



## **Production of electricity from renewables in the Czech Republic compared to other EU Member States**

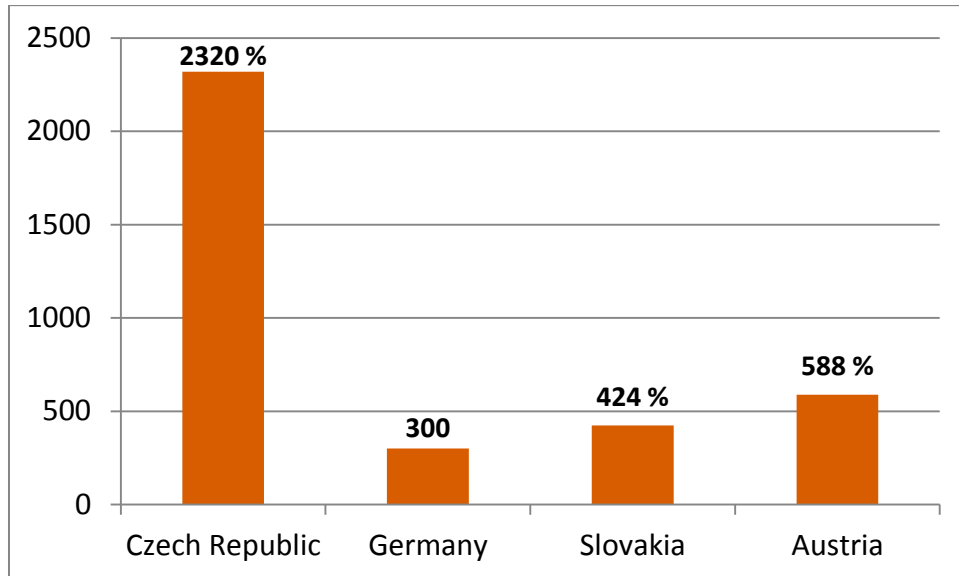
### **Supporting green energy will cost the Czech Republic one trillion crowns; two thirds of that sum will go to photovoltaics operators**

The Supreme Audit Office scrutinised how the state provided finances to support energy production from renewables. Financial support for installations producing electricity from biomass, wind, water, solar radiation, and biogas will remain an extreme burden on the Czech economy for a long time to come. The SAO's estimate is that the total costs of the supported sources of electricity will exceed one trillion crowns by 2030. The cost was almost CZK 157 billion in the years 2011 to 2014 alone. A significant portion of that sum will be paid by consumers as a surcharge on the electricity they consume.

The main cause of the large burden on the economy is the provision of blanket funding for all installations producing electricity from renewables. Most of this support went to photovoltaic power stations, which rank among the most expensive of these installations. In 2013, for example, support for green electricity totalled CZK 44 billion, with photovoltaics taking two thirds of that sum even though they only produced 22% of the green electricity. The total costs for the state will be even higher, because operators of "green" power station are entitled to tax relief. It is not clear how much this tax support will come to, because the Ministry of Industry and Trade does not monitor it.

The turning point was the start of 2011 when operating aid for newly built installations began to fall. The endeavour to complete the construction of photovoltaic installations under the old, more advantageous conditions culminated at the end of 2010 with a solar boom. Between 2009 and 2012, the quantity of electricity produced by photovoltaic power stations grew more than twenty-threefold, a development unlike anything witnessed in other EU Member States.

## Growth rate of electricity from photovoltaic power stations from 2009 to 2012



The payback period for investments in photovoltaics was roughly seven years after putting into operation, even though the law allowed for a period of 15 years. This shorter payback period was the consequence of both operating aid and investment aid provided by the Ministry of Industry and Trade. Yet, this investment aid was paid out to operators even at a time when the Ministry was attempting to scale down the solar boom. The combined influence of investment aid and operating aid significantly shortened an already short payback period.

Blanket support for installations completed after 2013 has currently been suspended, but power stations built earlier still enjoy the conditions put in place when they went into operation. The state will continue to pay this support for a further 20 or 30 years, depending on the type of renewable energy. As the support is index-linked by law, the costs will increase every year.

In 2013, the new act on the promotion of renewable sources of energy came into force. Even though the Czech Republic was supposed to present it to the European Commission for approval before it took force, the Commission only received it subsequently. Among other things, the European Commission stated that the support system put in place by the Government puts Czech green electricity producers at an advantage over other businesses in the sector. The Commission therefore ordered that importers of green electricity from the entire European Union must receive support as well. In 2014, this compensation may reach CZK 2.5 billion.

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In addition, audit no. 14/06 **Finances Earmarked for the Support of Energy Production from Renewable Resources** compared the production of electricity from renewables across all EU Member States, focusing mainly on developments in selected renewables - water, sun, wind and biomass - in the years 2009 to 2012.

The information was taken from the responses of European Supreme Audit Institutions sent by e-mail, information from publicly available sources, and information gained during audit no. 14/06. Hereby, we would like to thank the SAIs of Slovakia, Portugal, Germany, Hungary, Latvia, Austria, Poland, Cyprus, the Netherlands, Italy, Lithuania, Spain, Bulgaria, Denmark, Estonia, Ireland, Finland, Croatia, Sweden, the United Kingdom, Romania, Turkey, and the European Court of Auditors for their cooperation.

As mentioned in the audit conclusion of audit no. 14/06, renewable sources of energy are moving into the foreground of worldwide interest because of climate change, rising energy prices, and dependency on fossil fuels. Section 2 (1) (b) of Act No. 406/2000<sup>1</sup> provides that renewable sources of energy mean: “... *renewable non-fossil natural sources of energy, which are wind energy, solar energy, geothermal energy, water energy, soil energy, air energy, biomass energy, landfill gas energy, wastewater treatment plant sludge gas energy, and biogas energy.*”

Table 1 shows that, in 2012, the Czech Republic came 16th (8,066 GWh) out of all 27 Member States in gross production of electricity from renewables. The biggest producer of electricity from renewables was Germany (137,200 GWh).

Compared to 2009, the Czech Republic was thus two places higher (with production almost doubling). Gross electricity production from renewables in the Czech Republic totalled 4,665 GWh in 2009.

