531	
France	239	242	253	268	1534	1603	1764	1917	16447	16842	18032	20177	2727	2546	3700	5700	18220	18687	20049	20049	18220	18687	20049	22362	
Spain	433	441	462	483	1618	1647	1727	1807	18995	19333	20269	21206	4303	4800	5800	6800	8000	25349	25800	27050	25349	25800	27050	28300	
Italy	391	444	547	650	1947	2250	2750	3250	13128	13886	13893	13900	1334	2399	2499	2600	2600	15466	16580	17190	15466	16580	17190	17800	
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Latvia	24	24	25	27	1	1	1	1	1511	1511	1524	1522	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	128	127	133	141	
Lithuania	n.a.	n.a.	n.a.	n.a.	2	2	2	3	2	2	2	2	41	41	41	41	41	1100	1100	1300	34	38	38	44	
Luxembourg	2	2	2	3	32	36	36	41	0	0	0	0	0	0	0	0	0	0	0	0	n.a.	n.a.	n.a.	n.a.	
Hungary	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Malta	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Netherlands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Austria	308	455	465	497	692	726	743	794	6907	7053	7215	7707	3929	4285	4285	4285	4285	7907	8235	8423	7907	8235	8423	8997	
Poland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	915	952	1002	1152	
Portugal	n.a.	n.a.	n.a.	n.a.	323	410	550	750	4496	4524	6467	8798	537	1036	2454	4302	4816	4934	7017	7287	7017	7287	9548		
Romania	63	63	90	109	262	324	547	620	5964	6026	6650	7000	0	0	0	0	0	6289	6413	7287	6289	6413	7287	7729	
Slovenia	108	118	120	120	37	37	52	57	836	916	1021	1176	0	0	0	0	0	981	1071	1193	981	1071	1193	1354	
Slovakia	16	25	40	60	46	55	82	122	1535	1542	1610	1630	0	0	0	0	0	1597	1622	1732	1597	1622	1732	1812	
Finland	30	30	30	30	280	280	280	280	2730	2750	2750	2790	0	0	0	0	0	3040	3050	3050	3040	3050	3050	3100	
Sweden	140	140	140	140	765	765	765	765	15397	15402	15407	15412	43	43	43	43	43	16345	16350	16350	16345	16350	16350	16360	
United Kingdom	56	n.a.	n.a.	n.a.	102	n.a.	n.a.	n.a.	1343	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1501	1710	1920	1501	1710	1920	2130
All Member States (total)	2618	2700	2951	3202	8986	9473	10703	11880	95962	96437	101894	109336	18685	23403	27275	34810	41505.2	41779.3	42564.2.5	43555.4	115052.2	117992.3	125642.5	135554	

See Table 59 on page 43 for corresponding hydropower electricity production data.

Country information: *Total hydropower* in the NREAP for France and Sweden includes pumped storage capacity. The value for *All Member States (total)* should thus be lowered with approximately 4.3 GW in 2005 to 6.8 GW in 2020.

A breakdown in capacity ranges has not been provided for Bulgaria, the Netherlands and the United Kingdom. Therefore, the sum of all categories is lower than the value for *All Member States (total)*.

Table 59: Projected hydropower electricity generation [GWh] for the period 2005 - 2020, broken down into capacity ranges and pumped storage capacity

	Hydropower < 10MW										Hydropower > 10MW										Pumped storage hydropower										Total hydropower				
	2005		2010		2015		2020		2005		2010		2015		2020		2005		2010		2015		2020		2005		2010		2015		2020				
	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.	[GWh]	n.a.			
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.				
Bulgaria	343	575	670	724	728	474	490	490	490	1060	1060	1060	1060	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.				
Czech Republic	0	0	23	0	23	31	31	31	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Denmark	3157	2300	2450	2550	3560	4050	4250	4500	4500	12971	11650	12300	12950	7786	6989	6989	6989	6989	6989	6989	6989	6989	6989	19687	18000	19000	19000	20000	20000	20000	20000				
Germany	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.			
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.			
Ireland	106	112	131	150	218	593	713	833	833	4693	4283	4840	5593	593	776	776	776	776	776	776	776	776	776	35017	4988	5684	6576	6576	6576	6576	6576				
Greece	893	831	715	803	5719	4973	4617	5477	28891	28813	31399	33314	5153	3640	3640	3640	3640	3640	3640	3640	3640	3640	3640	35503	34617	36732	39593	39593	39593	39593	39593				
Spain	1796	1694	1727	1759	6111	5766	5878	5990	62332	61563	62758	63953	4705	5130	5130	5130	5130	5130	5130	5130	5130	5130	5130	70240	69024	70363	71703	71703	71703	71703	71703				
France	1851	1737	2009	2281	7391	7459	8627	9796	9796	34525	32946	31434	29923	1268	2739	2739	2739	2739	2739	2739	2739	2739	2739	43768	42141	42070	42000	42000	42000	42000	42000				
Italy	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
Cyprus	59	59	63	67	3	3	3	3	3	2880	2844	2899	2981	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.			
Latvia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	66	79	93	117	385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Lithuania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	93	100	100	117	0	0	0	0	0	0	0	0	0	0	0	785	785	928	107	124	124	124	124	124		
Luxembourg	5	6	6	7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
Hungary	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Malta	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Netherlands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Austria	1448	2129	2178	2326	3247	3400	3477	3715	3715	32430	33013	33768	36071	2738	2732	2732	2732	2732	2732	2732	2732	2732	2732	37125	38542	39423	42112	42112	42112	42112	42112	42112	42112		
Portugal	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Poland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	381	827	1108	1511	4737	8916	9993	9993	9993	9993	9993	9993	9993	9993	0	0	0	0	0	0	0	0	0	0	0	
Romania	61	95	135	164	538	624	1054	1195	1195	15493	15848	17490	18410	387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Slovenia	451	262	270	270	155	192	247	270	270	3493	3744	4042	4581	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Slovakia	80	75	119	179	198	164	244	364	364	4360	4595	4798	4857	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Slovenia	140	150	150	150	1260	1290	1290	1310	1310	12510	12780	12960	12960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finland	458	458	458	458	3027	3027	3027	3027	3027	69318	67693	66069	64444	71	71	71	71	71	71	71	71	71	71	71	72874	71249	69625	68000	68000	68000	68000	68000	68000	68000	
Sweden	44	n.a.	n.a.	n.a.	399	n.a.	n.a.	n.a.	n.a.	4478	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
United Kingdom	10892	10483	11081	11888	33117	33052	35249	38746	38746	294805	290101	295983	304012	23486	22862	27004	31850	346641	345747	355610	355610	355610	355610	346641	345747	355610	370110	370110	370110	370110	370110	370110	370110		
All Member States (total)	10892	10483	11081	11888	33117	33052	35249	38746	38746	294805	290101	295983	304012	23486	22862	27004	31850	346641	345747	355610	355610	355610	355610	346641	345747	355610	370110	370110	370110	370110	370110	370110	370110		

See Table 58 on page 42 for corresponding hydropower capacity data.
 Country information: Total hydropower in the NREAP for Sweden includes energy production from pumped storage. The value for All Member States (total) should thus be lowered with 71 GWh (all years, see Table 59).

Table 60: *Projected geothermal electric capacity [MW] for the period 2005 - 2020*

	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2020 [%]
Belgium	0	0	0	4	0
Bulgaria	0	0	0	0	0
Czech Republic	0	0	4	4	0
Denmark	0	0	0	0	0
Germany	0	10	79	298	18
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	0	0	0	0	0
Greece	0	0	20	120	7
Spain	0	0	0	50	3
France	15	26	53	80	5
Italy	711	754	837	920	57
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.
Latvia	n.a.	n.a.	n.a.	n.a.	n.a.
Lithuania	0	0	0	0	0
Luxembourg	0	0	0	0	0
Hungary	n.a.	0	4	57	4
Malta	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	0	0	0	0	0
Austria	1	1	1	1	0
Poland	0	0	0	0	0
Portugal	14	25	40	75	5
Romania	0	0	0	0	0
Slovenia	0	0	0	0	0
Slovakia	0	0	4	4	0
Finland	0	0	0	0	0
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	n.a.	n.a.	n.a.	n.a.	n.a.
All Member States (total)	741	816	1042	1613	100

See Table 61 on page 45 for corresponding geothermal electricity production data.

Table 61: *Projected geothermal electricity generation [GWh] for the period 2005 - 2020*

	2005 [GWh]	2010 [GWh]	2015 [GWh]	2020 [GWh]	2020 [%]
Belgium	0	0	0	29	0
Bulgaria	0	0	0	0	0
Czech Republic	0	0	18	18	0
Denmark	0	0	0	0	0
Germany	0	27	377	1654	15
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	0	0	0	0	0
Greece	n.a.	0	123	736	7
Spain	0	0	0	300	3
France	95	153	314	475	4
Italy	5325	5632	6191	6750	62
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.
Latvia	n.a.	n.a.	n.a.	n.a.	n.a.
Lithuania	0	0	0	0	0
Luxembourg	0	0	0	0	0
Hungary	n.a.	0	29	410	4
Malta	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	0	0	0	0	0
Austria	2	2	2	2	0
Poland	0	0	0	0	0
Portugal	55	163	260	488	4
Romania	0	0	0	0	0
Slovenia	0	0	0	0	0
Slovakia	0	0	28	30	0
Finland	0	0	0	0	0
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	n.a.	n.a.	n.a.	n.a.	n.a.
All Member States (total)	5477	5977	7342	10892	100

See Table 60 on page 44 for corresponding geothermal electricity capacity data.

Table 62: Projected solar electric capacity [MW] for the period 2005 - 2020, broken down into photovoltaic (PV) and concentrated solar power (CSP)

	Solar photovoltaic					Concentrated solar power					Total solar electricity				
	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2020 [MW]
Belgium	2	350	713	1340	0	0	0	0	0	0	2	350	713	1340	0
Bulgaria	0	9	220	303	0	0	0	0	0	0	0	9	220	303	0
Czech Republic	1	1650	1680	1695	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	1650	1680	1695	0
Denmark	3	3	4	6	0	0	0	0	0	0	3	4	6	6	0
Germany	1980	15784	34279	51753	0	0	0	0	0	0	1980	15784	34279	51753	0
Estonia	n.a.	n.a.	n.a.	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	n.a.
Ireland	n.a.	n.a.	0	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	0	0	0
Greece	1	184	1270	2200	n.a.	n.a.	n.a.	30	250	0	1	184	1300	2450	0
Spain	60	4021	5918	8367	0	632	3048	5079	540	60	60	4653	8966	13445	0
France	25	504	2151	4860	0	0	203	540	540	25	25	504	2353	5400	0
Italy	34	2500	5500	8000	0	5	62	600	600	34	34	2505	5562	8600	0
Cyprus	0	6	37	192	0	0	50	75	75	0	0	6	87	267	0
Latvia	n.a.	n.a.	1	2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	1	1	2
Lithuania	0	1	10	10	0	0	0	0	0	0	0	1	10	10	0
Luxembourg	24	27	88	113	0	0	0	0	0	24	24	27	88	113	0
Hungary	n.a.	0	19	63	n.a.	0	0	0	0	n.a.	n.a.	19	63	63	0
Malta	n.a.	4	27	28	n.a.	0	0	0	0	n.a.	0	4	27	28	0
Netherlands	51	92	317	722	0	0	0	0	0	0	51	92	317	722	0
Austria	22	90	179	322	0	0	0	0	0	22	22	90	179	322	0
Poland	1	1	2	3	0	0	0	0	0	0	1	2	2	3	0
Portugal	3	156	540	1000	0	0	180	500	0	3	3	156	720	1500	0
Romania	0	0	148	260	0	0	0	0	0	0	0	148	148	260	0
Slovenia	0	12	37	139	0	0	0	0	0	0	0	12	37	139	0
Slovakia	0	60	160	300	0	0	0	0	0	0	0	60	160	300	0
Finland	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0
Sweden	4	5	7	8	n.a.	n.a.	n.a.	n.a.	n.a.	4	4	5	7	8	0
United Kingdom	11	50	1070	2680	n.a.	0	0	0	0	11	11	50	1070	2680	0
All Member States (total)	2221	25509	54377	84376	0	637	3573	7044	7044	2221	26146	57949	91419	91419	0

See Table 63 on page 47 for corresponding solar electricity production data.

Table 63: Projected solar electricity generation [GWh] for the period 2005 - 2020, broken down into photovoltaic (PV) and concentrated solar power (CSP)

	Solar photovoltaic					Concentrated solar power					Total solar electricity				
	2005	2010	2015	2020		2005	2010	2015	2020		2005	2010	2015	2020	
	[GWh]	[GWh]	[GWh]	[GWh]		[GWh]	[GWh]	[GWh]	[GWh]		[GWh]	[GWh]	[GWh]	[GWh]	
Belgium	1	304	610	1139		0	0	0	0		1	304	610	1139	
Bulgaria	0	12	263	454		0	0	0	0		0	12	263	454	
Czech Republic	0	578	1708	1726		n.a.	n.a.	n.a.	n.a.		0	578	1708	1726	
Denmark	2	2	3	4		0	0	0	0		2	2	3	4	
Germany	1282	9499	26161	41389		0	0	0	0		1282	9499	26161	41389	
Estonia	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.	
Ireland	n.a.	n.a.	0	0		n.a.	n.a.	n.a.	n.a.		0	0	0	0	
Greece	1	242	1668	2891		n.a.	n.a.	86	714		1	242	1754	3605	
Spain	41	6417	9872	14316		0	1144	7913	15353		41	7561	17785	29669	
France	22	613	2617	5913		0	0	365	972		22	613	2987	6885	
Italy	31	1967	6122	9650		0	9	170	1700		31	1976	6292	11350	
Cyprus	0	6	59	309		0	0	149	224		0	6	208	533	
Latvia	n.a.	n.a.	1	4		n.a.	n.a.	n.a.	n.a.		0	0	1	4	
Lithuania	0	0	13	15		0	0	0	0		0	0	13	15	
Luxembourg	18	20	65	84		0	0	0	0		18	20	65	84	
Hungary	n.a.	2	26	81		n.a.	0	0	0		n.a.	2	26	81	
Malta	n.a.	6	41	43		n.a.	n.a.	n.a.	n.a.		0	6	41	43	
Netherlands	40	73	250	570		0	0	0	0		40	73	250	570	
Austria	21	85	170	306		0	0	0	0		21	85	170	306	
Poland	0	1	2	3		0	0	0	0		0	1	2	3	
Portugal	3	230	797	1475		0	0	360	1000		3	230	1157	2475	
Romania	0	0	180	320		0	0	0	0		0	0	180	320	
Slovenia	0	12	37	139		0	0	0	0		0	12	37	139	
Slovakia	0	30	160	300		0	0	0	0		0	30	160	300	
Finland	0	0	0	0		0	0	0	0		0	0	0	0	
Sweden	0	1	3	4		n.a.	n.a.	n.a.	n.a.		0	1	3	4	
United Kingdom	8	40	890	2240		n.a.	0	0	0		8	40	890	2240	
All Member States (total)	1470	20140	51718	83375		0	1153	9043	19963		1470	21293	60766	103338	

See Table 62 on page 46 for corresponding solar electric capacity data.

Table 64: *Projected tidal, wave and ocean energy electric capacity [MW] for the period 2005 - 2020*

	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2020 [%]
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.
Bulgaria	0	0	0	0	0
Czech Republic	n.a.	n.a.	n.a.	n.a.	n.a.
Denmark	0	0	0	0	0
Germany	0	0	0	0	0
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	0	0	0	75	4
Greece	n.a.	n.a.	n.a.	n.a.	n.a.
Spain	0	0	0	100	5
France	240	240	301	380	18
Italy	0	0	0	3	0
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.
Latvia	n.a.	n.a.	n.a.	n.a.	n.a.
Lithuania	0	0	0	0	0
Luxembourg	0	0	0	0	0
Hungary	n.a.	0	0	0	0
Malta	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	0	0	0	0	0
Austria	n.a.	n.a.	n.a.	n.a.	n.a.
Poland	0	0	0	0	0
Portugal	0	5	60	250	12
Romania	0	0	0	0	0
Slovenia	0	0	0	0	0
Slovakia	0	0	0	0	0
Finland	0	0	10	10	0
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	n.a.	0	0	1300	61
All Member States (total)	240	245	371	2118	100

See Table 65 on page 49 for corresponding tidal, wave and ocean energy electricity production data.

Table 65: *Projected tidal, wave and ocean energy electricity generation [GWh] for the period 2005 - 2020*

	2005 [GWh]	2010 [GWh]	2015 [GWh]	2020 [GWh]	2020 [%]
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.
Bulgaria	0	0	0	0	0
Czech Republic	n.a.	n.a.	n.a.	n.a.	n.a.
Denmark	0	0	0	0	0
Germany	0	0	0	0	0
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	0	0	0	230	4
Greece	n.a.	n.a.	n.a.	n.a.	n.a.
Spain	0	0	0	220	4
France	535	500	789	1150	19
Italy	0	0	1	5	0
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.
Latvia	n.a.	n.a.	n.a.	n.a.	n.a.
Lithuania	0	0	0	0	0
Luxembourg	0	0	0	0	0
Hungary	n.a.	0	0	0	0
Malta	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	0	0	0	0	0
Austria	n.a.	n.a.	n.a.	n.a.	n.a.
Poland	0	0	0	0	0
Portugal	0	1	75	437	7
Romania	0	0	0	0	0
Slovenia	0	0	0	0	0
Slovakia	0	0	0	0	0
Finland	0	0	0	0	0
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	n.a.	0	0	3950	66
All Member States (total)	535	501	865	5992	100

See Table 64 on page 48 for corresponding tidal, wave and ocean energy capacity data.