Table 1: Gross production of electricity from renewables in 2009 and 2012 [GWh]

Member state	2009		2012		Member state	2009		2012	
Germany	96 113.0	1.	137 200.0	1.	Belgium	7 167.3	15.	9 470.8	15.
France	82 941.0	2.	92 508.0	4.	Slovakia	5 143.0	16.	5 893.0	18.
Sweden	82 229.0	3.	88 062.0	5.	Slovenia	4 909.0	17.	4 588.5	20.
Spain	78 242.0	4.	93 919.0	2.	<b>Czech Republic</b>	<b>4 665.0</b>	<b>18.</b>	<b>8 066.0</b>	<b>16.</b>
Italy	62 684.0	5.	93 339.0	3.	Ireland	4 067.4	19.	5 659.0	19.
Austria	45 201.0	6.	46 703.0	6.	Bulgaria	4 017.0	20.	6 407.0	17.
United Kingdom	24 861.0	7.	40 243.0	7.	Latvia	3 030.0	21.	3 527.3	21.
Finland	22 899.0	8.	25 566.0	8.	Hungary	2 886.0	22.	2 584.0	22.
Portugal	20 998.0	9.	20 654.0	9.	Lithuania	695.0	23.	1 212.0	24.
Romania	17 075.0	10.	19 813.6	10.	Estonia	542.0	24.	1 524.0	23.
Netherlands	10 756.0	11.	12 532.0	13.	Luxembourg	267.0	25.	306.0	25.
Denmark	10 407.0	12.	13 013.3	12.	Cyprus	30.4	26.	256.3	26.
Poland	8 747.4	13.	16 964.2	11.	Malta	0.5	27.	16.6	27.
Greece	8 172.0	14.	10 229.0	14.					

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009 and 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>).

<sup>1</sup> Act No. 406/2000, on energy management

Total gross production of electricity from renewables in the EU Member States, broken down into electricity produced from water, solar radiation, wind, and biomass, is shown in Annex 1 to this material.

The EU Member States committed themselves to achieving a target of a 20% share of total energy from renewables. This is one of the three main energy-related objectives of the Europe 2020 strategy.<sup>2</sup> The other two are reducing CO<sub>2</sub> emissions by 20% compared to 1990 and increasing energy efficiency by 20%. Each EU Member State has its target set in a way ensuring the joint target will be achieved.<sup>3</sup> The Czech Republic, for example, committed itself to achieving at least 13% of energy from renewables out of total energy consumption; by contrast, Germany's target is 18%.

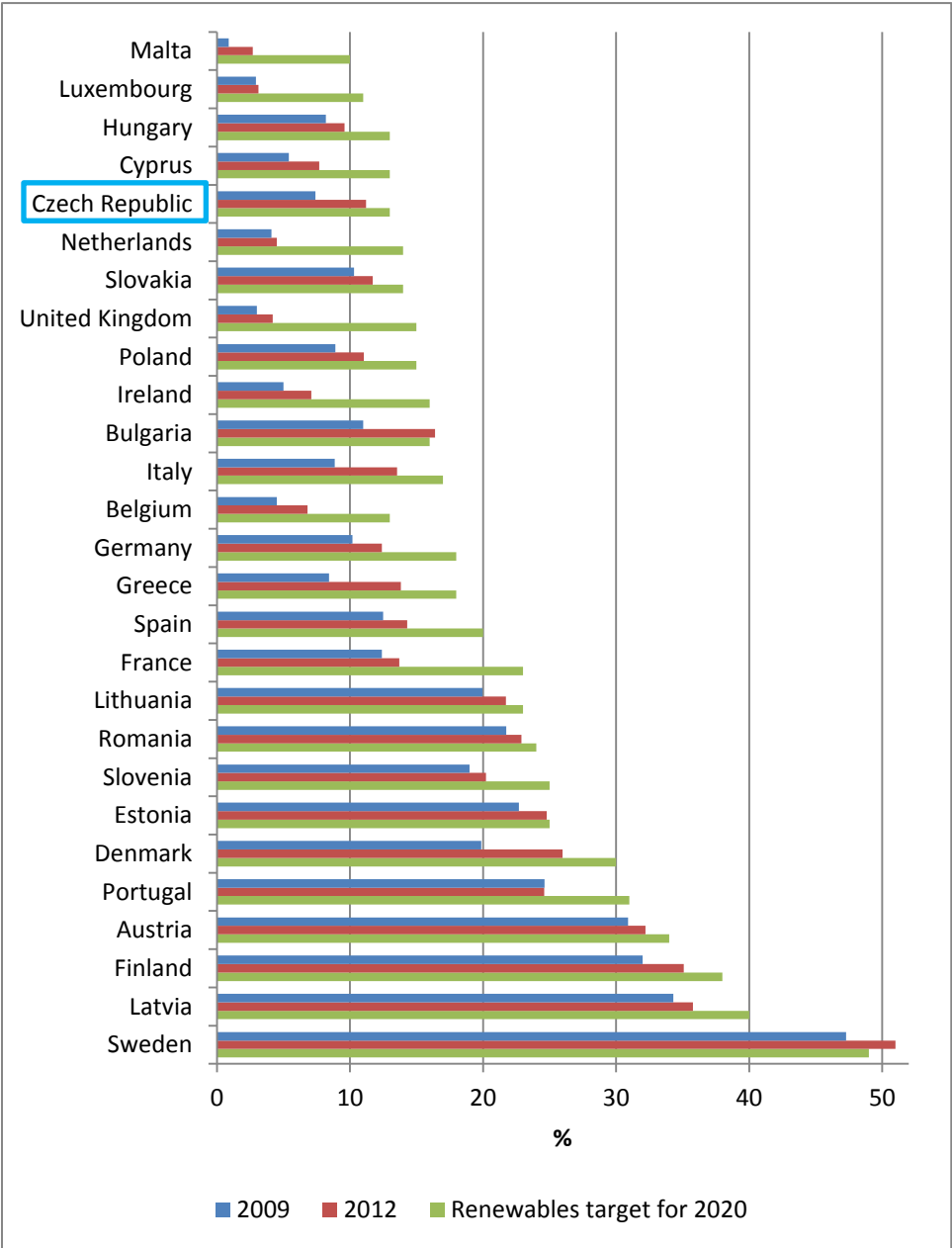
Graph 1 shows the proportion of gross final consumption of energy accounted for by renewables in Member States in the years 2009 and 2012, including the target for 2020. The data table for Graph 1 forms Annex 2 to this material.

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<sup>2</sup> *Launched in 2010, Europe 2020 is a ten-year EU strategy that aims to deliver economic growth and greater employment.*

<sup>3</sup> *Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources*

Graph 1: Gross final energy consumption in 2009 and 2012 accounted for by renewables, including targets for 2020



Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009 and 2012); Energy Challenges and Policy (European Commission).

The graph shows that Sweden and Bulgaria had already hit the set target in 2012. Of the other states, Estonia is closest to achieving its target (the share in 2012 was 24.8% and the 2020 target is 25%), while the United Kingdom has the longest way to go (share in 2012 4.2%, 2020 target 15%). In the Czech Republic, renewables accounted for 11.22% of gross final consumption of energy in 2012. The country’s 2020 target is 13%.

## A. Renewable source of energy - WATER

Water is the energy source that has been used for the longest time in the Czech Republic. The European Union regards installations with a capacity of up to 10 MW as small hydropower plants ("SHPs"). The installed capacity of SHPs in 2012 was 311 MW, i.e., approximately 30% of the total installed capacity of hydropower stations in the Czech Republic. The potential for large hydropower plants in the Czech Republic has practically been exhausted.

Table 2 shows the proportion of total gross production of electricity from renewables accounted for by the gross output of hydropower plants in 2012. Countries where hydropower plants accounted for the majority of the electricity produced from renewables in 2012 included Slovenia (90.6%) and Latvia (89%). The share in the Czech Republic was 26.4%.

Table 2: Share of total gross electricity production from renewables accounted for by hydropower stations in 2012

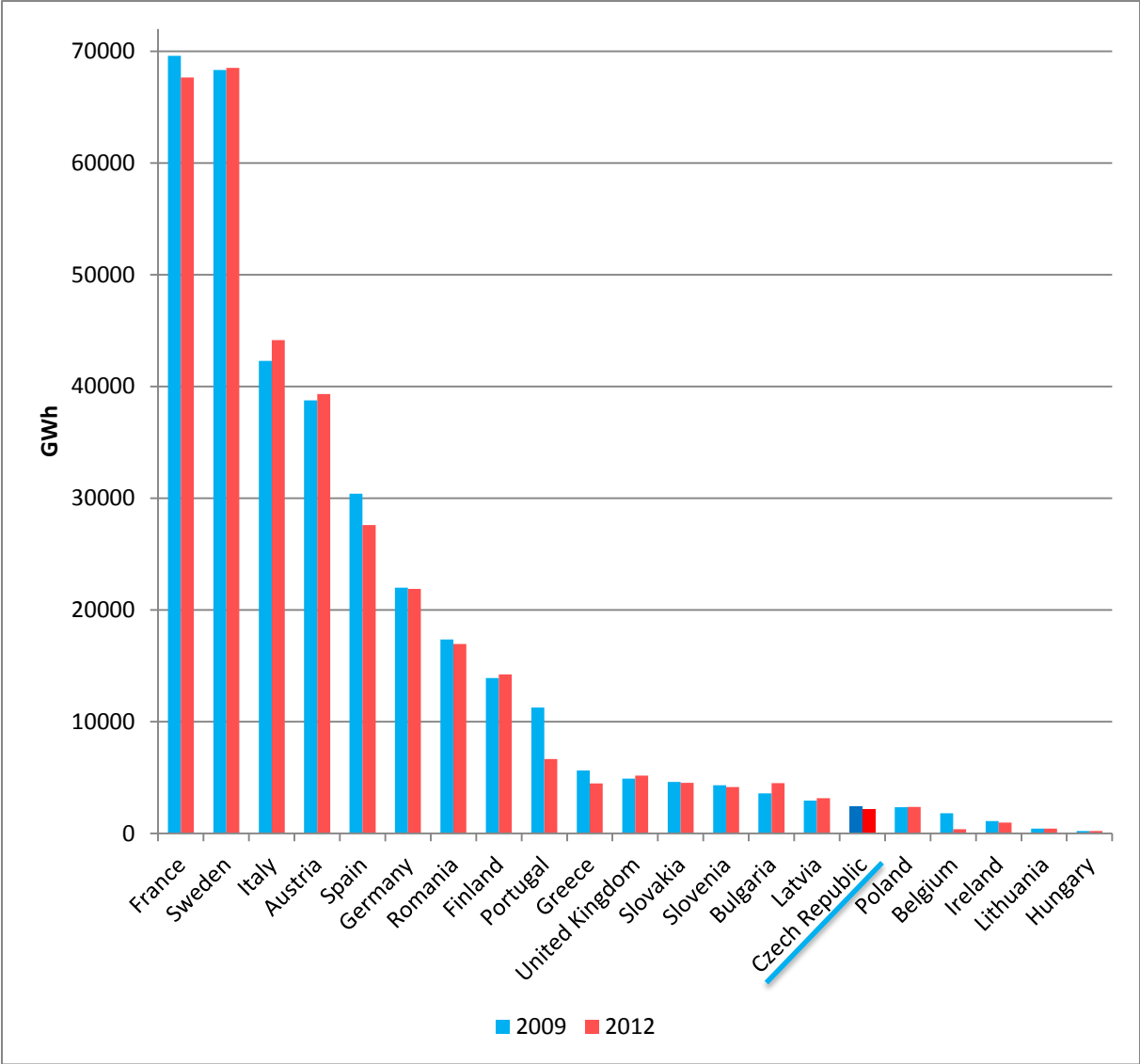
Member state	Gross output of hydropower plants	Total gross production of electricity from renewables	Proportion of total gross production of electricity from renewables accounted for by the output of hydropower plants
	in GWh		in %
Slovenia	4 158.4	4 588.5	90.6
Latvia	3 140.2	3 527.3	89.0
Romania	16 948.7	19 813.6	85.5
Austria	39 311.0	46 703.0	84.2
Sweden	68 506.0	88 062.0	77.8
Slovakia	4 522.0	5 893.0	76.7
France	67 659.0	92 508.0	73.1
Bulgaria	4 488.0	6 407.0	70.0
Finland	14 241.0	25 566.0	55.7
Italy	44 141.0	93 339.0	47.3
Greece	4 468.0	10 229.0	43.7
Lithuania	430.0	1 212.0	35.5
Luxembourg	103.0	306.0	33.7
Portugal	6 660.0	20 654.0	32.2
Spain	27 594.0	93 919.0	29.4
<b>Czech Republic</b>	<b>2 129.0</b>	<b>8 066.0</b>	<b>26.4</b>
Ireland	971.0	5 659.0	17.2
Germany	21 880.0	137 200.0	15.9
Poland	2 358.7	16 964.2	13.9
United Kingdom	5 186.0	40 243.0	12.9
Hungary	219.0	2 584.0	8.5
Belgium	371.7	9 470.8	3.9
Estonia	23.0	1 524.0	1.5
Netherlands	100.0	12 532.0	0.8
Denmark	22.1	13 013.3	0.2
Cyprus	0.0	256.3	0.0
Malta	0.0	16.6	0.0

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

Graph 2 shows the quantity of electricity produced by hydropower station in the years 2009 and 2012 in the EU Member States. The graph does not show data for Luxembourg, the

Netherlands, Estonia, Denmark, Malta, and Cyprus owing to their low or zero values that would not show up in the graph. A data table for Graph 2 forms Annex 3 to this material.

Graph 2: Quantity of electricity produced by hydropower station in the years 2009 and 2012



Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009 and 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

## B. Renewable source of energy - SUN

The sun's energy is used to produce electricity with the help of photovoltaic power stations ("photovoltaics") or to produce heat through solar collectors. As this report focuses on electricity production, data on solar collectors are omitted.