Table 66: Projected wind power electric capacity [MW] for the period 2005 - 2020, broken down into onshore and offshore wind

	Onshore wind					Offshore wind					Total wind power				
	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2025 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2025 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2025 [MW]
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	190	733	2049	4320	
Bulgaria	8	336	984	1236	0	0	0	0	0	8	8	336	2049	1256	
Czech Republic	22	243	493	743	n.a.	n.a.	n.a.	n.a.	n.a.	22	22	336	493	743	
Denmark	2706	2923	2929	2621	423	661	1251	1339	1339	3129	3584	4180	3960	3960	
Germany	18415	27526	33647	35750	0	150	3000	10000	10000	18415	27676	36647	45750	45750	
Estonia	31	147	400	400	n.a.	n.a.	n.a.	250	250	31	147	400	650	650	
Ireland	469	2052	2899	4094	25	36	252	555	555	494	2088	4649	4649	4649	
Greece	491	1327	4303	7200	n.a.	n.a.	n.a.	300	300	491	1327	3151	7500	7500	
Spain	9918	20155	27847	35000	0	0	150	3000	3000	9918	20155	27997	38000	38000	
France	752	5542	10778	19000	0	0	2667	6000	6000	752	5542	13445	25000	25000	
Italy	1639	5800	8900	12000	0	0	168	680	680	1639	5800	9068	12880	12880	
Cyprus	0	82	180	300	n.a.	n.a.	n.a.	n.a.	n.a.	0	82	180	300	300	
Latvia	26	28	104	236	n.a.	n.a.	n.a.	180	180	26	28	104	416	416	
Lithuania	1	179	389	500	0	0	0	0	0	1	179	389	500	500	
Luxembourg	35	35	105	131	0	0	0	0	0	35	35	105	131	131	
Hungary	n.a.	330	577	750	n.a.	0	0	0	0	n.a.	330	577	750	750	
Malta	n.a.	0	7	15	n.a.	0	0	95	95	0	0	7	110	110	
Netherlands	1224	1993	4400	6000	0	228	1178	5178	5178	1224	2221	5578	11178	11178	
Austria	694	1011	1951	2578	0	0	0	0	0	694	1011	1951	2578	2578	
Poland	121	1100	3350	5600	0	0	0	500	500	121	1100	3540	6650	6650	
Portugal	1063	4256	6100	6800	0	0	25	75	75	1063	4256	6125	6875	6875	
Romania	1	560	3200	4000	0	0	0	0	0	1	560	3200	4000	4000	
Slovenia	0	2	60	106	0	0	0	0	0	0	2	60	106	106	
Slovakia	5	5	300	350	0	0	0	0	0	5	5	300	350	350	
Finland	80	n.a.	n.a.	n.a.	0	n.a.	n.a.	n.a.	n.a.	80	170	300	350	2500	
Sweden	513	1797	3081	4365	23	76	129	182	182	536	1873	3210	4547	4547	
United Kingdom	1351	4040	8710	14890	214	1390	5500	12990	12990	1565	5430	14210	27880	27880	
All Member States (total)	39565	81469	125694	164685	685	2541	14320	41324	41324	40440	84913	142922	213379	213379	

See Table 67 on page 51 for corresponding wind power electricity production data.
 Because for Finland and Belgium no breakdown into onshore and offshore wind power has been specified after 2005 the sum of the subcategories in 2010, 2015 and 2020 is lower than the value for All Member States (total). Poland reports micro-wind separately from onshore wind, which results in a difference between onshore and total capacity.

Table 67: Projected wind power electricity generation [GWh] for the period 2005 - 2020, broken down into onshore wind and offshore wind

	Onshore wind					Offshore wind					Total wind power				
	2005	2010	2015	2020		2005	2010	2015	2020		2005	2010	2015	2020	
	[GWh]	[GWh]	[GWh]	[GWh]		[GWh]	[GWh]	[GWh]	[GWh]		[GWh]	[GWh]	[GWh]	[GWh]	
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	320	991	6084	10474	
Bulgaria	5	605	1672	2260	0	0	0	0	0	5	605	1672	2260		
Czech Republic	21	454	975	1496	n.a.	n.a.	n.a.	n.a.	n.a.	21	454	975	1496		
Denmark	5158	6121	6322	6391	2485	4920	4920	5322	5322	6614	8606	11242	11713		
Germany	26658	44397	61990	72664	0	271	8004	31771	31771	26658	44668	69994	104435		
Estonia	54	337	981	974	n.a.	n.a.	n.a.	563	563	54	337	981	1535		
Ireland	n.a.	4701	7525	10228	n.a.	n.a.	814	1742	1742	1588	4817	8339	11970		
Greece	1267	3129	9674	16125	n.a.	n.a.	n.a.	672	672	1267	3129	9674	16797		
Spain	20729	40978	56786	70502	0	0	300	7753	7753	20729	40978	57086	78254		
France	1128	11638	22634	39900	0	0	8000	18000	18000	1128	11638	30634	57900		
Italy	2558	8398	13199	18000	0	0	453	2000	2000	2558	8398	13652	20000		
Cyprus	0	31	300	499	n.a.	n.a.	n.a.	n.a.	n.a.	0	31	300	499		
Latvia	47	58	228	519	n.a.	n.a.	n.a.	391	391	47	58	228	910		
Lithuania	2	297	924	1250	0	0	0	0	0	2	297	924	1250		
Luxembourg	52	60	192	239	0	0	0	0	0	52	60	192	239		
Hungary	n.a.	692	1377	1545	n.a.	0	0	0	0	n.a.	692	1377	1545		
Malta	n.a.	0	17	38	n.a.	0	0	0	0	0	0	17	255		
Netherlands	2067	3667	9508	13372	0	803	4147	19036	19036	2067	4470	13655	32408		
Austria	1343	2034	3780	4811	0	0	0	0	0	1343	2034	3780	4811		
Poland	136	2310	7370	13160	0	0	0	1050	1050	136	2310	7541	15210		
Portugal	1773	10214	13420	14416	0	0	60	180	180	1773	10214	13400	14596		
Romania	0	460	6614	8400	0	0	0	0	0	0	460	6614	8400		
Slovenia	0	2	109	191	0	0	0	0	0	0	2	109	191		
Slovakia	7	480	840	560	0	0	0	0	0	7	480	840	560		
Finland	150	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	150	360	1520	6090		
Sweden	877	4585	8292	12000	62	208	354	500	500	939	4793	8646	12500		
United Kingdom	2501	9520	20610	34150	403	4630	18820	44120	44120	2904	14150	39430	78270		
All Member States (total)	66533	154695	254979	343690	1921	8513	45872	133316	133316	70362	164559	308547	494570		

See Table 66 on page 50 for corresponding wind power capacity data.

For Finland no breakdown into onshore and offshore wind power has been specified after 2005. For Ireland the energy production has not been allocated to either onshore or offshore wind power for the year 2005. Therefore, the sum of the subcategories is lower than the value for All Member States (total). Poland reports micro-wind separately from onshore wind, which results in a difference between onshore and total electricity production.

Table 68: Projected biomass electric capacity [MW] for the period 2005 - 2020, all biomass input categories

	Solid biomass				Biogas				Biobriquets				Total biomass			
	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]	2005 [MW]	2010 [MW]	2015 [MW]	2020 [MW]
Belgium	270	498	1052	2007	57	106	224	427	13	14	15	18	340	618	1290	2452
Bulgaria	0	0	65	93	0	0	45	65	0	0	0	0	0	0	109	158
Czech Republic	n.a.	n.a.	n.a.	n.a.	36	113	267	417	n.a.	n.a.	n.a.	n.a.	36	113	267	417
Denmark	740	991	1717	2404	37	26	95	349	0	0	26	26	777	1017	1837	2779
Germany	2427	3707	4358	4792	693	2368	3126	3796	54	237	237	237	3174	6312	7721	8825
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	2	15	75	91	18	62	62	62	0	0	0	0	20	77	137	153
Greece	n.a.	20	20	40	24	40	100	210	n.a.	n.a.	n.a.	n.a.	24	60	120	250
Spain	449	596	745	1187	152	156	220	400	0	0	0	0	601	752	965	1587
France	623	888	1531	2382	84	164	363	625	0	0	0	0	707	1082	1895	3007
Italy	653	1026	1333	1640	284	453	826	1200	0	439	710	980	937	1918	2869	3820
Cyprus	n.a.	n.a.	n.a.	n.a.	0	6	10	17	n.a.	n.a.	n.a.	n.a.	0	6	10	17
Latvia	3	2	46	108	7	11	64	92	n.a.	n.a.	n.a.	n.a.	10	13	110	200
Lithuania	2	22	115	162	5	12	35	62	0	0	0	0	5	13	150	224
Luxembourg	4	5	13	30	3	8	23	29	n.a.	n.a.	n.a.	n.a.	9	9	36	59
Hungary	n.a.	360	377	500	n.a.	14	43	100	n.a.	n.a.	n.a.	n.a.	n.a.	374	420	600
Malta	n.a.	0	15	15	n.a.	3	8	7	n.a.	n.a.	n.a.	n.a.	0	3	23	23
Netherlands	966	1214	2062	2253	162	216	381	639	0	n.a.	n.a.	n.a.	0	1128	1430	2892
Austria	892	1099	1114	1164	72	97	100	102	12	15	15	15	976	1211	1228	1281
Poland	268	300	1300	1550	18	80	230	980	0	0	0	0	286	380	1530	2530
Portugal	178	273	367	367	9	37	105	150	289	334	435	435	476	647	907	952
Romania	0	10	300	405	0	4	125	195	0	0	0	0	0	14	425	600
Slovenia	15	22	24	34	3	30	58	61	0	0	n.a.	n.a.	18	51	83	96
Slovakia	47	100	145	170	2	18	80	110	n.a.	n.a.	n.a.	n.a.	49	118	225	280
Finland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2140	1790	2200	2920
Sweden	2526	2641	2757	2872	42	42	42	42	n.a.	n.a.	n.a.	n.a.	2568	2683	2799	2914
United Kingdom	501	580	1290	3140	957	1340	1240	1100	n.a.	n.a.	n.a.	n.a.	1458	1920	2530	4240
All Member States (total)	10566	14369	20821	27406	2665	5405	7871	11237	368	1039	1438	1711	15739	22605	32329	42375

See Table 69 on page 53 for corresponding biomass electricity production data.
 For Finland no breakdown into biomass input types has been provided. Therefore, the sum of all categories is lower than the value for All Member States (total).

Table 69: Projected biomass electricity generation [GWh] for the period 2005 - 2020, broken down into biomass input categories

	Solid biomass					Biogas					Bioliqids					Total biomass				
	2005	2010	2015	2020	2005	2010	2015	2020	2005	2010	2015	2020	2005	2010	2015	2020	2005	2010	2015	2020
Belgium	1521	2580	5145	9575	235	393	777	1439	35	34	30	25	n.a.	3007	5952	11039	n.a.	3007	5952	11039
Bulgaria	0	0	387	514	0	2	269	357	0	0	0	0	0	2	656	871	0	2	656	871
Czech Republic	560	1306	3065	3294	161	624	1754	2871	0	0	0	0	0	1930	4819	6165	0	1930	4819	6165
Denmark	2960	3578	5312	6345	283	194	721	2493	0	0	1	8	3243	3772	6035	8846	0	3772	6035	8846
Germany	10044	17498	21695	24569	3652	13829	18946	23438	329	1450	1450	1450	14025	32778	42090	49457	14025	32778	42090	49457
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	241	346	346	n.a.	241	346	346
Ireland	8	28	567	687	108	320	320	319	0	0	0	0	116	347	887	1006	116	347	887	1006
Greece	n.a.	73	73	364	94	181	431	895	n.a.	n.a.	n.a.	n.a.	94	254	504	1259	94	254	504	1259
Spain	2029	3719	4660	7400	623	799	1302	2617	0	0	0	0	2653	4517	5962	10017	2653	4517	5962	10017
France	3341	4506	8366	13470	478	935	2129	3701	0	0	0	0	3819	5441	10496	17171	3819	5441	10496	17171
Italy	3477	4758	6329	7900	1198	2129	4074	6020	0	1758	3309	4860	4675	8645	13712	18780	4675	8645	13712	18780
Cyprus	n.a.	n.a.	n.a.	n.a.	0	30	84	143	n.a.	n.a.	n.a.	n.a.	0	30	84	143	n.a.	30	84	143
Latvia	5	8	271	642	36	64	393	584	n.a.	n.a.	n.a.	n.a.	41	72	664	1226	41	72	664	1226
Lithuania	3	98	533	810	4	50	228	413	0	0	0	0	7	147	761	1223	7	147	761	1223
Luxembourg	19	25	77	190	27	44	123	144	n.a.	n.a.	n.a.	n.a.	46	70	200	334	46	70	200	334
Hungary	n.a.	1870	1988	2688	n.a.	85	262	636	n.a.	n.a.	n.a.	n.a.	n.a.	1955	2250	3324	n.a.	1955	2250	3324
Malta	n.a.	0	86	86	n.a.	9	54	50	n.a.	n.a.	n.a.	n.a.	0	9	140	135	0	9	140	135
Netherlands	4758	5103	11189	11975	283	872	2161	4664	0	0	0	0	5041	5975	13550	16639	5041	5975	13550	16639
Austria	2507	4131	4223	4530	283	553	567	581	33	36	36	36	2823	4720	4826	5147	2823	4720	4826	5147
Poland	1340	5700	8950	10200	111	328	943	4018	0	0	0	0	1451	6028	9893	14218	1451	6028	9893	14218
Portugal	934	1092	1468	1468	34	130	368	525	1008	1170	1523	1523	1976	2400	3358	3516	1976	2400	3358	3516
Romania	0	48	1450	1950	0	19	600	950	0	0	0	0	0	67	2050	2900	0	67	2050	2900
Slovenia	82	150	272	309	32	148	351	367	0	0	0	0	114	298	623	676	114	298	623	676
Slovakia	27	540	725	850	5	70	624	860	n.a.	n.a.	n.a.	n.a.	32	610	1349	1710	32	610	1349	1710
Finland	9640	3930	5300	7860	20	40	50	270	n.a.	n.a.	n.a.	n.a.	9660	8090	9880	12910	9660	8090	9880	12910
Sweden	7452	10513	13574	16635	53	53	53	53	65	65	65	65	7506	10567	13628	16689	7506	10567	13628	16689
United Kingdom	4347	5500	7990	20590	4762	6830	6300	5570	n.a.	n.a.	n.a.	n.a.	9109	12330	14290	26160	9109	12330	14290	26160
All Member States (total)	55054	76754	113695	154900	12482	28731	43884	63978	1470	8633	10944	12747	67185	114302	168805	231907	67185	114302	168805	231907

See Table 68 on page 52 for corresponding biomass electricity capacity data.

Table 70: *Projected total geothermal heat energy [ktoe] for the period 2005 - 2020*

	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	2020 [%]
Belgium	2.8	3.2	4.1	5.7	0
Bulgaria	n.a.	1	3	9	0
Czech Republic	0	0	15	15	1
Denmark	0	0	0	0	0
Germany	12	34	234	686	27
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	0	0	0	0	0
Greece	10	24	23	51	2
Spain	4	4	5	10	0
France	130	155	310	500	20
Italy	213	226	260	300	12
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.
Latvia	n.a.	n.a.	n.a.	n.a.	n.a.
Lithuania	2	3	4	5	0
Luxembourg	n.a.	0	0	0	0
Hungary	n.a.	101	147	357	14
Malta	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	0	39	130	259	10
Austria	19	19	27	40	2
Poland	n.a.	23	57	178	7
Portugal	1	10	18	25	1
Romania	n.a.	n.a.	n.a.	n.a.	n.a.
Slovenia	16	18	19	20	1
Slovakia	3	3	40	90	4
Finland	0	0	0	0	0
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	1	n.a.	n.a.	n.a.	n.a.
All Member States (total)	413.8	663.2	1296.1	2550.7	100

Table 71: Projected total solar thermal energy [ktoe] for the period 2005 - 2020

	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	2020 [%]
Belgium	3	29	91	199	3
Bulgaria	n.a.	6	11	21	0
Czech Republic	2	7	15	22	0
Denmark	10	11	14	16	0
Germany	238	440	741	1245	20
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	0	4	12	20	0
Greece	101	216	271	355	6
Spain	61	159	308	644	10
France	38	130	465	927	15
Italy	27	113	424	1586	25
Cyprus	41	59	75	90	1
Latvia	0	0	1	2	0
Lithuania	0	0	5	9	0
Luxembourg	0	1	2	8	0
Hungary	n.a.	6	31	82	1
Malta	n.a.	3	3	3	0
Netherlands	16	20	17	23	0
Austria	92	127	181	269	4
Poland	n.a.	21	176	506	8
Portugal	22	50	105	160	3
Romania	n.a.	n.a.	n.a.	n.a.	n.a.
Slovenia	3	5	10	21	0
Slovakia	0	2	7	30	0
Finland	0	0	0	0	0
Sweden	6	6	6	6	0
United Kingdom	29	34	34	34	1
All Member States (total)	690	1449	3005	6278	100

Table 72: Projected biomass heat energy [ktoe] for the period 2005 - 2020, broken down into biomass input categories

	Solid biomass					Biogas					Bioliquids					Bio-SNG for grid feed-in					Total biomass thermal energy				
	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]					
Belgium	476	669	1138	1947	2	9	26	55	0	4	14	32	n.a.	n.a.	n.a.	n.a.	477	682	1178	2034					
Bulgaria	724	734	916	1053	0	0	13	20	0	0	0	0	n.a.	n.a.	n.a.	n.a.	724	734	929	1073					
Czech Republic	1351	1706	2137	2350	23	53	110	167	0	0	0	0	n.a.	n.a.	n.a.	n.a.	1374	1759	2248	2517					
Denmark	1714	2178	2426	2470	45	59	92	165	0	8	8	8	n.a.	n.a.	n.a.	n.a.	1759	2245	2526	2643					
Germany	6794	7516	8389	8952	154	912	1312	1692	313	664	688	711	n.a.	n.a.	n.a.	n.a.	7260	9092	10388	11355					
Estonia	505	612	626	607	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	505	612	626	607					
Ireland	176	188	362	453	7	10	26	33	0	0	0	0	n.a.	n.a.	n.a.	n.a.	183	198	388	486					
Greece	3441	3550	1012	1222	n.a.	n.a.	n.a.	n.a.	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3477	3583	4060	4950					
Spain	951	9870	3997	4850	36	33	63	100	0	0	0	0	n.a.	n.a.	n.a.	n.a.	951	1012	1128	1222					
France	9067	9870	12500	15900	86	83	260	555	0	0	0	0	n.a.	n.a.	n.a.	n.a.	9153	9953	12760	16455					
Italy	1629	2206	3404	5254	26	26	83	266	0	7	33	150	n.a.	n.a.	n.a.	n.a.	1655	2239	3521	5670					
Cyprus	4	18	24	30	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	18	24	30					
Latvia	1113	1013	1139	1343	1	7	39	49	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1114	1020	1178	1392					
Lithuania	685	657	851	973	1	6	28	50	0	0	0	0	n.a.	n.a.	n.a.	n.a.	686	663	879	1023					
Luxembourg	16	19	39	70	3	5	12	13	n.a.	0	0	0	n.a.	n.a.	n.a.	n.a.	19	24	51	83					
Hungary	n.a.	812	800	1225	n.a.	0	30	56	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	829	812	829	1277				
Malta	n.a.	0	0	0	n.a.	1	2	2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	1	2	2					
Netherlands	540	573	604	650	n.a.	111	174	288	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	582	647	715	980					
Austria	3025	3400	3447	3591	8	15	16	16	0	0	0	0	n.a.	n.a.	n.a.	n.a.	647	715	980	1520					
Poland	n.a.	3846	3996	4636	n.a.	65	231	453	0	0	0	0	n.a.	n.a.	n.a.	n.a.	3033	3415	3463	3607					
Portugal	1785	1514	1515	1484	10	10	23	37	713	655	801	801	n.a.	n.a.	n.a.	n.a.	2507	2179	2339	2322					
Romania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.				
Slovenia	401	415	483	497	0	0	n.a.	0	43	0	12	28	n.a.	n.a.	n.a.	n.a.	445	415	495	526					
Slovakia	357	443	540	630	1	4	36	60	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	358	447	576	690					
Finland	5450	2710	3300	3940	40	30	30	60	n.a.	2240	2470	2610	n.a.	n.a.	n.a.	n.a.	5490	4990	5810	6610					
Sweden	6992	7800	8607	9415	21	18	14	11	65	65	65	65	n.a.	n.a.	n.a.	n.a.	7013	7817	8622	9426					
United Kingdom	493	305	904	3612	67	18	54	302	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	560	323	958	3914					
All Member States (total)	47689	53766	63272	77154	600	1475	2674	4450	1134	3643	4091	4405	38	31	202	582	49395	58859	70185	86523					

As indicated in section ?? the subtotal for Biomass in Sweden does not include liquid energy carriers. For this reason the sum of all subcategories is 65 GWh higher than the value for All Member States (total).