Like hydropower stations, here too it is germane to state what proportion of total gross electricity production from renewables was accounted for by electricity produced by photovoltaics in 2012 (see Table 3). The table shows that the highest proportion in the EU in 2012 was found in Malta. In second place, there was the Czech Republic with a 26.2% share. It must be said, however, that total gross electricity production from renewables in Malta was 16.6 GWh, compared to 8,066 GWh in the Czech Republic. The biggest producer of electricity from photovoltaics in 2012 was Germany (26,380 GWh).

Table 3: Share of total gross electricity production from renewables accounted for by photovoltaics in 2012

Member state	Gross electricity production accounted for by photovoltaics	Total gross electricity production from renewables	Proportion of total gross electricity production from renewables accounted for by photovoltaics
	in GWh		in %
Malta	13.6	16.6	81.8
Czech Republic	2 149.0	8 066.0	26.6
Belgium	2 148.3	9 470.8	22.7
Italy	18 862.0	93 339.0	20.2
Germany	26 380.0	137 200.0	19.2
Greece	1 694.0	10 229.0	16.6
Bulgaria	814.0	6 407.0	12.7
Luxembourg	38.0	306.0	12.4
Spain	8 193.0	93 919.0	8.7
Cyprus	21.4	256.3	8.4
Slovakia	424.0	5 893.0	7.2
France	4 446.0	92 508.0	4.8
Slovenia	162.8	4 588.5	3.5
United Kingdom	1 188.0	40 243.0	3.0
Netherlands	254.0	12 532.0	2.0
Portugal	393.0	20 654.0	1.9
Denmark	103.9	13 013.3	0.8
Austria	337.0	46 703.0	0.7
Hungary	8.0	2 584.0	0.3
Lithuania	2.0	1 212.0	0.2
Romania	8.0	19 813.6	0.0
Sweden	19.0	88 062.0	0.0
Finland	5.0	25 566.0	0.0
Ireland	0.5	5 659.0	0.0
Poland	1.1	16 964.2	0.0
Estonia	0.0	1 524.0	0.0
Latvia	0.0	3 527.3	0.0

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

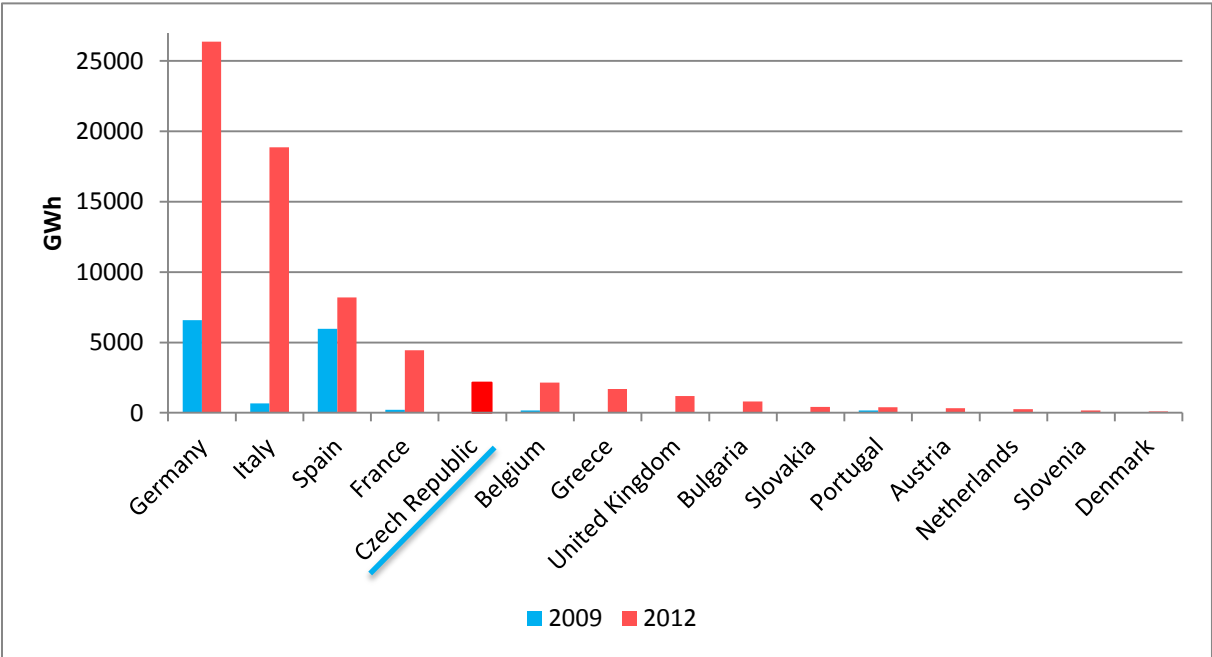
Graph 3 shows the quantity of electricity produced by photovoltaics in 2009 and 2012. The following countries are omitted from the graph: Luxembourg, Cyprus, Sweden, Malta,



Hungary, Romania, Finland, Lithuania, Poland, Ireland, Estonia, and Latvia. The quantities produced in these countries are too low to show up in the graph.

Most electricity from photovoltaics was produced in 2012 (and in 2009) by Germany with 26,380 GWh (6,583 GWh in 2009). In 2012, the Czech Republic produced a total of 2,149 GWh from photovoltaics (just 89 GWh in 2009). A data table for Graph 3 forms Annex 4 to this material.

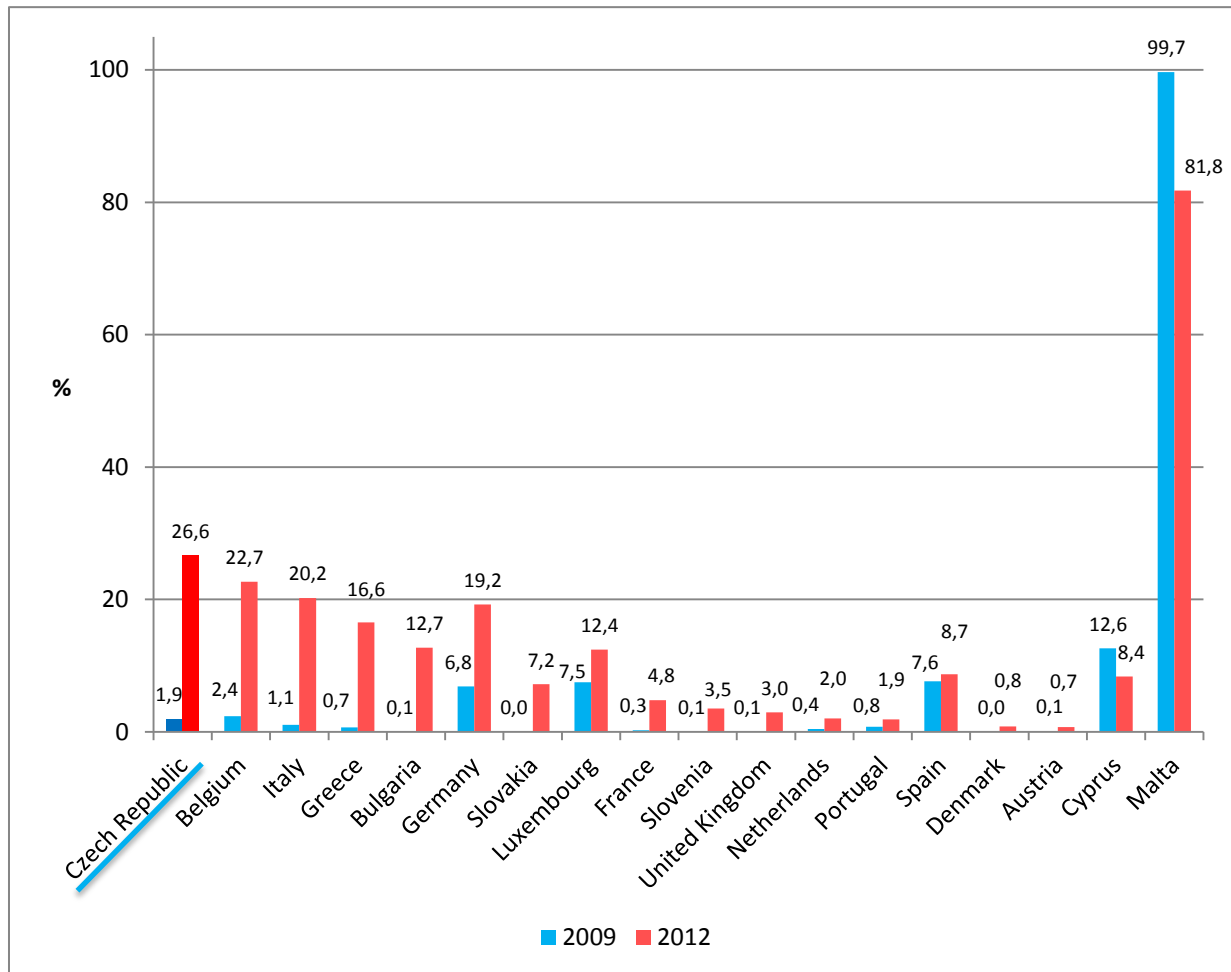
Graph 3: Quantity of electricity produced from photovoltaics in 2009 and 2012



Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009 and 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

The rate of growth of the share of electricity production from photovoltaics, specifically the difference between 2009 and 2012, is shown in Graph 4, which is based on the same numerical data as Graph 3, supplemented by total gross electricity production from renewables and calculated proportions (see Annex 5). Again, the states with extremely low values are not shown in the graph.

Graph 4: Share of electricity production from photovoltaics (years 2009 and 2012)



Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009 and 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

The data are ranked from the highest values of the difference in proportions between 2012 and 2009 to the lowest. The Czech Republic increased its proportion of gross production of electricity from renewables accounted for by photovoltaics from 1.9% in 2009 to 26.8% in 2012. This rate of growth between 2009 and 2012 outstripped all other EU Member States.

### C. Renewable source of energy - WIND

As a landlocked country, the Czech Republic does not have particularly suitable conditions for making use of wind. The building of wind turbines also has to respect the restrictions linked to nature and landscape conservation. A wind turbine with a capacity of 1 MW will save around 2,200 tonnes of CO<sub>2</sub> a year and will produce electricity for roughly a thousand households.

Table 4 shows, for all EU Member States, the proportion of gross electricity production from renewables accounted for by wind.

Table 4: Total gross electricity production from renewables accounted for by wind turbines in 2012

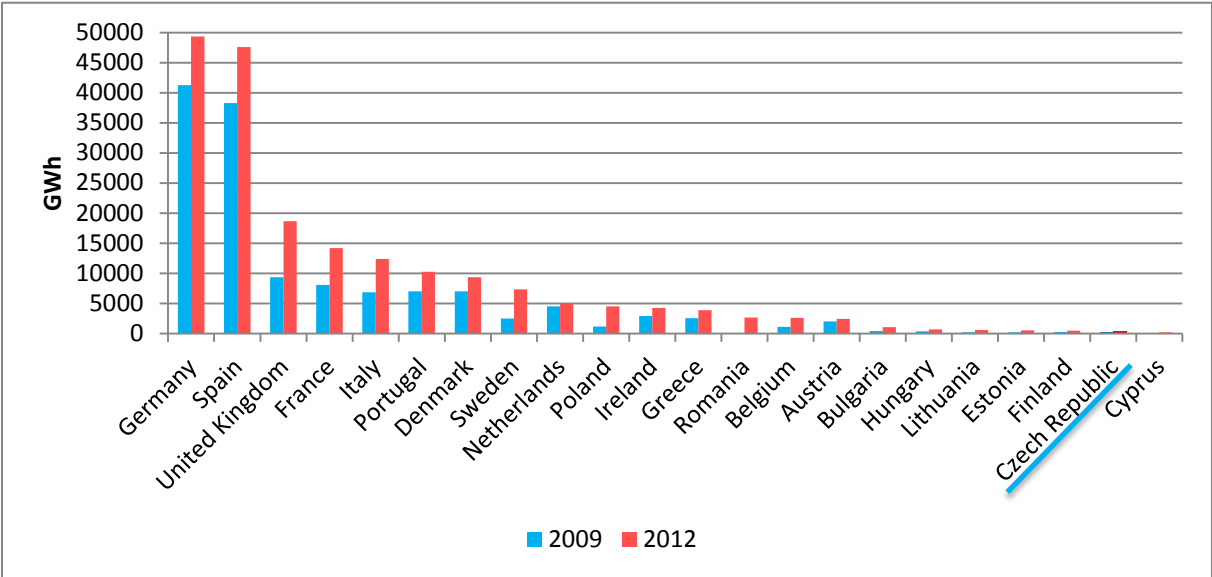
Member state	Gross electricity production accounted for by wind	Total gross electricity production from renewables	Proportion of gross electricity production from renewables accounted for by wind
	in GWh		in %
Ireland	4 247.0	5 659.0	75.0
Cyprus	184.6	256.3	72.0
Denmark	9 333.2	13 013.3	71.7
Spain	47 560.0	93 919.0	50.6
Portugal	10 260.0	20 654.0	49.7
United Kingdom	18 666.0	40 243.0	46.4
Lithuania	562.0	1 212.0	46.4
Netherlands	4 939.0	12 532.0	39.4
Greece	3 870.0	10 229.0	37.8
Germany	49 335.0	137 200.0	36.0
Estonia	500.0	1 524.0	32.8
Belgium	2 602.8	9 470.8	27.5
Hungary	701.0	2 584.0	27.1
Poland	4 510.3	16 964.2	26.6
Luxembourg	74.0	306.0	24.2
Bulgaria	1 039.0	6 407.0	16.2
France	14 186.0	92 508.0	15.3
Romania	2 645.1	19 813.6	13.3
Italy	12 402.0	93 339.0	13.3
Sweden	7 348.0	88 062.0	8.3
Austria	2 412.0	46 703.0	5.2
<b>Czech Republic</b>	<b>416.0</b>	<b>8 066.0</b>	<b>5.2</b>
Latvia	98.4	3 527.3	2.8
Finland	474.0	25 566.0	1.9
Slovakia	6.0	5 893.0	0.1
Malta	0.0	16.6	0.0
Slovenia	0.0	4 588.5	0.0

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

The biggest share of total gross electricity production from renewables is seen in Ireland (75%), but the highest absolute GWh value in 2012 was produced by wind turbines in Germany (49,335 GWh). In the Czech Republic, 416 GWh was produced in 2012, with wind turbines accounting for 5.2% of total production.