Table 73: Projected heat pump thermal energy [ktoe] for the period 2005 - 2020, broken down into source type

	Aerothermal heat pumps					Geothermal heat pumps					Hydrothermal heat pumps					Total renewable energy from heat pumps,				
	2005	2010	2015	2020	2020	2005	2010	2015	2020	2020	2005	2010	2015	2020	2020	2005	2010	2015	2020	
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.1	52.2	161.4	350	
Bulgaria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	0	0	
Czech Republic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	29	45	82	118	
Denmark	48	91	135	170	199	52	119	166	199	0	0	0	0	0	100	210	301	370		
Germany	39	165	338	547	521	130	258	400	521	27	42	62	77	77	196	465	800	1144		
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Ireland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	10	18	51	84	
Greece	3	14	104	229	50	1	3	23	50	n.a.	n.a.	n.a.	n.a.	n.a.	4	17	127	279		
Spain	4	5	7	10	41	4	12	23	41	0	0	0	0	0	8	17	31	51		
France	27	664	1080	1280	570	49	222	425	570	n.a.	n.a.	n.a.	n.a.	n.a.	76	886	1505	1850		
Italy	16	1127	1566	2175	522	4	40	145	522	2	105	146	203	203	21	1273	1857	2900		
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0.34	1.61	2.97		
Latvia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	0	0		
Lithuania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	0	0		
Luxembourg	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	0	0		
Hungary	n.a.	0	2	7	107	n.a.	5	28	107	n.a.	1	7	29	29	n.a.	6	37	143		
Malta	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
Netherlands	n.a.	35	81	117	242	n.a.	90	161	242	n.a.	0	3	11	11	54	132	252	377		
Austria	0	38	55	105	26	0	10	14	26	0	48	68	131	131	69	96	137	263		
Poland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
Portugal	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
Romania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
Slovenia	0	1	7	14	38	0	4	26	38	0	2	5	5	5	2	8	37	58		
Slovakia	0	0	1	3	4	0	0	2	4	0	0	1	3	3	0	0	4	10		
Finland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	40	230	530	660		
Sweden	0	50	100	150	815	0	272	544	815	0	27	54	80	80	0	349	697	1046		
United Kingdom	n.a.	66	194	1301	953	n.a.	120	354	953	n.a.	n.a.	n.a.	n.a.	n.a.	0	186	548	2254		
All Member States (total)	137	2256	3670	6108	4088	240	1155	2311	4088	29	225	346	539	539	616.1	4016.54	7243.01	12142.97		

For Ireland, Lithuania, Luxembourg and Finland (and the Netherlands and Austria in 2005) no breakdown into source types has been provided. Therefore, the sum of all categories is lower than the value for All Member States (total).

Table 74: Projected bioethanol / bio-ETBE in renewable transport [ktoe] for the period 2005 - 2020, indicating the contribution of Article 21.2 and imported bioethanol / bio-ETBE

	Bioethanol / bio-ETBE Article 21.2					Bioethanol / bio-ETBE imported					Total bioethanol / bio-ETBE				
	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	2020 [ktoe]	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	2020 [ktoe]	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	
Belgium	0	0	0	0	0	0	0	0	0	0	0	37	47	91	
Bulgaria	0	0	15	32	0	0	0	0	10	0	0	0	15	42	
Czech Republic	0	0	0	29	0	0	17	24	29	0	0	50	128	128	
Denmark	0	13	95	94	0	0	13	95	94	0	0	13	95	94	
Germany	0	0	32 to 107	32 to 442	0	0	189	482	278	144	639	996	857	857	
Estonia	n.a.	n.a.	n.a.	0	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	0	14	38	
Freland	21	0	0	0	0	n.a.	3	49	99	n.a.	40	90	139	139	
Greece	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	43	256	414	n.a.	43	232	256	414	
Spain	0	0	0	52	0	0	25	0	0	113	0	301	400	400	
France	n.a.	n.a.	n.a.	n.a.	n.a.	0	50	50	50	75	550	550	550	650	
Italy	0	19	60	100	0	0	18	109	200	0	148	374	600	600	
Cyprus	0	0	0	15	0	0	3	0	15	0	0	3	15	15	
Lithuania	0	0	0	18	0	0	0	0	9	0	14	19	18	18	
Latvia	0	0	n.a.	0	0	0	0	0	0	1	13	30	36	36	
Luxembourg	0	0	0	0	0	0	5	9	23	0	5	9	23	23	
Hungary	0	0	0	0	0	n.a.	n.a.	0	0	5	34	106	304	304	
Malta	n.a.	2	4	6	0	n.a.	2	4	6	n.a.	34	106	304	304	
Netherlands	0	17	22	34	0	n.a.	152	196	240	0	n.a.	217	282	282	
Austria	0	0	0	0	0	0	14	12	11	0	54	61	80	80	
Poland	0	0	0	44	0	n.a.	n.a.	n.a.	n.a.	28	279	334	451	451	
Portugal	0	0	0	0	0	0	0	0	0	0	0	24	27	27	
Romania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Slovenia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Slovakia	0	0	0	25	0	0	0	0	0	0	4	8	19	19	
Finland	0	0	20	40	0	0	n.a.	0	0	0	15	30	75	75	
Sweden	0	0	0	117	0	117	140	185	292	144	251	358	465	465	
United Kingdom	0	0	0	0	0	n.a.	1	1	1	18	135	692	1743	1743	
All Member States (total)	21	51	285	725	117	672	1474	1770	528	2794	4840	7121	7121	7121	

The German Action Plan defines a *data range* for Article 21.2 Bioethanol/bio-ETBE. In the table the range is provided, but the 'total' value uses the average value of the range (69.5 ktoe for 2015 and 237.0 ktoe for 2020).

Table 75: Projected biodiesel in renewable transport [ktoe] for the period 2005 - 2020, indicating the contribution of Article 21.2 and imported biodiesel

	Biodiesel Article 21.2					Biodiesel imported					Total biodiesel				
	2005	2010	2015	2020		2005	2010	2015	2020		2005	2010	2015	2020	
	[ktoe]	[ktoe]	[ktoe]	[ktoe]		[ktoe]	[ktoe]	[ktoe]	[ktoe]		[ktoe]	[ktoe]	[ktoe]	[ktoe]	
Belgium	0	0	0	127		0	0	0	0		0	292	449	698	
Bulgaria	0	30	100	130		0	0	0	24		0	30	100	154	
Czech Republic	0	0	0	215		6	64	104	143		3	193	347	495	
Denmark	0	18	152	167		0	18	152	167		0	18	152	167	
Germany	0	98	98	98		0	1459	610	2846		1598	2790	2074	4443	
Estonia	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.		0	1	21	51	
Ireland	21	0	0	0		n.a.	4	125	240		1	94	209	342	
Greece	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.		1	64	130	203	
Spain	0	50	161	200		0	910	325	310		145	1471	2169	3100	
France	n.a.	n.a.	n.a.	n.a.		13	400	400	400		328	2165	2375	2850	
Italy	21	72	161	250		0	73	436	800		179	868	1374	1880	
Cyprus	0	0	2	23		0	9	11	23		0	16	20	23	
Latvia	0	0	0	15		0	0	0	8		3	25	20	28	
Lithuania	0	0	0	0		0	0	0	0		3	42	79	131	
Luxembourg	0	0	0	0		1	37	72	193		1	37	72	193	
Hungary	0	18	20	22		0	0	0	0		0	110	144	202	
Malta	n.a.	1	1	7		n.a.	0	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.	
Netherlands	0	139	70	121		0	69	245	276		0	139	350	552	
Austria	0	0	0	0		34	153	152	175		35	276	309	410	
Poland	0	0	88	132		n.a.	n.a.	n.a.	n.a.		15	687	993	1451	
Portugal	0	4	6	8		0	0	0	0		0	281	405	450	
Romania	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.	
Slovenia	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.		0	37	72	174	
Slovakia	0	0	0	30		0	0	0	0		0	67	107	110	
Finland	0	0	50	140		n.a.	n.a.	n.a.	n.a.		0	150	300	430	
Sweden	0	0	0	0		0	0	0	0		9	89	170	251	
United Kingdom	0	0	0	0		0	1	1	1		57	861	1818	2462	
All Member States (total)	42	431	909	1685		54	3197	2633	5606		2378	10803	14259	21250	

Table 76: *Projected total hydrogen from renewables in transport [ktoe] for the period 2005 - 2020*

	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	2020 [%]
Belgium	0	0	0	0	0
Bulgaria	0	0	0	0	0
Czech Republic	0	0	0	0	0
Denmark	0	0	0	0	0
Germany	0	0	0	0	0
Estonia	0	n.a.	n.a.	n.a.	n.a.
Ireland	n.a.	0	0	0	0
Greece	n.a.	n.a.	n.a.	n.a.	n.a.
Spain	0	0	0	0	0
France	0	0	0	0	0
Italy	0	0	0	0	0
Cyprus	0	0	0	0	0
Latvia	0	0	0	0	0
Lithuania	0	0	0	0	0
Luxembourg	0	0	0	0	0
Hungary	0	0	0	0	0
Malta	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	0	0	0	0	0
Austria	0	0	0	0	0
Poland	n.a.	n.a.	n.a.	n.a.	n.a.
Portugal	0	0	0	0	0
Romania	n.a.	n.a.	n.a.	n.a.	n.a.
Slovenia	n.a.	n.a.	n.a.	n.a.	n.a.
Slovakia	0	0	0	0	0
Finland	0	0	0	0	0
Sweden	0	0	0	0	0
United Kingdom	0	0	0	0	0
All Member States (total)	0	0	0	0	0

Table 77: Projected renewable electricity in transport [ktoe] for the period 2005 - 2020, indicating the contribution of road and non-road transport

	Renewable electricity road transport					Renewable electricity non-road transport					Total renewable electricity					
	2005	2010	2015	2020	2005	2010	2015	2020	2005	2010	2015	2020	2005	2010	2015	2020
	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]	[ktoe]
Belgium	0	0	6	42	16	24	42	56	16	24	47	97	16	24	47	97
Bulgaria	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Czech Republic	0	0	4	1	6	7	16	19	6	7	16	19	6	7	16	19
Denmark	0	0	4	12	9	11	15	17	9	11	19	29	9	11	19	29
Germany	0	0	0	63	169	219	373	604	169	219	374	667	169	219	374	667
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	n.a.	0	0	34	0	1	1	2	0	1	1	1	0	1	1	1
Greece	n.a.	1	1	5	n.a.	2	6	11	n.a.	2	7	17	n.a.	2	7	17
Spain	0	0	31	123	108	99	193	258	108	99	224	381	108	99	224	381
France	0	0	31	110	141	183	229	292	141	183	260	402	141	183	260	402
Italy	0	6	45	98	139	164	219	271	139	170	265	369	139	170	265	369
Cyprus	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Latvia	1	1	2	2	3	2	3	4	3	3	4	6	3	3	4	6
Lithuania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Luxembourg	0	0	0	5	1	2	3	5	1	2	4	10	1	2	4	10
Hungary	0	0	0	2	0	6	15	22	0	6	15	24	0	6	15	24
Malta	n.a.	0	0	1	n.a.	1	17	37	n.a.	1	17	37	n.a.	1	17	37
Netherlands	0	0	1	24	8	12	22	47	8	12	23	71	8	12	23	71
Austria	0	0	8	68	162	171	183	204	162	171	191	272	162	171	191	272
Poland	0	0	0	20	0	15	23	30	0	15	23	30	0	15	23	30
Portugal	0	0	5	20	12	20	32	38	12	20	37	58	12	20	37	58
Romania	11	10	15	14	n.a.	n.a.	n.a.	n.a.	11	10	15	14	11	10	15	14
Slovenia	0	0	0	1	4	5	7	9	4	5	7	11	4	5	7	11
Slovakia	0	0	0	5	8	8	10	12	8	8	10	17	8	8	10	17
Finland	0	0	0	10	20	20	20	20	20	20	20	40	20	20	20	40
Sweden	0	3	6	9	121	144	167	190	121	144	173	198	121	144	173	198
United Kingdom	0	0	4	29	113	136	187	238	113	136	192	267	113	136	192	267
All Member States (total)	12	21	159	702	1040	1252	1783	2386	1053	1273	1946	3102	1053	1273	1946	3102

For Romania the contribution of renewable electricity in transport has not been specified in Template Table 12, but from Template Table 4a the information is available for 'electricity in road transport'. The data from Template Table 4a have been used in this overview table. In this way, the Article 5.1 correction as introduced in Table 9 on page 11 is performed for road transport, but double counting of RES-E in non-road transport still occurs (the data for 'electricity in non-road transport' are not available from the Romanian NREAP).

Table 78: Projected other biofuels in transport [ktoe] for the period 2005 - 2020, indicating the contribution of Article 21.2 fuels

	Other biofuels Article 21.2					Total other biofuels in transport				
	2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]		2005 [ktoe]	2010 [ktoe]	2015 [ktoe]	2020 [ktoe]	
Belgium	0	0	0	0	0	0	0	0	0	
Bulgaria	0	0	0	4	0	0	0	0	4	
Czech Republic	0	0	0	48	0	0	0	0	49	
Denmark	0	0	0	0	0	0	0	0	0	
Germany	0	0	4	26 to 115	177	102	35	173 to 261	0	
Estonia	n.a.	n.a.	n.a.	n.a.	0	0	0	0	0	
Ireland	1	1	1	1	1	1	1	1	1	
Greece	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Spain	0	0	0	0	0	0	0	1	4	
France	0	0	0	50	0	0	0	1	160	
Italy	0	5	27	50	0	5	27	0	50	
Cyprus	0	0	0	0	0	0	0	0	0	
Latvia	0	0	0	7	0	0	10	0	31	
Lithuania	0	0	0	0	0	0	0	0	0	
Luxembourg	0	0	0	0	0	0	0	0	0	
Hungary	0	0	0	0	0	0	0	1	5	
Malta	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Netherlands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Austria	0	0	0	0	8	63	71	94	94	
Poland	n.a.	n.a.	26	66	n.a.	n.a.	26	66	66	
Portugal	0	0	0	0	0	0	0	0	0	
Romania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Slovenia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Slovakia	0	0	0	5	0	0	0	0	5	
Finland	0	0	0	0	0	0	0	0	0	
Sweden	13	40	67	94	13	40	67	94	94	
United Kingdom	0	0	0	0	0	0	0	0	0	
All Member States (total)	14	46	125	396	199	211	269	780		

The German Action Plan defines a *data range* for both 'total' and 'Article 21.2' other biofuels. In the table the range is provided, but the total value for all Member States uses the average value of the range (70.5 ktoe for 'Article 21.2' other biofuels and 217.0 ktoe for 'total other biofuels' in 2020).

	2010				2015				2020				Page
	[GWh]	[ktoe]	[%] ^b	[%] ^c	[GWh]	[ktoe]	[%] ^b	[%] ^c	[GWh]	[ktoe]	[%] ^b	[%] ^c	
Renewable production													
Electricity													
Hydropower < 10 MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	43
Hydropower 10-100 MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	43
Hydropower > 100 MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	43
Hydropower (subtotal)	35503	3053	66.0	36.2	34617	2977	41.2	23.5	36732	3158	33.1	19.2	3.3
Geothermal	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	45
Solar photovoltaic	41	4	0.1	0.0	6417	552	7.6	4.3	9872	849	8.9	5.2	3.0
Concentrated solar power	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	47
Solar (subtotal)	41	4	0.1	0.0	7561	650	9.0	5.1	17785	1529	16.0	9.3	5.4
Tidal, wave and ocean energy	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	49
Onshore wind	20729	1782	38.5	21.1	40978	3523	48.8	27.8	56786	4883	51.2	29.7	17.3
Offshore wind	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	51
Wind power (subtotal)	20729	1782	38.5	21.1	40978	3523	48.8	27.8	56786	4883	51.2	29.7	17.3
Solid biomass	2029	174	3.8	2.1	3719	320	4.4	2.5	4660	401	4.2	2.4	1.4
Biogas	623	54	1.2	0.6	799	69	1.0	0.5	1302	112	1.2	0.7	0.4
Biorefineries	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	53
Biomass (subtotal)	2653	228	4.9	2.7	4517	388	5.4	3.1	5962	513	5.4	3.1	1.8
Total (according to Template Tables 10a/b)	53773	4624	100.0	54.8	84034	7226	100.0	56.9	110988	9543	100.0	58.1	33.8
Sum of all technologies (Template Tables 10a/b)	58926	5067	109.6	60.1	87673	7539	104.3	59.4	117865	10109	105.9	61.6	35.8
Gross final RES-E consumption (Template Table 4a)	4	0	0.0	0.0	4	0	0.0	0.0	5	0	0.0	0.0	54
Geothermal													
Solar thermal	61	1.7	0.7	0.2	159	4.2	1.3	0.5	308	7.0	1.9	1.0	0.3
Solid biomass	3441	96.9	40.8	8.5	3550	94.3	28.0	10.6	3997	90.8	24.3	12.7	4.2
Biogas	36	1.0	0.4	0.1	33	0.9	0.3	0.1	63	1.4	0.4	0.2	0.1
Biorefineries	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	56
Biomass (subtotal)	3477	97.9	41.2	8.6	3583	95.2	28.2	10.7	4060	92.2	24.7	12.9	4.3
Aerothermal heat pumps	4	0.1	0.0	0.0	5	0.1	0.0	0.0	7	0.2	0.0	0.0	57
Geothermal heat pumps	4	0.1	0.0	0.0	12	0.3	0.1	0.0	23	0.5	0.1	0.1	57
Hydrothermal heat pumps	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	57
Renewable energy from heat pumps (subtotal)	8	0.2	0.1	0.0	17	0.5	0.1	0.1	31	0.7	0.2	0.1	57
Total (according to Template Table 11)	3550	100.0	42.1	8.8	3764	100.0	29.7	11.3	4404	100.0	26.8	14.0	4.7
Sum of all technologies (Template Table 11)	3550	100.0	42.1	8.8	3764	100.0	29.7	11.3	4404	100.0	26.8	14.0	4.7
Gross final RES-H/C consumption (Template Table 4a)	113	30.9	1.3	0.3	232	12.9	1.8	0.8	301	11.2	1.8	1.0	0.3
Bioethanol / bio-ETBE	145	39.6	1.7	0.4	1471	81.6	11.6	4.8	2169	80.5	13.2	6.9	2.3
Bio diesel													
Hydrogen from renewables	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	60
Renewable electricity	108	29.5	1.3	0.3	99	5.5	0.8	0.3	224	8.3	1.4	0.7	0.2
Other biofuels	0	0.0	0.0	0.0	0	0.0	0.0	0.0	1	0.0	0.0	0.0	62
Total (according to Template Table 12)	366	100.0	4.3	1.1	182	100.0	14.2	5.8	2695	100.0	16.4	8.6	2.8
Sum of all technologies (Template Table 12)	366	100.0	4.3	1.1	182	100.0	14.2	5.8	2695	100.0	16.4	8.6	2.8
Gross final RES-T consumption (Template Table 4a)	366	100.0	4.3	1.1	182	100.0	14.2	5.8	2695	100.0	16.4	8.6	2.8
RES-T including Article 21.2 (Template Table 4b) ^f	366	100.0	4.3	1.1	182	100.0	14.2	5.8	2695	100.0	16.4	8.6	2.8
All RES excl. co-operation mech.	8433	100.0	26.0	8.3	12693	100.0	41.1	13.6	16419	100.0	52.6	17.4	38-41
Sum total RES consumption (Template Tables 10a/b, 11, 12)	8433	100.0	26.0	8.3	12693	100.0	41.1	13.6	16419	100.0	52.6	17.4	38-41
Sum all technologies in Template Tables 10a/b, 11, 12	8983	100.0	27.7	8.8	13104	100.0	42.4	14.1	17208	100.0	55.1	18.2	38-41
Co-operation mechanisms	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	38-41
Transfer from other Member States and third countries	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	38-41
Transfer to other Member States	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	38-41
All RES incl. co-operation mech.	8433	100.0	26.0	8.3	12693	100.0	41.1	13.6	16419	100.0	52.6	17.4	38-41
Total (Template Table 4a)	25080	25080	100.0	24.6	25056	25056	100.0	26.9	29647	29647	100.0	33.3	29
reference scenario ^f	40254	40254	100.0	39.5	33340	33340	100.0	35.8	33115	33115	100.0	30.8	31
additional energy efficiency ^f	32407	32407	100.0	31.8	30875	30875	100.0	33.1	31222	31222	100.0	32.6	33
reference scenario ^f	101845	101845	100.0	100.0	93226	93226	100.0	100.0	109223	109223	100.0	100.0	34
additional energy efficiency ^f	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	100866	100866	n.a.	n.a.	36
reference scenario ^f	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	37
additional energy efficiency ^f													22
Transport fuels target													
Overall renewable target ^g													

^a The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in the sector total (RES-E, RES-H/C or RES-T, see values highlighted in bold).
^b The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in total RES (if applicable including co-operation mechanisms, see value highlighted in bold).
^c The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in the sector total of the final gross energy consumption ('Additional energy efficiency scenario', see values highlighted in bold).
^d The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in road transport (final gross energy consumption ('Additional energy efficiency scenario', see values highlighted in bold).
^e Art. 21.2 adjustment refers to double counting of certain biofuels (lines 2) and renewable electricity in road transport (lines 2,5).
^f In 'Final assumption' values for the year 2005 refer to the 'base year' in Template Table 1 (see Table 44, page 28) and Template Table 53 (page 37).
^g For the years 2005 and 2020 the shares as defined in Annex I of Directive 2009/28/EC are presented, for the years 2010 and 2015 it is referred to the trajectory periods 2011-2012 and 2015-2016.
 Generated: where is referred to Tables 1, 4a, 10a/b, 11 and 12 it is meant to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Renewable production	Electricity	2010					2015					2020					Page	
		[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c		
Renewable production	Hydropower < 10 MW	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	43	
	Hydropower 10-100 MW	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	43	
	Hydropower >100 MW	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	43	
	Hydropower (subtotal)	43768	3763	77.7	54.2	12.7	42141	3623	63.1	34.1	11.5	42000	3611	42.5	16.0	11.2	2.7	43
	Geothermal	5325	458	9.4	6.6	1.5	0.0	0.0	0.0	0.0	0.0	6750	580	6.8	2.6	1.8	0.4	45
	Solar photovoltaic	31	3	0.1	0.0	0.0	1967	169	2.9	1.6	0.6	6122	526	7.5	3.5	1.7	0.4	47
	Concentrated solar power	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	47
	Solar (subtotal)	31	3	0.1	0.0	0.0	1967	170	3.0	1.6	0.6	6122	526	7.5	3.5	1.7	0.4	47
	Tidal, wave and ocean energy	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	5	0	0.0	0.0	0.0	0.0	49
	Onshore wind	2558	220	4.5	3.2	0.7	8398	722	12.6	6.8	2.4	13199	1135	16.1	7.6	3.6	0.9	51
	Offshore wind	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	453	39	0.6	0.3	0.1	0.0	51
Wind power (subtotal)	2558	220	4.5	3.2	0.7	8398	722	12.6	6.8	2.4	13652	1174	16.7	7.9	3.7	0.9	51	
Solid biomass	3477	299	6.2	4.3	1.0	4758	409	7.1	3.9	1.3	6329	544	7.7	3.7	1.7	0.4	53	
Biogas	1198	103	2.1	1.5	0.3	2129	183	3.2	1.7	0.6	4074	350	5.0	2.4	1.1	0.3	53	
Biofuels	0	0	0.0	0.0	0.0	1758	151	2.6	1.4	0.5	3309	285	4.0	1.9	0.9	0.2	53	
Biomass (subtotal)	4675	402	8.3	5.8	1.4	8645	743	12.9	7.0	2.4	13712	1179	16.7	7.9	3.7	0.9	53	
Total (according to Template Tables 10a/b)	56356	4846	100.0	69.8	16.3	66791	5743	100.0	54.1	18.7	44	18198	7044	100.0	47.3	22.4	5.3	-
Sum of all technologies (Template Tables 10a/b)	56357	4847	100.0	69.8	16.3	66792	5744	100.0	54.1	18.7	44	18199	7045	100.0	47.3	22.4	5.3	-
Gross final RES-E consumption (Template Table 4a)		213	11.1	3.1	0.3	0.2	226	5.9	2.1	0.4	0.2	260	4.3	1.7	0.4	0.2	54	
Heating and cooling																		
Renewable production	Solar thermal	27	1.4	0.4	0.0	0.0	113	2.9	1.1	0.2	0.1	424	7.0	2.8	0.7	0.3	55	
	Solid biomass	1629	85.0	23.5	2.4	1.2	2206	57.3	20.8	3.7	1.7	3404	56.2	22.9	5.7	2.6	3.9	56
	Biogas	26	1.4	0.4	0.0	0.0	26	0.7	0.2	0.0	0.0	83	1.4	0.6	0.1	0.1	56	
	Biofuels	0	0.0	0.0	0.0	0.0	7	0.2	0.1	0.0	0.0	33	0.5	0.2	0.1	0.0	56	
	Biomass (subtotal)	1655	86.4	23.8	2.4	1.2	2239	58.1	21.1	3.8	1.7	3520	58.1	23.7	5.9	2.7	56	
	Aerothermal heat pumps	16	0.8	0.2	0.0	0.0	1127	29.3	10.6	1.9	0.9	1566	25.8	10.5	2.6	1.2	57	
	Geothermal heat pumps	4	0.2	0.1	0.0	0.0	40	1.0	0.4	0.1	0.0	145	2.4	1.0	0.2	0.1	57	
	Hydrothermal heat pumps	2	0.1	0.0	0.0	0.0	105	2.7	1.0	0.2	0.1	146	2.4	1.0	0.2	0.1	57	
	Renewable energy from heat pumps (subtotal)	21	1.1	0.3	0.0	0.0	1273	33.1	12.0	2.2	1.0	1857	30.6	12.5	3.1	1.4	57	
	Total (according to Template Table 11)	1916	100.0	27.6	2.8	1.4	3851	100.0	36.3	6.5	2.9	6062	100.0	40.7	10.1	4.6	-	
	Sum of all technologies (Template Table 11)	1916	100.0	27.6	2.8	1.4	3851	100.0	36.3	6.5	2.9	6062	100.0	40.7	10.1	4.6	-	
Gross final RES-H/C consumption (Template Table 4a)		0	0.0	0.0	0.0	0.0	148	12.4	1.4	0.4	0.1	374	18.3	2.5	1.1	0.3	58	
Transport																		
Renewable production	Bioethanol / bio-ETBE	179	56.3	2.6	0.5	0.1	868	72.9	8.2	2.3	0.7	1374	67.4	9.2	3.9	1.0	59	
	Biodiesel	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	60	
	Hydrogen from renewables	139	43.7	2.0	0.4	0.1	170	14.3	1.6	0.5	0.1	265	13.0	1.8	0.7	0.2	61	
	Renewable electricity	0	0.0	0.0	0.0	0.0	5	0.4	0.0	0.0	0.0	27	1.3	0.2	0.1	0.0	61	
	Other biofuels	318	100.0	4.6	0.8	0.2	1190	100.0	11.2	3.2	0.9	2040	100.0	13.7	5.7	1.5	62	
	Solar (according to Template Table 12)	318	100.0	4.6	0.8	0.2	1190	100.0	11.2	3.2	0.9	2040	100.0	13.7	5.7	1.5	62	
	Solar (according to Template Table 12)	318	100.0	4.6	0.8	0.2	1190	100.0	11.2	3.2	0.9	2040	100.0	13.7	5.7	1.5	62	
	Gross final RES-T consumption (Template Table 4a)	179	56.3	2.6	0.5	0.1	1020	85.7	9.6	2.8	0.8	1775	87.0	11.9	5.0	1.3	38-41	
	RES-T including Article 21.2 (Template Table 4a) ^f	338	106.3	4.9	0.9	0.2	1295	108.8	12.2	3.5	1.0	2356	115.5	15.8	6.6	1.8	38-41	
	All RES excl. co-operation mech.	6942	100.0	17.8	4.9	1.2	10615	100.0	28.6	8.1	2.0	14882	100.0	41.9	11.2	3.8	38-41	
	Sum of all technologies (Template Tables 10a/b, 11, 12)	6941	100.0	17.8	4.9	1.2	10614	100.0	28.6	8.1	2.0	14881	100.0	41.9	11.2	3.8	38-41	
Sum of all technologies in Template Tables 10a/b, 11, 12	7080	n.a.	n.a.	n.a.	n.a.	10785	n.a.	n.a.	n.a.	n.a.	15145	n.a.	n.a.	n.a.	n.a.	n.a.	-	
Transfer from other Member States and third countries	n.a.	n.a.	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	38-41	
Transfer to other Member States	n.a.	n.a.	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	38-41	
Total (Template Table 4a)	6942	100.0	17.8	4.9	1.2	10615	100.0	28.6	8.1	2.0	14882	100.0	41.9	11.2	3.8	38-41		
All RES incl. co-operation mech.	29749	n.a.	n.a.	n.a.	n.a.	29505	n.a.	n.a.	n.a.	n.a.	31853	n.a.	n.a.	n.a.	n.a.	n.a.	28	
Electricity	29749	n.a.	n.a.	n.a.	n.a.	29749	n.a.	n.a.	n.a.	n.a.	31853	n.a.	n.a.	n.a.	n.a.	n.a.	28	
reference scenario ^g	29749	n.a.	n.a.	n.a.	n.a.	29749	n.a.	n.a.	n.a.	n.a.	31853	n.a.	n.a.	n.a.	n.a.	n.a.	28	
additional energy efficiency ^f	68501	n.a.	n.a.	n.a.	n.a.	64194	n.a.	n.a.	n.a.	n.a.	61904	n.a.	n.a.	n.a.	n.a.	n.a.	29	
reference scenario ^g	68501	n.a.	n.a.	n.a.	n.a.	68501	n.a.	n.a.	n.a.	n.a.	65532	n.a.	n.a.	n.a.	n.a.	n.a.	30	
additional energy efficiency ^f	39000	n.a.	n.a.	n.a.	n.a.	37054	n.a.	n.a.	n.a.	n.a.	35972	n.a.	n.a.	n.a.	n.a.	n.a.	31	
reference scenario ^g	39000	n.a.	n.a.	n.a.	n.a.	39000	n.a.	n.a.	n.a.	n.a.	37986	n.a.	n.a.	n.a.	n.a.	n.a.	32	
additional energy efficiency ^f	141226	n.a.	n.a.	n.a.	n.a.	134643	n.a.	n.a.	n.a.	n.a.	140399	n.a.	n.a.	n.a.	n.a.	n.a.	33	
reference scenario ^g	141226	n.a.	n.a.	n.a.	n.a.	141226	n.a.	n.a.	n.a.	n.a.	143042	n.a.	n.a.	n.a.	n.a.	n.a.	34	
additional energy efficiency ^f	141226	n.a.	n.a.	n.a.	n.a.	131801	n.a.	n.a.	n.a.	n.a.	132422	n.a.	n.a.	n.a.	n.a.	n.a.	35	
reference scenario ^g	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	36	
additional energy efficiency ^f	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	37	
Transport fuels target																	-	
Overall renewable target ^h																	22	

^a The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in the sector-total (RES-E, RES-H/C or RES-T, see values highlighted in bold).
^b The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in total RES (if applicable including co-operation mechanisms, see value highlighted in bold).
^c The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in the sector total of the final gross energy consumption ('Additional energy efficiency' only), see values highlighted in bold).
^d The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in the total final gross energy consumption ('Additional energy efficiency' only), see values highlighted in bold).
^e Art. 21.2 adjustment refers to double counting of certain biofuels (lines 2) and renewable electricity in road transport (lines 2.5).
^f In 'Final consumption' values for the year 2005 refer to the 'base year' in Template Table 1 (see Table 44, page 28) and renewable electricity in road transport (lines 2.5).
^g For the years 2005 and 2020 the shares as defined in Annex I of Directive 2009/28/EC are presented, for the years 2010 and 2015 it is referred to the trajectory periods 2011-2012 and 2015-2016.
 General: where is referred to Tables 1, 4a, 10a/b, 11 and 12 it is meant to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Renewable production	Electricity	2005						2010						2015						2020						Page
		[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	
Renewable production	Hydropower <10 MW	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	43
	Hydropower 10-100 MW	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	43
	Hydropower >100 MW	2942	253	97.1	18.4	43.5	6.0	2906	250	95.7	18.9	42.8	6.2	2965	255	76.9	16.3	39.5	5.8	3051	262	58.8	13.7	35.2	5.5	43
	Hydropower (subtotal)	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	43
	Geothermal	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	45
	Solar photovoltaic	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	47
	Concentrated solar power	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	47
	Solar (subtotal)	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	47
	Tidal, wave and ocean energy	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	49
	Onshore wind	n.a.	n.a.	0.0	0.0	0.0	0.0	58	5	1.9	0.4	0.9	0.1	228	20	5.9	1.3	3.0	0.4	519	45	10.0	2.3	6.0	0.9	51
	Offshore wind	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	391	34	7.5	1.8	4.5	0.7	51
	Wind power (subtotal)	47	4	1.6	0.3	0.7	0.1	58	5	1.9	0.4	0.9	0.1	228	20	5.9	1.3	3.0	0.4	910	78	17.5	4.1	10.5	1.6	51
	Solid biomass	n.a.	n.a.	0.0	0.0	0.0	0.0	8	1	0.3	0.1	0.1	0.0	271	23	7.0	1.5	3.6	0.5	642	55	12.4	2.9	7.4	1.2	53
Biogas	36	3	1.2	0.2	0.5	0.1	64	6	2.1	0.4	0.9	0.1	393	34	10.2	2.2	5.2	0.8	584	50	11.3	2.6	6.7	1.0	53	
Biofuels	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	53	
Biomass (subtotal)	41	4	1.4	0.3	0.6	0.1	72	6	2.4	0.5	1.1	0.2	664	57	17.2	3.7	8.8	1.3	1226	105	23.6	5.3	14.1	2.2	53	
Total (according to Template Tables 10a/b)	3030	261	100.0	18.9	44.8	6.1	3036	261	100.0	19.8	44.7	6.5	3858	332	100.0	21.3	51.4	7.6	5191	446	100.0	23.3	59.8	9.3	-	
Sum of all technologies (Template Tables 10a/b)	3030	261	100.0	18.9	44.8	6.1	3036	261	100.0	19.8	44.7	6.5	3858	332	100.0	21.3	51.4	7.6	5191	446	100.0	23.3	59.8	9.3	-	
Gross final RES-E consumption (Template Table 4a)	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	38 - 41	
Geothermal	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	54	
Solar thermal	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	2	0.1	0.1	0.1	0.1	0.0	35	
Solid biomass	1113	99.9	80.8	42.7	26.2		1013	99.3	76.7	45.0	25.1		1139	96.5	73.0	47.0	26.0		1343	96.2	70.0	51.4	28.0		56	
Biogas	1	0.1	0.1	0.0	0.0		7	0.7	0.5	0.3	0.2		39	3.3	2.5	1.6	0.9		49	3.5	2.6	1.9	1.0		56	
Biofuels	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	56	
Biomass (subtotal)	1114	100.0	80.9	42.7	26.3		1020	100.0	77.3	45.3	25.3		1178	99.8	75.5	48.6	26.9		1392	99.7	72.6	53.3	29.0		56	
Aerothermal heat pumps	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	57	
Geothermal heat pumps	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	57	
Hydrothermal heat pumps	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	57	
Renewable energy from heat pumps (subtotal)	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	57	
Total (according to Template Table 11)	1114	100.0	80.9	42.7	26.3		1020	100.0	77.3	45.3	25.3		1180	100.0	75.6	48.7	26.9		1396	100.0	72.8	53.4	29.1		-	
Sum of all technologies (Template Table 11)	1114	100.0	80.9	42.7	26.3		1020	100.0	77.3	45.3	25.3		1181	100.1	75.7	48.7	26.9		1398	100.1	72.9	53.4	29.1		-	
Gross final RES-H/C consumption (Template Table 4a)	1114	100.0	80.9	42.7	26.3		1020	100.0	77.3	45.3	25.3		1179	99.9	75.6	48.6	26.9		1395	99.9	72.7	53.4	29.1		38 - 41	
Bioethanol / bio-ETBE	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	19	35.8	1.2	1.6	0.4		18	21.7	0.9	1.4	0.4		58	
Bio diesel	3	42.9	0.2	0.3	0.1		25	59.5	1.9	2.3	0.6		20	37.7	1.3	1.7	0.5		28	33.7	1.5	2.2	0.6		59	
Hydrogen from renewables	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	60	
Renewable electricity	4	57.1	0.3	0.4	0.1		3	7.1	0.2	0.3	0.1		4	7.5	0.3	0.3	0.1		6	7.2	0.3	0.5	0.1		61	
Other biofuels	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	10	18.9	0.6	0.8	0.2		31	37.3	1.6	2.4	0.6		62	
Total (according to Template Table 12)	7	100.0	0.5	0.7	0.2		42	100.0	3.2	3.8	1.0		53	100.0	3.4	4.4	1.2		83	100.0	4.3	6.4	1.7		-	
Sum of all technologies (Template Table 12)	7	100.0	0.5	0.7	0.2		42	100.0	3.2	3.8	1.0		53	100.0	3.4	4.4	1.2		83	100.0	4.3	6.4	1.7		-	
Gross final RES-T consumption (Template Table 4a)	7	100.0	0.5	0.7	0.2		42	100.0	3.2	3.8	1.0		53	100.0	3.4	4.4	1.2		83	100.0	4.3	6.4	1.7		38 - 41	
RES-T including Article 21.2 (Template Table 4b) ^f	9	128.6	0.7	0.9	0.2		44	104.8	3.3	4.0	1.1		55	103.8	3.5	4.6	1.3		130	156.6	6.8	10.0	2.7		38 - 41	
All RES excl. co-operation mech.	Gross final RES consumption (Template Table 4a)	1377	100.0	140.2	32.5		1320	100.0	120.4	32.7		1560	100.0	130.1	35.6		1918	100.0	147.7	40.0					38 - 41	
Sum of all technologies (Template Tables 10a/b, 11, 12)	1378	100.0	140.3	32.5		1323	100.0	120.7	32.8		1561	100.0	130.2	35.6		1919	100.0	147.8	40.0							
Sum all technologies in Template Tables 10a/b, 11, 12	1382	100.0	140.7	32.6		1329	100.0	121.2	32.8		1566	100.0	130.7	35.7		1927	100.0	148.4	40.2							
Co-operation mechanisms	Transfer from other Member States and third countries	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	0.0	38 - 41
Transfer to other Member States	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	38 - 41	
All RES incl. co-operation mech.	Total (Template Table 4a)	1377	100.0	140.2	32.5		1320	100.0	120.4	32.7		1560	100.0	130.1	35.6		1918	100.0	147.7	40.0					38 - 41	
Electricity	reference scenario ^g	581					588					686					860								28	
additional energy efficiency ^h	581						584					646					746								29	
reference scenario ^g	2607						2271					2604					3114								30	
additional energy efficiency ^h	2607						2251					2425					2612								31	
Transport	reference scenario ^g	982					1099					1212					1320								32	
additional energy efficiency																										