Graph 5 compares the quantities of electricity produced by wind turbines in the years 2009 and 2012. In these years, the biggest producers of electricity from wind turbines in the EU were Germany (41,268 GWh in 2009; 49,335 GWh in 2012) and Spain (38,295 GWh in 2009 and 47,560 GWh in 2012). The Czech Republic produced 288 GWh of electricity from wind turbines in 2009 and 416 GWh in 2012. A data table for Graph 5 forms Annex 6 to this material.

Graph 5: Quantity of electricity produced by wind turbines in 2009 and 2012



Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009, 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

#### D. Renewable source of energy - BIOMASS

Wet biomass (manure, slurry, food waste, and agricultural crops) is not suitable for combustion, i.e., for producing heat, but can be put to good use for example in biogas power plants. The electricity is usually sold into the grid. Roughly half of the produced heat is consumed by operation of these biogas stations; the rest is commercially exploitable.

Table 5 shows the proportion of gross electricity production from biomass in the EU Member States in 2012. Biomass had the biggest share of the energy mix in Estonia (65%) in 2012. Germany, however, produced the biggest quantity of electricity from biomass in the EU in that year, (39,580 GWh). The share of gross electricity production accounted for by biomass in the Czech Republic in 2012 was 41.8%, i.e. 3,372 GWh.

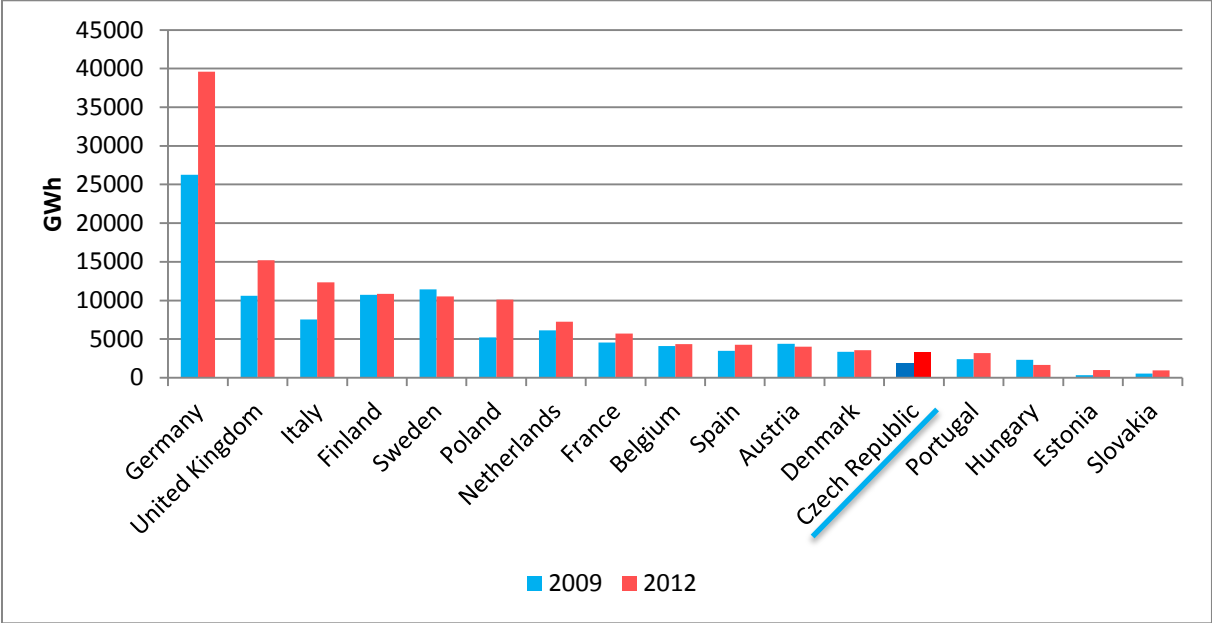
Table 5: Share of total gross electricity production from renewables accounted for by biomass in 2012

Member state	Gross electricity production accounted for by biomass	Total gross electricity production from renewables	Proportion of gross electricity production from renewables accounted for by biomass
	in GWh		in %
Estonia	1 001.0	1 524.0	65.7
Hungary	1 656.0	2 584.0	64.1
Poland	10 094.1	16 964.2	59.5
Netherlands	7 239.0	12 532.0	57.8
Belgium	4 348.0	9 470.8	45.9
Finland	10 846.0	25 566.0	42.4
<b>Czech Republic</b>	<b>3 372.0</b>	<b>8 066.0</b>	<b>41.8</b>
United Kingdom	15 198.0	40 243.0	37.8
Luxembourg	91.0	306.0	29.7
Germany	39 580.0	137 200.0	28.8
Denmark	3 554.0	13 013.3	27.3
Cyprus	50.2	256.3	19.6
Malta	3.0	16.6	18.2
Lithuania	218.0	1 212.0	18.0
Slovenia	941.0	5 893.0	16.0
Portugal	3 195.0	20 654.0	15.5
Italy	12 342.0	93 339.0	13.2
Sweden	10 527.0	88 062.0	12.0
Austria	4 003.0	46 703.0	8.6
Latvia	288.6	3 527.3	8.2
Ireland	441.0	5 659.0	7.8
France	5 708.0	92 508.0	6.2
Slovenia	267.3	4 588.5	5.8
Spain	4 262.0	93 919.0	4.5
Greece	197.0	10 229.0	1.9
Romania	211.7	19 813.6	1.1
Bulgaria	66.0	6 407.0	1.0

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

The quantity of electricity produced from biomass in the EU Member States in the years 2009 and 2012 is shown in Graph 6. This graph omits Ireland, Latvia, Slovenia, Lithuania, Romania, Greece, Luxembourg, Bulgaria, Cyprus, and Malta owing to the low values. A data table for Graph 6 forms Annex 7 to this material.