		2005						2010						2015						2020						Page
		[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	
Renewable production	Hydropower <1 MW	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	43
	Hydropower 1-10 MW	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	43
	Hydropower >10 MW	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	43
	Geothermal	451	39	98.0	5.3	3.9	0.8	432	37	49.3	4.7	4.1	0.7	446	38	20.8	3.4	3.7	0.7	470	40	15.9	2.7	3.4	0.7	43
		0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	45
Electricity	Solar photovoltaic	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	13	1	0.6	0.1	0.1	0.0	15	1	0.5	0.1	0.1	0.0	47
	Concentrated solar power	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	47
	Small (subtotal)	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	13	1	0.6	0.1	0.1	0.0	15	1	0.5	0.1	0.1	0.0	47
	Tidal, wave and ocean energy	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	49
	Offshore wind	2	0	0.4	0.0	0.0	0.0	297	26	33.9	3.2	2.8	0.5	924	79	43.1	7.0	7.6	1.4	1250	107	42.3	7.3	9.0	1.8	51
	Onshore wind	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	51
	Wind power (subtotal)	2	0	0.4	0.0	0.0	0.0	297	26	33.9	3.2	2.8	0.5	924	79	43.1	7.0	7.6	1.4	1250	107	42.3	7.3	9.0	1.8	51
	Solid biomass	3	0	0.7	0.0	0.0	0.0	98	8	11.2	1.1	0.9	0.2	533	46	24.9	4.0	4.4	0.8	810	70	27.4	4.7	5.8	1.1	53
	Biogas	4	0	0.9	0.0	0.0	0.0	50	4	5.7	0.5	0.5	0.1	228	20	10.6	1.7	1.9	0.3	413	36	14.0	2.4	3.0	0.6	53
	Biogas (subtotal)	7	0	1.5	0.0	0.0	0.0	147	13	16.8	1.6	1.4	0.3	761	65	35.5	5.7	6.2	1.2	1223	105	41.5	7.1	8.8	1.7	53
	Total (according to Template Tables 10(a,b))	460	40	100.0	5.4	4.0	0.8	876	75	100.0	9.5	8.3	1.5	2143	184	100.0	16.1	17.6	3.3	2958	254	100.0	17.3	21.3	4.2	-
	Sum of all technologies (Template Tables 10(a,b))	460	40	100.0	5.4	4.0	0.8	876	75	100.0	9.5	8.3	1.5	2143	184	100.0	16.1	17.6	3.3	2958	254	100.0	17.3	21.3	4.2	-
Gross final RES-E consumption (Template Table 4a)	38	96.1	5.2	3.9	0.8	1.0	74	96.2	9.3	8.1	1.5	182	96.8	15.9	17.4	3.2	254	99.9	17.2	21.3	4.2	4.2	38-41	54		
Heating and cooling	Geothermal	2	0.3	0.3	0.1	0.0	2	0.5	0.4	0.1	0.1	0.1	4	0.4	0.4	0.2	0.1	5	0.5	0.3	0.3	0.2	0.1	54		
	Solar thermal	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	55	
	Solid biomass	685	99.6	93.8	26.5	14.1	657	98.6	82.6	27.2	13.1	851	95.2	74.5	32.7	15.2	973	97.6	66.0	36.3	16.0	56				
	Biogas	1	0.1	0.1	0.0	0.0	0	0.0	0.8	0.2	0.1	0.1	28	3.1	7.5	1.1	0.5	50	4.8	3.4	0.9	0.8	56			
	Biogas (subtotal)	686	99.7	94.0	26.6	14.0	663	99.5	83.4	27.4	13.2	879	98.3	77.0	33.8	15.7	1023	97.3	69.4	38.1	16.8	56				
	Aerothermal heat pumps	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	57
	Geothermal heat pumps	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	57
	Hydrothermal heat pumps	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	57
	Renewable energy from heat pumps (subtotal)	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.7	0.5	0.2	0.1	14	1.3	0.9	0.5	0.2	57			
	Total (according to Template Table 11)	688	100.0	94.2	26.6	14.0	666	100.0	83.8	27.6	13.2	894	100.0	78.3	34.4	15.9	1051	100.0	71.3	39.2	17.3	38-41				
	Sum of all technologies (Template Table 11)	688	100.0	94.2	26.6	14.0	666	100.0	83.8	27.6	13.2	894	100.0	78.3	34.4	15.9	1051	100.0	71.3	39.2	17.3	38-41				
	Gross final RES-H/C consumption (Template Table 4a)	688	100.0	94.2	26.6	14.0	666	100.0	83.8	27.6	13.2	894	100.0	78.3	34.4	15.9	1051	100.0	71.3	39.2	17.3	38-41				
	Transport	Bioethanol / Bio-ETBE	1	25.0	0.1	0.1	0.0	13	23.2	1.6	1.0	0.3	30	26.5	2.6	2.0	0.5	56	20.8	2.4	2.1	0.6	58			
		Biodiesel	3	75.0	0.4	0.3	0.1	42	75.0	5.3	3.2	0.8	79	69.9	6.9	5.2	1.4	131	75.7	8.9	7.6	2.2	59			
		Hydrogen from renewables	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	60			
		Renewable electricity	0	0.0	0.0	0.0	0.0	0	0.5	0.0	0.0	0.0	2	1.4	0.1	0.1	0.0	3	1.4	0.2	0.1	0.0	61			
		Other biofuels	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	62			
		Total (according to Template Table 12)	4	100.0	0.5	0.4	0.1	56	100.0	7.0	4.2	1.1	113	100.0	9.9	7.4	2.0	173	100.0	11.7	10.0	2.8	-			
		Sum of all RES-T (Template Table 4a)	4	100.0	0.5	0.4	0.1	56	100.0	7.0	4.2	1.1	113	100.0	9.9	7.4	2.0	173	100.0	11.7	10.0	2.8	-			
		RES-T including Article 21.2 (Template Table 4b) ^e	4	100.0	0.5	0.4	0.1	55	98.2	6.9	4.1	1.1	111	98.2	9.9	7.4	2.0	173	100.0	11.7	10.0	2.8	38-41			
All RES excl. co-operation mech.		730	100.0	64.4	14.9	795	100.0	59.6	15.8	1142	100.0	74.8	20.4	1474	100.0	85.1	24.5	1474	100.0	85.1	24.5	38-41				
Sum of all technologies in Template Tables 10(a,b), 11, 12		732	100.0	64.6	14.9	797	100.0	59.8	15.8	1189	100.0	74.9	21.2	1475	100.0	85.1	24.5	1475	100.0	85.1	24.5	38-41				
Co-operation mechanisms		Transfer from other Member States and third countries	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	38-41			
Transfer to other Member States		0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	38-41			
Total (Template Table 4a)		730	100.0	64.4	14.9	795	100.0	59.6	15.8	1142	100.0	74.8	20.4	1474	100.0	85.0	24.2	1474	100.0	85.0	24.2	38-41				
Final consumption		Electricity	985	985	100.0	20.1	913	100.0	18.1	1053	100.0	18.7	1204	100.0	19.6	29										
	Heating and cooling	2583	2583	100.0	52.6	2417	100.0	48.0	2697	100.0	46.4	2886	100.0	44.1	32											
	Transport	1133	1133	100.0	23.1	1336	100.0	26.5	1554	100.0	27.2	1817	100.0	28.5	33											
	Total before aviation reduction	4907	4907	100.0	50.0	5031	100.0	50.0	5698	100.0	50.0	6084	100.0	50.0	34											
	Total after aviation reduction	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	36											
Target	Overall renewable target ^g	n.a.	n.a.	0.0	0.0	n.a.	n.a.	n.a.	n.a.	18.6	n.a.	n.a.	10.0	23.0	23											

^a The percentages refer to the values in the column 'ktoe' and express the share of the renewable technology in the sector-total (RES-E, RES-H/C or RES-T; see values highlighted in bold).

^b The percentages refer to the values in the column 'ktoe' and express the share of the renewable technology in total RES (if applicable) including co-operation mechanisms; see values highlighted in bold.

^c The percentages refer to the values in the column 'ktoe' and express the share of the renewable technology in the sector total of the final gross energy consumption (Additional energy efficiency scenario^e only); see values highlighted in bold.

^d The percentages refer to the values in the column 'ktoe' and express the share of the renewable technology in the total final gross energy consumption (before aviation reduction of the Additional energy efficiency scenario^e); see values highlighted in bold.

^e Art. 21.2 adjustment refers to double counting of certain biofuels (times 2) and renewable electricity in road transport (times 2.5).

^f In 'Final consumption' values for the year 2005 refer to the 'base year' in Template Table 1 (see Table 4d (page 28) to Table 53 (page 37)).

^g For the years 2005 and 2020 the shares as defined in Annex I of Directive 2009/28/EC are presented; for the year 2010 and 2015 it is referred to the trajectory periods 2011-2012 and 2015-2016.

General: Where is referred to Tables 1, 4a, 10(a,b), 11 and 12 it is meant to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ.do?uri=CELEX:32009D0548:ENN:NOT>

	2005				2010				2015				2020				Page
	[GWh]	[ktoe]	[%] ^a	[%] ^b	[GWh]	[ktoe]	[%] ^a	[%] ^b	[GWh]	[ktoe]	[%] ^a	[%] ^b	[GWh]	[ktoe]	[%] ^a	[%] ^b	
Renewable production																	
Electricity																	
Hydropower <10 MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	
Hydropower 10-100 MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	
Hydropower >100 MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	
Hydropower (subtotal)	98	8	45.8	21.1	107	9	41.8	10.3	107	9	41.8	10.3	124	11	15.9	2.2	
Geothermal	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Solar photovoltaic	18	2	8.4	3.9	20	2	7.8	1.9	65	6	11.5	2.4	84	7	10.8	1.5	
Concentrated solar power	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Solar (subtotal)	18	2	8.4	3.9	20	2	7.8	1.9	65	6	11.5	2.4	84	7	10.8	1.5	
Tidal, wave and ocean energy	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Onshore wind	52	4	24.3	11.2	60	5	23.4	5.8	192	17	34.0	7.1	239	21	30.6	4.2	
Offshore wind	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Wind power (subtotal)	52	4	24.3	11.2	60	5	23.4	5.8	192	17	34.0	7.1	239	21	30.6	4.2	
Solid biomass	19	2	8.9	4.1	25	2	9.8	2.4	77	7	13.7	2.9	190	16	24.4	3.4	
Biogas	27	2	12.6	5.8	44	4	17.2	4.3	123	11	21.8	4.6	144	12	18.5	2.6	
Biofuels	n.a.	n.a.	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Biomass (subtotal)	46	4	21.5	9.9	70	6	27.3	6.8	200	17	35.5	7.4	334	29	42.8	5.9	
Total (according to Template Tables 10a/b)	214	18	100.0	46.0	256	22	100.0	24.7	564	48	100.0	21.0	780	67	100.0	13.9	
Sum of all technologies (Template Tables 10a/b)	214	18	100.0	46.0	256	22	100.0	24.7	564	48	100.0	21.0	780	67	100.0	13.9	
Gross final RES-E consumption (Template Table 4a)	n.a.	n.a.	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Geothermal																	
Solar thermal	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Solid biomass	16	80.0	40.0	1.3	19	73.1	21.3	1.5	39	68.4	16.9	3.2	70	64.8	14.5	5.5	
Biogas	3	15.0	7.5	0.3	5	19.2	5.6	0.4	12	21.1	5.2	1.0	13	12.0	2.7	1.0	
Biofuels	n.a.	n.a.	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Biomass (subtotal)	19	95.0	47.5	1.6	24	92.3	27.0	1.9	51	89.5	22.1	4.1	83	76.9	17.1	6.5	
Aerothermal heat pumps	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	
Geothermal heat pumps	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	
Hydrothermal heat pumps	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	
Renewable energy from heat pumps (subtotal)	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Total (according to Template Table 11)	20	100.0	50.0	1.7	26	100.0	29.2	2.1	57	100.0	24.7	4.6	108	100.0	22.3	8.5	
Sum of all technologies (Template Table 11)	19	95.0	47.5	1.6	26	100.0	29.2	2.1	57	100.0	24.7	4.6	108	100.0	22.3	8.5	
Gross final RES-H/C consumption (Template Table 4a)	20	100.0	50.0	1.7	26	100.0	29.2	2.1	57	100.0	24.7	4.6	108	100.0	22.3	8.5	
Transport																	
Bioethanol / bio-ETBE	0	0	0.0	0.0	5	11.6	5.6	0.2	9	10.7	3.9	0.4	23	10.2	4.8	1.0	
Biodiesel	1	50.0	2.5	0.0	37	86.0	41.6	1.8	72	85.7	31.2	3.3	193	85.4	39.9	8.3	
Hydrogen from renewables	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Renewable electricity	1	50.0	2.5	0.0	2	4.7	2.2	0.1	4	4.8	1.7	0.2	10	4.4	2.1	0.4	
Other biofuels	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Total (according to Template Table 12)	2	100.0	5.0	0.1	43	100.0	48.3	2.1	84	100.0	36.4	3.8	236	100.0	46.7	9.7	
Sum of all technologies (Template Table 12)	2	100.0	5.0	0.1	44	102.3	49.9	2.1	88	100.0	36.4	3.8	236	100.0	46.7	9.7	
Gross final RES-T consumption (Template Table 4a)	2	100.0	5.0	0.1	43	100.0	48.3	2.1	84	100.0	36.4	3.8	236	100.0	46.7	9.7	
RES-T including Article 21.2 (Template Table 4b) ^f	2	100.0	5.0	0.1	43	100.0	48.3	2.1	84	100.0	36.4	3.8	234	103.5	48.3	10.0	
Gross final RES consumption (Template Table 4a)	40	100.0	1.7	0.9	89	100.0	4.3	2.1	186	80.5	8.4	4.2	391	80.8	16.8	8.6	
Sum totals (Template Tables 10a/b, 11, 12 (corr. Art 5(1)))	39	98.5	1.6	0.9	89	100.0	4.4	2.2	185	80.3	8.4	4.2	391	80.8	16.8	8.6	
Sum all technologies in Template Tables 10a/b, 11, 12	39	98.5	1.6	0.9	92	100.0	4.4	2.2	190	80.3	8.4	4.2	401	80.8	17.2	8.9	
Transfer from other Member States and third countries	n.a.	n.a.	0.0	0.0	0	0	0.0	0.0	45	19.5	2.0	1.0	93	19.2	4.0	2.1	
Transfer to other Member States	n.a.	n.a.	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	
Total (Template Table 4a)	40	100.0	1.7	0.9	89	100.0	4.3	2.1	231	100.0	10.4	5.3	484	100.0	20.7	10.7	
reference scenario ^g	567				567				568				602				
additional energy efficiency ^h	567				567				544				569				
reference scenario ⁱ	1189				1293				1346				1436				
additional energy efficiency ^j	1189				1235				1234				1268				
reference scenario ^k	2416				2309				2448				2584				
additional energy efficiency ^l	2416				2086				2211				2334				
reference scenario ^m	4605				4558				4760				5019				
additional energy efficiency ⁿ	4605				4273				4386				4530				
reference scenario ^o	4457				4426				4641				4915				
additional energy efficiency ^p	4457				4123				4243				4396				
Transport fuels target																	
Overall renewable target ^q									2.9				5.4				

^a The percentages refer to the values in the column "[ktoe]" and express the share of the renewable technology in the sector-total (RES-E, RES-H/C or RES-T, see values highlighted in bold).
^b The percentages refer to the values in the column "[ktoe]" and express the share of the renewable technology in total RES (if applicable including co-operation mechanisms, see value highlighted in bold).
^c The percentages refer to the values in the column "[ktoe]" and express the share of the renewable technology in the total final gross energy consumption ("Additional energy efficiency scenario", only), see values highlighted in bold).
^d The percentages refer to the values in the column "[ktoe]" and express the share of the renewable technology in the total final gross energy consumption ("Additional energy efficiency scenario", only), see values highlighted in bold).
^e Art. 21.2 adjustment refers to double counting of certain biofuels (lines 2) and renewable electricity in road transport (lines 2, 5) and renewable electricity in road transport (lines 2, 5).
^f In "Final consumption" values for the year 2005 refer to the "base year" in Template Table 1 (see Table 44, page 28) and Template Table 1 (see Table 53, page 37).
^g For the years 2005 and 2020 the shares as defined in Annex I of Directive 2009/28/EC are presented, for the years 2010 and 2015 it is referred to the trajectory periods 2011-2012 and 2015-2016.
 General: where is referred to Tables 1, 4a, 10a/b, 11 and 12 it is meant to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

Renewable production	Electricity	2005						2010						2015						2020						Page						
		[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d							
Hydropower <10 MW	Hydropower >10 MW	n.a.	n.a.	0.0	0.0	0.0	0.0	5	0	0.2	0.0	0.0	0.0	8	3	0.2	0.0	0.0	0.0	12	1	0.2	0.0	0.0	0.0	12	1	0.2	0.0	0.0	0.0	43
		n.a.	n.a.	0.0	0.0	0.0	0.0	3	0	0.1	0.0	0.0	0.0	30	0	0.0	0.0	0.0	0.0	6	0	0.0	0.0	0.0	0.0	43						
		n.a.	n.a.	0.0	0.0	0.0	0.0	158	14	5.6	1.0	0.4	0.1	158	14	4.8	0.8	0.3	0.1	158	14	2.8	0.5	0.3	0.1	43						
		n.a.	n.a.	0.0	0.0	0.0	0.0	194	17	6.8	1.2	0.5	0.1	196	17	5.1	1.0	0.4	0.1	238	20	4.3	0.7	0.5	0.1	43						
		n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	29	2	0.7	0.2	0.1	0.0	410	35	7.3	1.2	0.8	0.2	45						
		n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	26	2	0.7	0.1	0.1	0.0	81	7	1.4	0.2	0.2	0.0	47						
		n.a.	n.a.	0.0	0.0	0.0	0.0	2	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	47						
		n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.1	0.0	0.0	0.0	26	2	0.7	0.1	0.1	0.0	81	7	1.4	0.2	0.2	0.0	47						
		n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	49						
		n.a.	n.a.	0.0	0.0	0.0	0.0	692	60	24.3	4.4	1.6	0.3	1377	118	35.5	7.2	2.9	0.6	1545	133	27.6	4.6	3.0	0.7	51						
		n.a.	n.a.	0.0	0.0	0.0	0.0	692	60	24.3	4.4	1.6	0.3	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	51						
n.a.	n.a.	0.0	0.0	0.0	0.0	1870	161	65.8	12.0	4.4	0.9	1988	171	51.3	10.4	4.2	0.9	2688	231	48.0	8.0	5.2	1.2	53								
n.a.	n.a.	0.0	0.0	0.0	0.0	85	7	3.0	0.5	0.2	0.0	262	23	6.8	1.4	0.5	0.1	636	55	11.4	1.9	1.2	0.3	53								
n.a.	n.a.	0.0	0.0	0.0	0.0	1955	168	68.8	12.5	4.6	0.9	2280	193	58.0	11.7	4.7	1.0	3524	286	59.4	9.9	6.5	1.5	53								
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	3878	333	100.0	20.2	8.1	1.7	5597	481	100.0	16.7	10.9	2.4	54								
n.a.	n.a.	0.0	0.0	0.0	0.0	2843	244	100.0	18.2	6.7	1.3	3878	333	100.0	20.2	8.1	1.7	5598	481	100.0	16.7	10.9	2.4	54								
n.a.	n.a.	0.0	0.0	0.0	0.0	244	24	99.8	18.2	6.6	1.3	333	33	99.9	20.2	8.1	1.7	599	48	99.9	16.7	10.9	2.4	54								
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	54								
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	147	14.0	8.9	1.4	0.7	357	19.2	12.4	3.7	1.8	38-41										
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	31	3.0	1.9	0.3	0.2	82	4.4	2.8	0.8	0.4	55										
n.a.	n.a.	0.0	0.0	0.0	0.0	812	85.6	60.4	7.8	4.4	800	76.3	48.5	7.5	4.0	1225	65.8	43.5	12.6	62												
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	30	2.9	1.8	0.3	0.2	56	3.0	1.9	0.6	0.3	56											
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	56											
n.a.	n.a.	0.0	0.0	0.0	0.0	812	85.6	60.4	7.8	4.4	830	79.1	50.4	7.8	4.2	1281	68.8	44.5	13.2	6.5												
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	2	0.2	0.1	0.0	0.0	7	0.4	0.2	0.1	0.0	57											
n.a.	n.a.	0.0	0.0	0.0	0.0	5	0.5	0.4	0.0	0.0	28	2.7	1.7	0.3	0.1	107	5.7	3.7	1.1	0.5	57											
n.a.	n.a.	0.0	0.0	0.0	0.0	1	0.1	0.1	0.0	0.0	7	0.7	0.4	0.1	0.0	29	1.6	1.0	0.3	0.1	57											
n.a.	n.a.	0.0	0.0	0.0	0.0	6	0.6	0.4	0.2	0.0	37	3.5	2.2	0.3	0.2	77	7.7	5.0	1.5	0.7	57											
n.a.	n.a.	0.0	0.0	0.0	0.0	949	100.0	70.6	9.2	5.2	1049	100.0	63.7	9.9	5.3	1863	100.0	64.7	19.2	9.5												
n.a.	n.a.	0.0	0.0	0.0	0.0	925	97.5	68.8	8.9	5.2	1045	99.6	63.4	9.8	5.3	1863	100.0	64.7	19.2	9.5												
n.a.	n.a.	0.0	0.0	0.0	0.0	949	100.0	70.6	9.2	5.2	1049	100.0	63.7	9.9	5.3	1863	100.0	64.7	19.2	9.5												
n.a.	n.a.	0.0	0.0	0.0	0.0	34	22.7	2.5	0.8	0.2	106	39.8	6.4	2.2	0.5	304	56.8	10.6	3.7	1.5												
n.a.	n.a.	0.0	0.0	0.0	0.0	110	73.3	8.2	2.7	0.6	144	54.1	8.7	2.9	0.7	202	37.8	7.0	3.8	1.0												
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	60											
n.a.	n.a.	0.0	0.0	0.0	0.0	6	4.0	0.4	0.1	0.0	15	5.6	0.9	0.3	0.1	24	4.5	0.8	0.4	0.1	61											
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	1	0.4	0.1	0.0	0.0	5	0.9	0.2	0.1	0.0	62											
n.a.	n.a.	0.0	0.0	0.0	0.0	150	100.0	11.2	3.7	0.8	266	100.0	16.1	5.4	1.3	535	100.0	18.6	10.0	2.7												
n.a.	n.a.	0.0	0.0	0.0	0.0	180	100.0	11.2	3.7	0.8	266	100.0	16.1	5.4	1.3	535	100.0	18.6	10.0	2.7												
n.a.	n.a.	0.0	0.0	0.0	0.0	150	100.0	11.2	3.7	0.8	266	100.0	16.1	5.4	1.3	535	100.0	18.6	10.0	2.7												
n.a.	n.a.	0.0	0.0	0.0	0.0	177	118.0	13.2	4.3	1.0	310	116.5	18.8	6.3	1.6	598	111.8	20.8	11.2	3.0												
n.a.	n.a.	0.0	0.0	0.0	0.0	134	134	100.0	32.9	7.4	164	163	100.0	33.5	8.3	2879	2855	99.2	53.4	14.5												
n.a.	n.a.	0.0	0.0	0.0	0.0	1319	1319	100.0	32.3	7.2	1644	1633	99.1	33.2	8.3	2879	2855	99.2	53.4	14.7												
n.a.	n.a.	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	38-41											
n.a.	n.a.	0.0	0.0	0.0	0.0	1344	1344	100.0	32.9	7.4	1648	1648	100.0	33.5	8.3	2879	2879	100.0	53.8	14.7												
n.a.	n.a.	0.0	0.0	0.0	0.0	3609	3609	100.0	18.1	4169	4169	100.0	20.8	4906	4906	100.0	22.5	29														
n.a.	n.a.	0.0	0.0	0.0	0.0	12192	12192	100.0	61.2	10992	11008	100.0	53.8	10412	10412	100.0	49.5	30														
n.a.	n.a.	0.0	0.0	0.0	0.0	3964	3964	100.0	19.9	4107	5005	100.0	24.9	5492	5492	100.0	27.2	32														
n.a.	n.a.	0.0	0.0	0.0	0.0	19909	19909	100.0	18332	20325	19782	100.0	19644	20325	19644	100.0	35															
n.a.	n.a.	0.0	0.0	0.0	0.0	19909	19909	100.0	18325	20325	19782	100.0	19644	20325	19644	100.0	35															
n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	36														
n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	37														
n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	23														

^a The percentages refer to the values in the column 'Total' and express the share of the renewable technology in the sectoral total (RES-E, RES-HFC or RES-T, see values highlighted in bold).
^b The percentages refer to the values in the column 'Total' and express the share of the renewable technology in total RES (if applicable, including co-operation mechanisms, see value highlighted in bold).
^c The percentages refer to the values in the column 'Total' and express the share of the renewable technology in the sector total of the final gross energy consumption ('Additional energy efficiency scenario', only), see values highlighted in bold.
^d The percentages refer to the values in the column 'Total' and express the share of the renewable technology in the total final gross energy consumption ('before aviation reduction of the Additional energy efficiency scenario'), see values highlighted in bold.
^e Art. 21.2 adjustment refers to double counting of certain biogas (times 2) and renewable electricity in road transport (times 2.5).
^f In 'Final consumption' values for the year 2005 refer to the 'base year', in Template Table 1 (see Table 44 page 28) to Table 53 (page 37).
^g For the years 2005 and 2020 the shares as defined in Annex I of Directive 2009/28/EC are presented, for the years 2010 and 2015 it is referred to the trajectory periods 2011-2012 and 2015-2016.
General: Where is referred to Tables 1, 4a, 10a/b, 11 and 12 it is meant to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/lexUriServV.do?uri=CELEX:32009D0548:EN:NOT>

Renewable production	2005				2010				2015				2020				Page
	[GWh]	[%] ^a	[%] ^b	[%] ^d	[GWh]	[%] ^a	[%] ^b	[%] ^d	[GWh]	[%] ^a	[%] ^b	[%] ^d	[GWh]	[%] ^a	[%] ^b	[%] ^d	
Electricity	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	43
Hydropower < 10 MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	43
Hydropower 10-100 MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	43
Hydropower > 100 MW	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	43
Geothermal	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	45
Solar photovoltaic	n.a.	0.0	0.0	0.0	6	1	41.6	6.7	0.2	0.1	41	4	20.7	13.1	1.4	0.6	47
Concentrated solar power	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	47
Solar (subtotal)	0	0	0.0	0.0	6	1	41.6	6.7	0.2	0.1	41	4	20.7	13.1	1.4	0.6	47
Tidal, wave and ocean energy	n.a.	n.a.	0.0	0.0	0	n.a.	0.0	0.0	0.0	0.0	0	n.a.	0.0	0.0	0.0	0.0	49
Onshore wind	n.a.	0.0	0.0	0.0	0	0	0.1	0.0	0.0	0.0	17	2	8.8	5.6	0.6	0.3	51
Offshore wind	n.a.	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	51
Wind power (subtotal)	0	0	0.0	0.0	0	0	0.1	0.0	0.0	0.0	17	2	8.8	5.6	0.6	0.3	51
Solid biomass	n.a.	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	86	7	43.1	27.2	3.0	1.3	53
Biogas	n.a.	0.0	0.0	0.0	9	1	58.3	9.3	0.3	0.1	54	5	27.4	17.3	1.9	0.8	53
Biofuels	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	53
Biomass (subtotal)	0	0	0.0	0.0	9	1	58.3	9.3	0.3	0.1	140	12	70.5	44.5	4.9	2.1	53
Total (according to Template Tables 10a/b)	n.a.	0.0	0.0	0.0	15	1	100.0	16.0	0.6	0.3	198	17	100.0	63.2	7.0	3.0	54
Sum of all technologies (Template Tables 10a/b)	0	0	0.0	0.0	15	1	99.9	16.0	0.6	0.3	198	17	100.0	63.2	7.0	3.0	54
Gross final RES-E consumption (Template Table 4a)	n.a.	0.0	0.0	0.0	n.a.	1	78.1	12.5	0.5	0.2	n.a.	n.a.	0.0	0.0	0.0	0.0	54
Heating and cooling	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	55
Solar thermal	n.a.	0.0	0.0	0.0	3	71.4	31.5	5.6	0.5	0.5	0	0	0.0	0.0	0.0	0.0	55
Solid biomass	n.a.	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	56
Biogas	n.a.	0.0	0.0	0.0	1	28.6	12.6	2.2	0.2	0.2	2	44.6	8.2	3.5	0.4	0.4	56
Biofuels	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	56
Biomass (subtotal)	0	0	0.0	0.0	1	28.6	12.6	2.2	0.2	0.2	2	44.6	8.2	3.5	0.4	0.4	56
Aerothermal heat pumps	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	57
Geothermal heat pumps	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	57
Hydrothermal heat pumps	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	57
Renewable energy from heat pumps (subtotal)	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	57
Total (according to Template Table 11)	n.a.	0.0	0.0	0.0	4	100.0	44.1	7.8	0.7	0.7	5	100.0	18.3	7.9	0.9	0.9	58
Sum of all technologies (Template Table 11)	0	0	0.0	0.0	4	100.0	44.1	7.8	0.7	0.7	5	100.0	18.3	7.9	0.9	0.9	58
Gross final RES-H/C consumption (Template Table 4a)	n.a.	0.0	0.0	0.0	4	113.3	50.0	8.9	0.8	0.8	5	101.0	18.5	7.9	0.9	0.9	58
Transport	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	59
Bioethanol / bio-ETBE	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	59
Biodiesel	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	59
Hydrogen from renewables	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	60
Renewable electricity	n.a.	0.0	0.0	0.0	1	43.0	16.0	0.8	0.3	0.3	17	327.9	63.1	10.7	3.0	3.0	61
Other biofuels	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	62
Total (according to Template Table 12)	n.a.	0.0	0.0	0.0	3	100.0	37.3	2.0	0.6	0.6	5	100.0	19.3	3.3	0.9	0.9	62
Sum of all technologies (Template Table 12)	0	0	0.0	0.0	3	100.0	37.3	2.0	0.6	0.6	5	100.0	19.3	3.3	0.9	0.9	62
Gross final RES-T consumption (Template Table 4a)	n.a.	0.0	0.0	0.0	3	100.7	37.5	2.0	0.6	0.6	5	96.2	18.5	3.1	0.9	0.9	38-41
RES-T including Article 21.2 (Template Table 4b) ^f	n.a.	0.0	0.0	0.0	4	134.2	50.0	2.6	0.8	0.8	7	134.6	25.9	4.4	1.2	1.2	38-41
All RES excl. co-operation mech.	n.a.	0.0	0.0	0.0	8	100.0	5.3	1.6	0.6	0.6	27	100.0	17.0	4.8	1.8	1.8	38-41
Gross final RES consumption (Template Tables 10a/b, 11, 12) (cont. Art 5(1))	0	0	0.0	0.0	7	81.4	4.3	1.3	0.5	0.5	10	37.6	6.4	1.8	0.7	0.7	38-41
Sum of all technologies in Template Tables 10a/b, 11, 12	0	0	0.0	0.0	6	81.4	4.0	1.2	0.5	0.5	39	32.7	6.0	1.7	0.7	0.7	38-41
Transfer from other Member States and third countries	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	38-41
Transfer to other Member States	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	38-41
Co-operation mechanisms	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	38-41
All RES incl. co-operation mech.	n.a.	0.0	0.0	0.0	8	100.0	5.3	1.6	0.6	0.6	27	100.0	17.0	4.8	1.8	1.8	38-41
Electricity	n.a.	0.0	0.0	0.0	226	n.a.	n.a.	n.a.	n.a.	n.a.	258	291	100.0	33.3	9.1	3.8	28
reference scenario ^f	n.a.	n.a.	n.a.	n.a.	215	n.a.	n.a.	n.a.	n.a.	n.a.	244	270	100.0	44.8	10.0	4.8	29
additional energy efficiency ^f	n.a.	n.a.	n.a.	n.a.	46	n.a.	n.a.	n.a.	n.a.	n.a.	66	76	100.0	12.1	3.0	3.0	30
Heating and cooling	n.a.	n.a.	n.a.	n.a.	45	n.a.	n.a.	n.a.	n.a.	n.a.	63	73	100.0	12.1	3.0	3.0	31
Transport	n.a.	n.a.	n.a.	n.a.	152	n.a.	n.a.	n.a.	n.a.	n.a.	159	165	100.0	27.4	7.3	7.3	32
reference scenario ^f	n.a.	n.a.	n.a.	n.a.	152	n.a.	n.a.	n.a.	n.a.	n.a.	159	165	100.0	27.4	7.3	7.3	33
additional energy efficiency ^f	n.a.	n.a.	n.a.	n.a.	517	n.a.	n.a.	n.a.	n.a.	n.a.	577	625	100.0	100.0	100.0	100.0	34
Total before aviation reduction	n.a.	n.a.	n.a.	n.a.	506	n.a.	n.a.	n.a.	n.a.	n.a.	561	603	100.0	100.0	100.0	100.0	35
reference scenario ^f	n.a.	n.a.	n.a.	n.a.	506	n.a.	n.a.	n.a.	n.a.	n.a.	561	603	100.0	100.0	100.0	100.0	35
additional energy efficiency ^f	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	36
Total after aviation reduction	n.a.	n.a.	n.a.	n.a.	434	n.a.	n.a.	n.a.	n.a.	n.a.	490	534	88.6	88.6	88.6	88.6	37
reference scenario ^f	n.a.	n.a.	n.a.	n.a.	434	n.a.	n.a.	n.a.	n.a.	n.a.	490	534	88.6	88.6	88.6	88.6	37
additional energy efficiency ^f	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	37
Transport fuels target	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	37
Overall renewable target ^f	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	37

^a The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in the sector-total (RES-E, RES-H/C or RES-T, see values highlighted in bold).
^b The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in total RES (if applicable including co-operation mechanisms, see value highlighted in bold).
^c The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in the sector total of the final gross energy consumption ('Additional energy efficiency scenario'), see values highlighted in bold).
^d The percentages refer to the values in the column '[ktoe]' and express the share of the renewable technology in the total final gross energy consumption ('before aviation reduction of the Additional energy efficiency scenario'), see value highlighted in bold).
^e Art. 21.2 adjustment refers to double counting of certain biofuels (lines 2) and renewable electricity in road transport (lines 2, 5).
^f In 'Final consumption' values for the year 2005 refer to the 'base year' in Template Table 1 (see Table 44, (page 28) to Table 53 (page 37)).
^g For the years 2005 and 2020 the shares as defined in Annex I of Directive 2009/28/EC are presented, for the years 2010 and 2015 it is referred to the trajectory periods 2011-2012 and 2015-2016.
 General: where is referred to Tables 1, 4a, 10a/b, 11 and 12 it is meant to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