Graph 6: Quantity of electricity produced from biomass in 2009 and 2012



Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009, 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

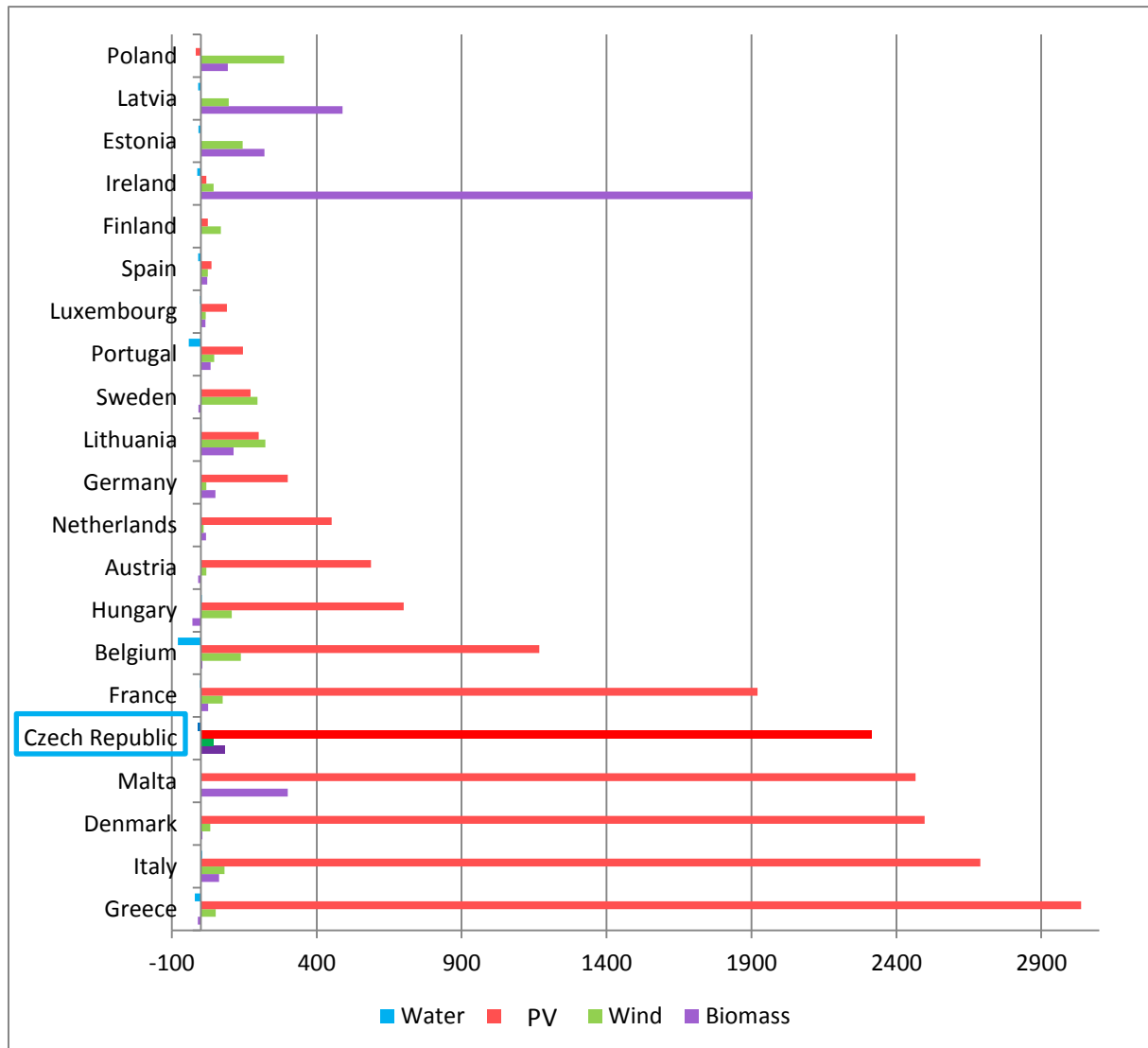
## E. Summary

The EU Member States have committed themselves to fulfilling the Europe 2020 strategy, part of which requires developing renewable energy sources. Every country is constrained by its location on the continent and the climatic conditions this location entails. The preceding chapters showed the data for individual EU Member States from various perspectives. Growth soared in the photovoltaics segment in particular. The following Graph 7 shows the rate of growth of electricity production from selected types of renewables between 2009 and 2012. Some countries (Romania, Slovakia, Bulgaria, the United Kingdom, and Cyprus) display such low values that they could not be included in the graph.

Romania increased its electricity production from photovoltaics from 0.003 GWh in 2009 to 8 GWh in 2012 and its electricity production from wind turbines from 9.8 GWh in 2009 to 2,645.1 GWh in 2012. Slovakia increased its electricity production from photovoltaics from zero in 2009 to 424 GWh in 2012. Bulgaria also increased its electricity production from photovoltaics from 3 GWh in 2009 to 814 GWh in 2012, etc. A data table for Graph 7 forms Annex 8 to this material.

The purpose of Graph 7 is to highlight the sharp growth in the production of electricity from photovoltaic power stations, a phenomenon that also affected the Czech Republic. In 2012, the Czech Republic was the 5th biggest generator of electricity from photovoltaics in the EU. If we look back at Graph 4, however, we find that the Czech Republic was (with the exception of Malta) the EU Member State in which photovoltaics accounted for the biggest share of electricity produced from renewables. Between 2009 and 2012, the Czech Republic overtook the following countries in terms of its production: Germany, Belgium, Spain, Cyprus, and Luxembourg.

Graph 7: Rate of growth of electricity production from selected renewables from 2009 to 2012



Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009, 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

As at 23 December 2014, the data for 2013 were not available.

NB: Every EU Member State takes a different approach to promoting renewables. For that reason, the material deliberately ignored various forms of support because of the impossibility of comparing data.

Once again, we would like to thank the SAIs of Slovakia, Portugal, Germany, Hungary, Latvia, Austria, Poland, Cyprus, the Netherlands, Italy, Lithuania, Spain, Bulgaria, Denmark, Estonia, Ireland, Finland, Croatia, Sweden, the United Kingdom, Romania, Turkey, and, last but not least, the European Court of Auditors for their cooperation.

The full wording of the audit conclusion can be found in Czech and in English on the SAO web site (<http://www.nku.cz/scripts/rka/detail.asp?cisloakce=14/06&rok=0&sestava=0>).