		2005				2010				2015				2020				Page		
		[GWh]	[ktoe]	[%] ^a	[%] ^b	[GWh]	[ktoe]	[%] ^a	[%] ^b	[GWh]	[ktoe]	[%] ^a	[%] ^b	[GWh]	[ktoe]	[%] ^a	[%] ^b			
Renewable production	Electricity	Hydropower <1MW	388	31	0.5	0.0	357	31	3.4	0.5	0.3	0.1	427	37	2.1	0.5	0.3	0.1	407	
		Hydropower >10 MW	308	43	13.3	0.0	534	46	3.0	0.2	0.0	0.0	634	31	3.0	0.4	0.0	0.0	714	
		Hydropower >100 MW	1339	115	35.4	0.0	1388	119	13.1	2.0	1.0	0.2	1388	119	7.0	1.6	0.9	0.2	1758	
		Hydropower (subtotal)	2201	189	58.1	0.0	2279	196	21.5	3.3	1.6	0.3	2499	210	12.3	2.8	1.6	0.5	2969	
		Geothermal	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	
		Solar photovoltaic	0	0	0.0	0.0	1	0	0.0	0.0	0.0	0.0	2	0	0.0	0.0	0.0	0.0	3	
		Concentrated solar power	0	0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	2	0	0.0	0.0	0.0	0.0	9	
		Solar (subtotal)	0	0	0.0	0.0	1	0	0.0	0.0	0.0	0.0	2	0	0.0	0.0	0.0	0.0	3	
		Tidal, wave and ocean energy	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	
		Offshore wind	136	12	3.6	0.0	2310	199	21.8	3.4	1.6	0.3	7370	634	37.1	8.3	4.8	1.0	13160	
Electricity production	Onshore wind	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	1050	
	Wind power (subtotal)	136	12	3.6	0.0	2310	199	21.8	3.4	1.6	0.3	7370	634	37.1	8.3	4.9	1.0	13210		
	Solid biomass	1340	115	35.4	0.0	5700	490	53.7	8.3	4.1	0.8	8950	770	45.0	10.1	5.9	1.2	10200		
	Biogas	111	10	2.9	0.0	328	28	3.1	0.5	0.2	0.0	943	81	4.7	1.1	0.6	0.1	4018		
	Biogas (subtotal)	1451	125	38.3	0.0	6028	518	56.8	8.8	4.3	0.8	9893	851	49.8	11.2	6.5	1.3	14218		
	Total (according to Template Tables 10(a,b))	3787	326	100.0	0.0	10618	913	100.0	15.5	7.5	1.5	19875	1709	100.0	22.4	13.0	2.7	33400		
	Sum of all technologies (Template Tables 10(a,b))	3788	326	100.0	0.0	10618	913	100.0	15.5	7.5	1.5	19875	1709	100.0	22.4	13.0	2.7	33400		
	Gross final RES-E consumption (Template Table 4a)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2786	
	Heating and cooling		Geothermal		n.a.	0.0	0.0	23	0.6	0.4	0.1	0.0	57	1.3	0.7	0.2	0.1	178	3.0	1.7
			Solar thermal		n.a.	0.0	0.0	21	0.5	0.4	0.1	0.0	176	3.9	2.3	0.5	0.3	506	8.5	4.7
		Solid biomass		n.a.	0.0	0.0	3846	96.6	6.5	1.9	6.3	3996	88.2	5.3	1.2	1	4636	78.3	4.3	
		Biogas		n.a.	0.0	0.0	45	1.6	1.1	0.2	0.1	231	5.1	3.0	0.7	0.3	453	7.7	4.2	
		Biogas (subtotal)		n.a.	0.0	0.0	3911	98.3	6.6	1.2	6.4	4227	93.3	5.5	1.28	6.6	5089	85.9	4.7	
		Aerothermal heat pumps		n.a.	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	
		Geothermal heat pumps		n.a.	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	
		Hydrothermal heat pumps		n.a.	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	
		Renewable energy from heat pumps (subtotal)		n.a.	0.0	0.0	25	0.6	0.4	0.1	0.0	72	1.6	0.9	0.2	0.1	148	2.5	1.4	
		Total (according to Template Table 11)		n.a.	0.0	0.0	3980	100.0	67.8	12.3	6.5	4532	100.0	59.5	13.7	7.1	5921	100.0	55.2	
		Sum of all technologies (Template Table 11)		n.a.	0.0	0.0	3980	100.0	67.8	12.3	6.5	4532	100.0	59.5	13.7	7.1	5921	100.0	55.2	
		Gross final RES-H/C consumption (Template Table 4a)		n.a.	0.0	0.0	3980	100.0	67.8	12.3	6.5	4532	100.0	59.5	13.7	7.1	5921	100.0	55.2	
Transport		Bioethanol / Bio-ETBE		28	65.1	0.0	0.0	279	28.4	4.8	1.7	0.5	334	24.3	4.4	1.9	0.5	451	22.3	
		Hydrogen from renewables		15	34.9	0.0	0.0	687	70.0	11.7	4.1	1.1	993	72.2	13.0	5.6	1.6	1451	71.9	
		Renewable electricity		n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	n.a.	
		Other biofuels		n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	n.a.	
		Total (according to Template Table 12)		43	100.0	0.0	0.0	981	100.0	16.7	5.8	1.6	1376	100.0	18.1	7.7	2.2	2018		
		Sum of all RES-T (Template Table 4b)		43	100.0	0.0	0.0	981	100.0	16.7	5.8	1.6	1376	100.0	18.1	7.7	2.2	2018		
		RES-T including Article 21.2 (Template Table 4b) ^g		43	100.0	0.0	0.0	971	99.0	16.5	5.8	1.6	1444	104.9	19.0	8.1	2.3	2194		
		Gross final RES consumption (Template Table 4a)		n.a.	n.a.	0.0	0.0	5873	100.0	35.0	9.6	2.7	7617	100.0	42.8	11.9	3.0	10275		
		Sum of all technologies (Template Tables 10(a,b), 11, 12)		369	369	0.0	0.0	5874	5899	34.9	9.6	2.7	7594	7594	42.7	11.9	3.0	10675		
		Transfer from other Member States and third countries		n.a.	n.a.	0.0	0.0	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	
		Transfer to other Member States		n.a.	n.a.	0.0	0.0	0	0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0	
Co-operation mechanisms		Total (Template Table 4a)		n.a.	n.a.	0.0	0.0	5873	100.0	35.0	9.6	2.7	7617	100.0	42.8	11.9	3.0	10725		
Electricity		reference scenario ^h		n.a.	n.a.	0.0	0.0	12900	100.0	19.7	5.3	1.5	15300	100.0	20.5	5.9	1.5	17400		
		additional energy efficiency ⁱ		n.a.	n.a.	0.0	0.0	31600	100.0	52.9	15.7	4.2	38800	100.0	51.7	14.3	3.7	46200		
Heating and cooling		reference scenario ^h		n.a.	n.a.	0.0	0.0	16800	100.0	27.4	7.8	2.2	17900	100.0	28.8	7.8	2.2	19100		
		additional energy efficiency ⁱ		n.a.	n.a.	0.0	0.0	61300	100.0	91.0	26.6	7.6	72000	100.0	99.6	29.4	8.4	82700		
Transport		reference scenario ^h		n.a.	n.a.	0.0	0.0	6300	100.0	0.0	0.0	6400	100.0	0.0	0.0	6500	100.0	0.0	6600	
		additional energy efficiency ⁱ		n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	n.a.	
Total before aviation reduction		reference scenario ^h		n.a.	n.a.	0.0	0.0	10725	100.0	19.7	5.3	1.5	12900	100.0	20.5	5.3	1.5	15300		
		additional energy efficiency ⁱ		n.a.	n.a.	0.0	0.0	31600	100.0	52.9	15.7	4.2	38800	100.0	51.7	14.3	3.7	46200		
Total after aviation reduction		reference scenario ^h		n.a.	n.a.	0.0	0.0	10725	100.0	19.7	5.3	1.5	12900	100.0	20.5	5.3	1.5	15300		
		additional energy efficiency ⁱ		n.a.	n.a.	0.0	0.0	31600	100.0	52.9	15.7	4.2	38800	100.0	51.7	14.3	3.7	46200		
Overall renewable target ^g						7.2				8.8				10.7						

^a The percentages refer to the values in the column 'ktoe' and express the share of the renewable technology in the sector-total (RES-E, RES-H/C or RES-T, see values highlighted in bold).
^b The percentages refer to the values in the column 'GWh' and express the share of the renewable technology in total RES (if applicable, including co-operation mechanisms, see value highlighted in bold).
^c The percentages refer to the values in the column 'ktoe' and express the share of the renewable technology in the sector total of the final gross energy consumption ('Additional energy efficiency scenario', only), see values highlighted in bold.
^d The percentages refer to the values in the column 'ktoe' and express the share of the renewable technology in the total final gross energy consumption ('before aviation reduction of the Additional energy efficiency scenario'), see values highlighted in bold.
^e Art. 21.2 adjustment refers to double counting of certain biofuels (times 2) and renewable electricity in road transport (times 2.5).
^f In 'Final consumption' values for the year 2005 refer to the 'base year', in Template Table 1 (see Table 4d page 28) to Table 53 (page 37).
^g For the years 2005 and 2020 the shares as defined in Annex I of Directive 2009/28/EC are presented, for the years 2010 and 2015 it is referred to the trajectory periods 2011-2012 and 2015-2016.
 General: where is referred to Tables 1, 4a, 10(a,b), 11 and 12 it is meant to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

	2005				2010				2015				2020				Page
	[GWh]	[ktoe]	[%]'	[%]''	[GWh]	[ktoe]	[%]'	[%]''	[GWh]	[ktoe]	[%]'	[%]''	[GWh]	[ktoe]	[%]'	[%]''	
Renewable production																	
Electricity																	
Hydropower <10MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	
Hydropower 10-100 MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	
Hydropower >100MW	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	n.a.	n.a.	0.0	0.0	
Hydropower (subtotal)	5118	440	57.3	11.4	9742	838	42.8	18.7	17.7	4.5	11101	955	37.7	17.6	18.8	5.0	
Geothermal	55	5	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	260	22	0.9	0.4	0.4	0.1	
Solar photovoltaic	3	0	0.0	0.0	230	20	1.0	0.4	0.4	0.1	797	69	2.7	1.3	1.4	0.4	
Concentrated solar power	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	
Solar (subtotal)	3	0	0.0	0.0	230	20	1.0	0.4	0.4	0.1	1157	99	3.5	1.8	2.0	0.5	
Tidal, wave and ocean energy	0	0	0.0	0.0	1	0	0.0	0.0	0.0	0.0	75	6	0.3	0.1	0.1	0.0	
Onshore wind	1773	152	19.9	3.9	10214	878	44.9	19.6	18.6	4.7	13420	1154	45.6	21.3	22.7	6.0	
Offshore wind	0	0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	60	5	0.2	0.1	0.1	0.0	
Wind power (subtotal)	1773	152	19.9	3.9	10214	878	44.9	19.6	18.6	4.7	13480	1159	45.8	21.3	22.7	6.0	
Solid biomass	934	80	10.5	2.1	1092	94	4.8	2.1	2.0	0.5	1468	126	4.1	2.1	2.3	0.6	
Biogas	34	3	0.4	0.1	130	11	0.6	0.2	0.2	0.1	368	32	1.3	0.6	0.6	0.2	
Biofuels	1008	87	11.3	2.2	1170	101	5.1	2.2	2.1	0.5	1523	131	4.3	2.2	2.4	0.7	
Biomass (subtotal)	1976	170	22.1	4.4	2400	206	10.5	4.6	4.4	1.1	3358	289	11.4	5.3	5.3	1.6	
Total (according to Template Tables 10a/b)	8925	767	100.0	19.9	16.8	3.9	22751	1956	100.0	43.7	41.4	10.5	29430	2531	100.0	46.7	49.9
Sum of all technologies (Template Tables 10a/b)	8925	767	100.0	19.9	16.8	3.9	22750	1956	100.0	43.7	41.4	10.5	29351	2524	99.7	46.6	49.7
Gross final RES-E consumption (Template Table 4a)	1337	174.2	34.6	29.3	6.8	1956	100.0	43.7	41.4	10.5	2531	100.0	46.7	49.9	13.3	35586	3060
Heating and cooling																	
Geothermal	0	0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	18	0.7	0.3	0.2	0.1	0.1	
Solar thermal	22	0.9	0.6	0.3	0.1	50	2.2	1.1	0.7	0.3	105	4.3	1.9	1.4	0.5	2.0	
Solid biomass	1785	70.6	46.2	22.5	9.1	1514	67.6	33.8	20.8	8.1	1515	61.5	27.9	19.7	7.9	1484	59.2
Biogas	10	0.4	0.3	0.1	0.1	10	0.4	0.2	0.1	0.1	23	0.9	0.4	0.3	0.1	37	1.5
Biofuels	713	28.2	18.4	9.0	3.6	655	29.2	14.6	9.0	3.5	801	32.5	14.8	10.4	4.2	801	32.0
Biomass (subtotal)	2508	99.1	64.9	31.6	12.8	2179	97.3	48.7	29.9	11.7	2339	95.0	43.1	30.4	12.2	2322	92.6
Aerothermal heat pumps	n.a.	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0
Geothermal heat pumps	n.a.	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0
Hydrothermal heat pumps	n.a.	n.a.	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.	0.0
Renewable energy from heat pumps (subtotal)	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
Total (according to Template Table 11)	2530	100.0	65.4	31.9	12.9	2240	100.0	50.0	30.7	12.0	2462	100.0	45.4	31.9	12.9	2507	100.0
Sum of all technologies (Template Table 11)	2531	100.0	65.5	31.9	12.9	2239	100.0	50.0	30.7	12.0	2462	100.0	45.4	31.9	12.9	2507	100.0
Gross final RES-H/C consumption (Template Table 4a)	2529	100.0	65.4	31.9	12.9	2240	100.0	50.0	30.7	12.0	2462	100.0	45.4	31.9	12.9	2507	100.0
Transport																	
Bioethanol/ bio-ETBE	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	24	5.2	0.4	0.4	0.1	27	5.0
Biodiesel	0	0	0.0	0.0	0.0	281	93.4	6.3	4.7	1.5	405	86.9	7.5	6.8	2.1	450	84.1
Hydrogen from renewables	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
Renewable electricity	12	100.0	0.3	0.2	0.1	20	6.6	0.4	0.3	0.1	37	7.9	0.7	0.6	0.2	58	10.8
Other biofuels	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
Total (according to Template Table 12)	12	100.0	0.3	0.2	0.1	30	100.0	6.7	5.0	1.6	466	100.0	8.6	7.8	2.4	535	100.0
Sum of all technologies (Template Table 12)	12	100.0	0.3	0.2	0.1	30	100.0	6.7	5.0	1.6	466	100.0	8.6	7.8	2.4	535	100.0
Gross final RES-T consumption (Template Table 4a)	12	100.0	0.3	0.2	0.1	305	101.3	6.8	5.0	1.6	479	102.8	8.8	8.0	2.5	574	107.3
RES-T including Article 21.2 (Template Table 4b) ^f	12	100.0	0.3	0.2	0.1	305	101.3	6.8	5.0	1.6	479	102.8	8.8	8.0	2.5	574	107.3
All RES excl. co-operation mech.	3866	100.0	62.1	19.7	16.8	4476	100.0	74.1	24.1	24.1	5421	100.0	90.7	28.4	6044	100.0	
Sum totals (Template Tables 10a/b, 11, 12 (corr. Art 5(1)))	3297	85.3	53.0	16.8	16.9	4477	100.0	74.1	24.1	24.1	5422	100.0	90.7	28.4	6044	100.0	
Sum of all technologies in Template Tables 10a/b, 11, 12	3310	85.3	53.2	16.9	16.9	4496	100.0	74.4	24.2	24.2	5452	100.0	91.2	28.6	6102	100.0	
Co-operation mechanisms	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
Transfer from other Member States and third countries	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
Transfer to other Member States	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
All RES incl. co-operation mech.	3866	100.0	62.1	19.7	16.8	4476	100.0	74.1	24.1	24.1	5421	100.0	90.7	28.4	6044	100.0	
Electricity	4558	4558	100.0	23.3	23.3	4730	4730	100.0	25.4	25.4	5076	5076	100.0	26.6	26.6	5721	5721
reference scenario ^g	4558	4558	100.0	23.3	23.3	4730	4730	100.0	25.4	25.4	5076	5076	100.0	26.6	26.6	5721	5721
additional energy efficiency ^h	7927	7927	100.0	40.5	40.5	7286	7286	100.0	39.2	39.2	7706	7706	100.0	40.4	40.4	8197	8197
reference scenario ⁱ	7927	7927	100.0	40.5	40.5	7286	7286	100.0	39.2	39.2	7706	7706	100.0	40.4	40.4	8197	8197
additional energy efficiency ^h	6223	6223	100.0	31.8	31.8	6040	6040	100.0	32.5	32.5	5980	5980	100.0	31.3	31.3	6010	6010
reference scenario ⁱ	6223	6223	100.0	31.8	31.8	6040	6040	100.0	32.5	32.5	5980	5980	100.0	31.3	31.3	6010	6010
additional energy efficiency ^h	19582	19582	100.0	100.0	100.0	18592	18592	100.0	100.0	100.0	19094	19094	100.0	100.0	100.0	20882	20882
reference scenario ⁱ	19582	19582	100.0	100.0	100.0	18592	18592	100.0	100.0	100.0	19094	19094	100.0	100.0	100.0	20882	20882
additional energy efficiency ^h	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
reference scenario ⁱ	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
additional energy efficiency ^h	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Transport fuels target																	
Overall renewable target ^j																	
20.5																	
25.2																	

^a The percentages refer to the values in the column "[ktoe]" and express the share of the renewable technology in the sector-total (RES-E, RES-H/C or RES-T, see values highlighted in bold).
^b The percentages refer to the values in the column "[GWh]" and express the share of the renewable technology in total RES (if applicable including co-operation mechanisms, see value highlighted in bold).
^c The percentages refer to the values in the column "[ktoe]" and express the share of the renewable technology in the total final gross energy consumption ("Additional energy efficiency scenario", only, see values highlighted in bold).
^d The percentages refer to the values in the column "[ktoe]" and express the share of the renewable technology in the total final gross energy consumption ("Additional energy efficiency scenario", only, see values highlighted in bold).
^e Art. 21.2 adjustment refers to double counting of certain biofuels (lines 2) and renewable electricity in road transport (lines 2, 5).
^f In "Final consumption" values for the year 2005 refer to the "base year" in Template Table 1 (see Template Table 1) and renewable electricity in road transport (lines 2, 5).
^g For the years 2005 and 2020 the shares as defined in Annex I of Directive 2009/28/EC are presented, for the years 2010 and 2015 it is referred to the trajectory periods 2011-2012 and 2015-2016.
^h In "Final consumption" values for the year 2005 refer to the "base year" in Template Table 1 (see Template Table 1) and renewable electricity in road transport (lines 2, 5).
ⁱ In "Final consumption" values for the year 2005 refer to the "base year" in Template Table 1 (see Template Table 1) and renewable electricity in road transport (lines 2, 5).
^j For the years 2005 and 2020 the shares as defined in Annex I of Directive 2009/28/EC are presented, for the years 2010 and 2015 it is referred to the trajectory periods 2011-2012 and 2015-2016.
 General: where is referred to Tables 1, 4a, 10a/b, 11 and 12 it is meant to the Template, prepared by the European Commission and available for download at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009D0548:EN:NOT>

	2005					2010					2015					2020					Page		
	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^d			
Renewable production																							
Electricity																							
Hydropower < 10 MW	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0		
Hydropower 10-100 MW	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0		
Hydropower > 100 MW	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0		
Hydrothermal (subtotal)	4099	352	97.3	42.6	27.7	6.9	4198	361	93.1	41.3	30.2	7.3	4559	392	85.6	35.7	30.3	7.6	5121	440	83.6	32.8	8.3
Geothermal	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0
Solar photovoltaic	0	0	0.0	0.0	0.0	0.0	12	1	0.3	0.1	0.1	0.0	37	3	0.7	0.3	0.2	0.1	139	12	2.3	0.9	0.9
Concentrated solar power	0	0	0.0	0.0	0.0	0.0	12	1	0.3	0.1	0.1	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0
Solar (subtotal)	0	0	0.0	0.0	0.0	0.0	24	2	0.6	0.2	0.2	0.0	37	3	0.7	0.3	0.2	0.1	139	12	2.3	0.9	0.9
Tidal, wave and ocean energy	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0
Onshore wind	0	0	0.0	0.0	0.0	0.0	2	0	0.0	0.0	0.0	0.0	109	9	2.0	0.9	0.7	0.2	191	16	3.1	1.2	1.2
Offshore wind	0	0	0.0	0.0	0.0	0.0	2	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
Wind power (subtotal)	0	0	0.0	0.0	0.0	0.0	4	0	0.0	0.0	0.0	0.0	109	9	2.0	0.9	0.7	0.2	191	16	3.1	1.2	1.2
Solid biomass	82	7	1.9	0.9	0.6	0.1	150	13	3.3	1.5	1.1	0.3	272	23	5.1	2.1	1.8	0.5	309	27	5.0	2.0	0.5
Biogas	32	3	0.8	0.3	0.2	0.1	148	13	3.3	1.5	1.1	0.3	351	30	6.6	2.7	2.3	0.6	367	32	6.0	2.3	0.4
Biofuels	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0
Biomass (subtotal)	114	10	2.7	1.2	0.8	0.2	298	26	6.6	2.9	2.1	0.5	623	54	11.7	4.9	4.1	1.0	676	58	11.0	4.3	1.1
Total (according to Template Tables 10a/b)	4213	362	100.0	43.8	28.5	7.1	4510	388	100.0	44.4	32.4	7.9	5328	458	100.0	41.7	35.4	8.8	6126	527	100.0	39.2	39.3
Sum of all technologies (Template Tables 10a/b)	4213	362	100.0	43.8	28.5	7.1	4510	388	100.0	44.4	32.4	7.9	5328	458	100.0	41.7	35.4	8.8	6127	527	100.0	39.2	39.3
Gross final RES-E consumption (Template Table 4a)	362	99.9	43.7	28.5	7.1	4510	388	100.0	44.4	32.4	7.9	5328	458	100.0	41.7	35.4	8.8	6127	527	100.0	39.2	39.3	
Heating and cooling																							
Geothermal	16	3	0.6	0.4	0.1	0.1	18	4	0.4	0.1	0.1	0.4	19	3	0.4	1.7	0.9	0.4	20	3	0.4	1.5	0.4
Solar thermal	3	0	0.0	0.0	0.0	0.0	5	1	0.6	0.3	0.1	0.1	21	3	0.4	1.6	1.0	0.4	21	3	0.4	1.6	1.0
Solid biomass	401	86.2	48.4	17.5	7.9	415	93.3	47.5	20.8	8.4	3.5	483	86.1	43.9	23.5	9.3	4.9	70.5	497	70.5	37.0	24.5	9.3
Biogas	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0
Biofuels	43	9.2	5.2	1.9	0.8	0.8	0	0	0.0	0.0	0.0	0.0	12	2	1.1	0.6	0.2	28	4	2.1	1.4	0.5	5.6
Biomass (subtotal)	444	95.5	53.6	19.4	8.7	415	93.3	47.5	20.8	8.4	3.5	495	88.2	45.0	24.1	9.5	5.2	84.0	525	84.0	39.1	25.9	9.9
Aerothermal heat pumps	0	0	0.0	0.0	0.0	0.0	1	0.2	0.1	0.1	0.0	0.0	7	1.2	0.6	0.3	0.1	14	2.2	1.0	0.7	0.3	5.7
Geothermal heat pumps	0	0	0.0	0.0	0.0	0.0	4	0.9	0.5	0.2	0.1	0.1	26	4.6	2.4	1.3	0.5	38	6.1	2.8	1.9	0.7	5.7
Hydrothermal heat pumps	0	0	0.0	0.0	0.0	0.0	2	0.4	0.2	0.1	0.0	0.0	5	0.8	0.4	0.2	0.1	5	0.8	0.4	0.2	0.1	5.7
Renewable energy from heat pumps (subtotal)	2	0.4	0.2	0.1	0.0	0.0	8	1.8	0.9	0.4	0.2	0.1	31	6.6	3.4	1.8	0.7	58	9.3	4.3	2.9	1.1	5.7
Total (according to Template Table 11)	465	100.0	56.2	20.3	9.1	445	100.0	50.9	22.3	9.0	3.5	561	100.0	51.0	27.3	10.8	6.25	100.0	625	100.0	46.5	30.8	11.7
Sum of all technologies (Template Table 11)	465	100.0	56.2	20.3	9.1	445	100.0	50.9	22.3	9.0	3.5	561	100.0	51.0	27.3	10.8	6.25	100.0	625	100.0	46.5	30.8	11.7
Gross final RES-H/C consumption (Template Table 4a)	465	100.0	56.2	20.3	9.1	445	100.0	50.9	22.3	9.0	3.5	561	100.0	51.0	27.3	10.8	6.25	100.0	625	100.0	46.5	30.8	11.7
Transport																							
Bioethanol/ bio-ETBE	0	0	0.0	0.0	0.0	0.0	4	8.7	0.5	0.2	0.1	0.8	72	83.7	6.6	3.9	1.4	19	9.4	1.4	1.0	0.4	5.8
Biodiesel	0	0	0.0	0.0	0.0	0.0	37	80.4	4.2	2.1	0.8	0.0	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0
Hydrogen from renewables	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0
Renewable electricity	4	0.0	0.0	0.5	0.3	0.1	5	10.9	0.6	0.3	0.1	0.0	7	8.1	0.6	0.4	0.1	11	5.4	0.8	0.6	0.2	6.1
Other biofuels	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0
Total (according to Template Table 12)	4	100.0	0.5	0.3	0.1	46	100.0	5.3	2.7	0.9	0.9	86	100.0	7.8	4.7	1.7	203	100.0	15.1	10.4	3.8	3.8	
Sum of all technologies (Template Table 12)	4	100.0	0.5	0.3	0.1	46	100.0	5.3	2.7	0.9	0.9	86	100.0	7.8	4.7	1.7	203	100.0	15.1	10.4	3.8	3.8	
Gross final RES-T consumption (Template Table 4a)	0	0	0.0	0.0	0.0	0.0	40	87.0	4.6	2.3	0.8	0.0	79	91.6	7.2	4.3	1.5	192	94.6	14.3	9.8	3.6	3.8
RES-T including Article 21.2 (Template Table 4b) ^f	4	100.0	0.5	0.3	0.1	46	100.0	5.3	2.7	0.9	0.9	86	100.0	7.8	4.7	1.7	204	100.5	15.2	10.4	3.8	3.8	
All RES excl. co-operation mech.																							
Gross final RES consumption (Template Table 4a)	828	100.0	54.3	16.3	7.1	874	100.0	50.4	17.7	8.0	3.5	1099	100.0	59.8	21.2	13.44	100.0	68.8	100.0	68.8	25.2	38	
Sum total Template Tables 10a/b, 11, 12 (corr. Art 5(1))	827	99.9	54.2	16.3	7.1	874	100.0	50.4	17.7	8.0	3.5	1098	99.9	59.7	21.2	13.44	100.0	68.8	100.0	68.8	25.2	38	
Sum all technologies in Template Tables 10a/b, 11, 12	831	831	54.5	16.3	7.1	880	880	50.7	17.9	8.1	3.5	1106	1106	60.1	21.3	13.55	100.0	69.4	100.0	69.4	25.5	38	
Transfer from other Member States and third countries	0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	
Transfer to other Member States	0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	
Co-operation mechanisms																							
All RES incl. co-operation mech.	828	100.0	54.3	16.3	7.1	874	100.0	50.4	17.7	8.0	3.5	1099	100.0	59.8	21.2	13.44	100.0	68.8	100.0	68.8	25.2	38	
Total (Template Table 4a)	1272	1272	100.0	25.0	10.0	1196	1196	24.3	10.0	4.0	1.7	16.0	16.0	17.8	17.8	16.0	16.0	17.8	16.0	16.0	25.0	25.0	
Electricity																							
reference scenario ^g	1272	1272	100.0	25.0	10.0	1196	1196	24.3	10.0	4.0	1.7	16.0	16.0	17.8	17.8	16.0	16.0	17.8	16.0	16.0	25.0	25.0	
additional energy efficiency ^h	2291	2291	100.0	45.0	18.0	1996	1996	40.5	100.0	40.5	16.0	20.0	20.0										

Renewable Production	Electricity	2005										2010										2015										2020										Page			
		[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d	[GWh]	[ktoe]	[%] ^a	[%] ^b	[%] ^c	[%] ^d														
Renewable Production	Electricity	Hydropower <10 MW	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	43						
		Hydropower 10-100 MW	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	43						
		Hydropower >100 MW	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	43						
		Hydropower (subtotal)	72874	6266	89.5	45.8	48.2	18.2	71249	6126	82.2	39.0	46.8	17.0	66625	5987	75.7	33.8	45.4	15.9	68000	5847	69.9	29.7	44.0	14.9	68000	5847	69.9	29.7	44.0	14.9	68000	5847	69.9	29.7	44.0	14.9	43						
Renewable Production	Electricity	Geothermal	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	45
		Solar photovoltaic	0	0	0.0	0.0	0.0	0.0	1	0	0.0	0.0	0.0	0.0	3	0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	4	0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	47						
		Concentrated solar power	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	47						
		Solar (subtotal)	0	0	0.0	0.0	0.0	0.0	1	0	0.0	0.0	0.0	0.0	3	0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	4	0	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	47						
		Tidal, wave and ocean energy	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	49						
		Offshore wind	877	75	1.1	0.6	0.6	0.2	4585	394	5.3	2.5	3.0	1.1	8292	713	9.0	4.0	5.4	1.9	12000	1032	12.3	5.2	7.8	2.6	12000	1032	12.3	5.2	7.8	2.6	51												
		Onshore wind	62	5	0.1	0.0	0.0	0.0	208	18	0.2	0.1	0.1	0.0	354	30	0.4	0.2	0.2	0.1	500	43	0.5	0.2	0.3	0.1	500	43	0.5	0.2	0.3	0.1	51												
		Wind power (subtotal)	939	81	1.2	0.6	0.6	0.2	4793	412	5.5	2.6	3.1	1.1	8646	743	9.4	4.2	5.6	2.0	12500	1075	12.9	5.5	8.1	2.7	12500	1075	12.9	5.5	8.1	2.7	51												
		Solid biomass	7452	641	9.2	4.7	4.9	1.9	10513	904	12.1	5.8	6.9	2.5	13574	1167	14.8	6.6	8.8	3.1	16635	1430	17.1	7.3	10.8	3.6	16635	1430	17.1	7.3	10.8	3.6	53												
		Bioogas	53	5	0.1	0.0	0.0	0.0	53	5	0.1	0.0	0.0	0.0	53	5	0.1	0.0	0.0	0.0	53	5	0.1	0.0	0.0	0.0	53	5	0.1	0.0	0.0	0.0	53												
		Biomethane (subtotal)	7406	646	9.2	4.7	4.9	1.9	10667	909	12.2	5.8	6.9	2.5	13628	1172	14.8	6.6	8.9	3.1	16689	1435	17.2	7.3	10.8	3.7	16689	1435	17.2	7.3	10.8	3.7	53												
Total (according to Template Tables 10a/b)	81384	6998	100.0	51.1	53.9	20.3	86610	7453	100.0	47.5	56.9	20.7	91966	7908	100.0	44.7	59.9	21.0	97258	8563	100.0	42.4	62.9	21.3	97258	8563	100.0	42.4	62.9	21.3	38-41														
Sum of all technologies (Template Tables 10a/b)	81319	6905	94.4	48.3	50.9	19.1	86610	7189	96.3	45.8	54.9	19.9	91902	7772	98.3	43.9	58.9	20.6	97193	8537	99.9	42.4	62.9	21.3	97193	8537	99.9	42.4	62.9	21.3	38-41														
Gross final RES-E consumption (Template Table 4a)	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	54								
Heating and cooling	Geothermal	Solar thermal	6	0.1	0.0	0.0	0.0	6	0.1	0.0	0.0	0.0	6	0.1	0.0	0.0	0.0	6	0.1	0.0	0.0	0.0	6	0.1	0.0	0.0	0.0	6	0.1	0.0	0.0	0.0	6	0.1	0.0	0.0	0.0	55							
		Solid biomass	6992	98.7	51.1	53.0	20.3	7890	94.7	49.7	54.0	21.6	8607	91.7	48.6	54.8	22.9	9415	89.3	47.8	55.5	24.0	9415	89.3	47.8	55.5	24.0	55																	
		Bioogas	21	0.3	0.2	0.2	0.2	18	0.2	0.1	0.1	0.0	14	0.1	0.0	0.0	0.0	11	0.1	0.0	0.0	0.0	11	0.1	0.0	0.0	0.0	11	0.1	0.0	0.0	0.0	56												
		Biomethane	65	0.9	0.5	0.5	0.2	65	0.8	0.4	0.4	0.2	65	0.7	0.4	0.4	0.2	65	0.6	0.3	0.4	0.2	65	0.6	0.3	0.4	0.2	65	0.6	0.3	0.4	0.2	56												
		Biomass (subtotal)	7078	99.9	51.7	53.7	20.5	7883	95.7	50.2	54.6	21.8	8686	92.5	49.1	55.3	23.1	9491	90.0	48.2	55.9	24.2	9491	90.0	48.2	55.9	24.2	56																	
		Aerothermal heat pumps	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	57												
		Geothermal heat pumps	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	57												
		Hydrothermal heat pumps	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	57												
		Renewable energy from heat pumps (subtotal)	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	57												
		Total (according to Template Table 11)	7084	100.0	51.7	53.7	20.5	8237	100.0	52.5	57.0	22.8	9290	100.0	53.0	59.8	24.9	10543	100.0	53.5	62.1	26.9	10543	100.0	53.5	62.1	26.9	38-41																	
		Sum of all technologies (Template Table 11)	7084	100.0	51.7	53.7	20.5	8237	100.0	52.5	57.0	22.8	9290	100.0	53.0	59.8	24.9	10543	100.0	53.5	62.1	26.9	10543	100.0	53.5	62.1	26.9	38-41																	
Gross final RES-H/C consumption (Template Table 4a)	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	58								
Transport	Bioethanol / Bio-ETBE	Bioethanol	144	50.0	1.1	1.9	0.4	251	47.5	1.6	3.3	0.7	358	46.6	2.0	4.5	1.0	465	46.1	2.4	5.7	1.2	465	46.1	2.4	5.7	1.2	465	46.1	2.4	5.7	1.2	58												
		Biodiesel	9	3.1	0.1	0.1	0.0	89	16.9	0.6	1.2	0.2	170	22.1	1.0	2.2	0.5	251	24.9	1.3	3.1	0.6	251	24.9	1.3	3.1	0.6	59																	
		Hydrogen from renewables	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	60																	
		Renewable electricity	121	42.0	0.9	1.6	0.4	147	27.8	0.9	1.9	0.4	173	22.5	1.0	2.2	0.5	194	19.6	1.0	2.4	0.5	194	19.6	1.0	2.4	0.5	61																	
		Other biofuels	13	4.5	0.1	0.2	0.0	40	7.6	0.3	0.5	0.1	67	8.7	0.4	0.8	0.2	94	9.3	0.5	1.2	0.2	94	9.3	0.5	1.2	0.2	62																	
		Total (according to Template Table 12)	288	100.0	2.1	3.9	0.8	528	100.0	3.4	6.9	1.5	768	100.0	4.3	9.7	2.0	1008	100.0	5.1	12.4	2.6	1008	100.0	5.1	12.4	2.6	62																	
		Sum of all RES-E (Template Table 4a)	288	100.0	2.1	3.9	0.8	528	100.0	3.4	6.9	1.5	768	100.0	4.3	9.7	2.0	1008	100.0	5.1	12.4	2.6	1008	100.0	5.1	12.4	2.6	38-41																	
		Sum of all RES-H/C (Template Table 4a)	288	100.0	2.1	3.9	0.8	528	100.0	3.4	6.9	1.5	768	100.0	4.3	9.7	2.0	1008	100.0	5.1	12.4	2.6	1008	100.0	5.1	12.4	2.6	38-41																	
		RES-E including Article 17.2 (Template Table 4b) ⁹	301	104.5	2.2	4.0	0.9	573	108.5	3.7	7.5	1.6	844	109.9	4.8	10.7	2.2	1116	110.7	5.7	13.8	2.8	1116	110.7	5.7	13.8	2.8	38-41																	
		Sum all technologies (Template Table 4a)	14369	100.0	183.2	39.7	41.6	15695	100.0	204.2	43.5	17702	100.0	234.1	47.5	19709	100.0	243.0	50.2	19709	100.0	243.0	50.2	38-41																					
		Sum all technologies (Template Table 4b)	14369	100.0	183.2	39.7	41.6	15695	100.0	204.2	43.5	17702	100.0	234.1	47.5	19709	100.0	243.0	50.2	19709	100.0	243.0	50.2	38-41																					
Sum all technologies (Template Table 4b)	14369	100.0	183.2	39.7	41.6	15695	100.0	204.2	43.5	17702	100.0	234.1	47.5	19709	100.0	243.0	50.2	19709	100.0	243.0	50.2	38-41																							
Co-operation mechanisms	Transfer from other Member States and third countries	Transfer from other Member States	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0																							

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