## Annex 1

Member state	Gross electricity production from renewables [GWh]																			
	Water energy				Photovoltaics				Wind energy				Biomass				Total gross electricity production from renewables			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
Czech Republic	2 430.0	2 789.0	2 118.0	2 129.0	89.0	616.0	2 182.0	2 149.0	288.0	335.0	397.0	416.0	1 847.0	2 127.0	2 704.0	3 372.0	4 665.0	5 903.0	7 403.0	8 066.0
Belgium	1 801.3	1 720.9	379.0	371.7	169.4	557.5	1 169.6	2 148.3	1 092.7	1 589.3	2 055.3	2 602.8	4 103.8	4 413.8	3 652.8	4 348.0	7 167.3	8 281.4	7 256.7	9 470.8
Bulgaria	3 598.0	3 709.0	4 413.0	4 488.0	3.0	15.0	101.0	814.0	412.0	722.0	802.0	1 039.0	4.0	16.0	56.0	66.0	4 017.0	4 461.0	5 373.0	6 407.0
Denmark	22.0	22.0	22.1	22.1	4.0	6.0	15.0	103.9	7 029.0	7 729.0	8 699.5	9 333.2	3 352.0	4 632.0	3 426.0	3 554.0	10 407.0	12 389.0	12 162.6	13 013.3
Estonia	25.0	22.0	13.0	23.0	0.0	0.0	0.0	0.0	204.0	247.0	348.0	500.0	313.0	740.0	781.0	1 001.0	542.0	1 009.0	1 159.0	1 524.0
Finland	13 898.0	13 877.0	14 020.0	14 241.0	4.0	5.0	5.0	5.0	279.0	314.0	402.0	474.0	10 718.0	10 948.0	10 953.0	10 846.0	22 899.0	25 144.0	25 380.0	25 566.0
France	69 597.0	68 643.0	68 369.0	67 659.0	220.0	676.0	2 358.0	4 446.0	8 087.0	10 499.0	12 531.0	14 186.0	4 539.0	4 876.0	5 513.0	5 708.0	82 941.0	85 185.0	89 304.0	92 508.0
Ireland	1 109.0	931.0	752.0	971.0	0.4	0.5	0.5	0.5	2 936.0	3 228.0	3 830.0	4 247.0	22.0	27.0	339.0	441.0	4 067.4	4 186.5	4 921.0	5 659.0
Italy	42 279.0	43 393.0	44 012.0	44 141.0	676.0	1 906.0	10 796.0	18 862.0	6 830.0	8 787.0	10 266.0	12 402.0	7 557.0	9 440.0	10 832.0	12 342.0	62 684.0	68 902.0	81 561.0	93 339.0
Cyprus	0.0	0.0	0.0	0.0	3.8	6.4	11.9	21.4	0.0	31.4	113.8	184.6	26.5	35.1	51.6	50.2	30.4	72.9	177.3	256.3
Lithuania	419.0	419.0	425.0	430.0	0.0	0.0	0.0	2.0	174.0	244.0	409.0	562.0	102.0	147.0	158.0	218.0	695.0	810.0	992.0	1 212.0
Latvia	3 457.0	3 520.0	3 097.2	3 140.2	0.0	0.0	0.0	0.0	50.0	49.0	64.6	98.4	49.0	66.0	119.4	288.6	3 030.0	3 154.0	3 281.2	3 527.3
Luxembourg	106.0	108.0	102.0	103.0	20.0	21.0	26.0	38.0	63.0	55.0	67.0	74.0	78.0	84.0	96.0	91.0	267.0	269.0	291.0	306.0
Hungary	212.0	211.0	217.0	219.0	1.0	1.0	2.0	8.0	338.0	518.0	645.0	701.0	2 335.0	2 291.0	1 844.0	1 656.0	2 886.0	3 021.0	2 708.0	2 584.0
Malta	0.0	0.0	0.0	0.0	0.5	1.7	12.4	13.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.0	0.5	1.7	13.9	16.6
Germany	21 988.0	21 575.0	21 970.0	21 880.0	6 583.0	11 729.0	19 599.0	26 380.0	41 268.0	43 074.0	46 746.0	49 335.0	26 255.0	29 560.0	32 839.0	39 580.0	96 113.0	105 966.0	121 173.0	137 200.0
Netherlands	100.0	101.0	100.0	100.0	46.0	60.0	100.0	254.0	4 481.0	4 503.0	4 725.0	4 939.0	6 129.0	7 059.0	7 071.0	7 239.0	10 756.0	11 722.0	11 996.0	12 532.0
Poland	2 355.6	2 390.3	2 352.3	2 358.7	1.3	1.7	0.2	1.1	1 164.2	1 700.3	2 922.0	4 510.3	5 223.4	6 303.6	7 599.5	10 094.1	8 747.4	10 396.7	12 874.0	16 964.2
Portugal	11 270.0	11 775.0	12 114.0	6 660.0	160.0	201.0	280.0	393.0	7 000.0	8 395.0	9 162.0	10 260.0	2 384.0	2 904.0	3 219.0	3 195.0	20 998.0	23 472.0	24 985.0	20 654.0
Austria	38 757.0	39 237.0	38 659.0	39 311.0	49.0	89.0	174.0	337.0	2 024.0	2 035.0	2 089.0	2 412.0	4 370.0	4 554.0	3 898.0	4 003.0	45 201.0	45 916.0	45 446.0	46 703.0
Romania	17 360.0	17 573.0	17 201.0	16 948.7	0.003	0.02	1.4	8.0	9.8	299.1	1 299.5	2 645.1	5.2	69.5	196.7	211.7	17 075.0	17 692.6	18 707.6	19 813.6
Greece	5 621.0	7 498.0	4 446.0	4 468.0	54.0	167.0	610.0	1 694.0	2 547.0	2 714.0	3 356.0	3 870.0	218.0	216.0	199.0	197.0	8 172.0	10 572.0	8 611.0	10 229.0
Slovakia	4 600.0	4 612.0	4 562.0	4 522.0	0.0	11.0	397.0	424.0	6.0	6.0	6.0	6.0	537.0	668.0	819.0	941.0	5 143.0	5 297.0	5 784.0	5 893.0
Slovenia	4 315.0	4 326.0	4 196.6	4 158.4	4.0	13.0	65.7	162.8	0.0	0.0	0.0	0.0	193.0	222.0	251.8	267.3	4 909.0	4 930.0	4 514.0	4 588.5
United Kingdom	4 910.0	4 790.0	5 115.0	5 186.0	20.0	33.0	244.0	1 188.0	9 333.0	11 239.0	14 104.0	18 666.0	10 596.0	11 914.0	13 200.0	15 198.0	24 861.0	27 977.0	32 666.0	40 243.0

Spain	30 395.0	31 545.0	28 833.0	27 594.0	5 961.0	6 413.0	7 441.0	8 193.0	38 295.0	42 732.0	44 644.0	47 560.0	3 488.0	3 894.0	3 814.0	4 262.0	78 242.0	85 275.0	89 307.0	93 919.0
Sweden	68 326.0	68 294.0	68 509.0	68 506.0	7.0	9.0	11.0	19.0	2 485.0	3 502.0	5 591.0	7 348.0	11 411.0	12 191.0	9 674.0	10 527.0	82 229.0	83 996.0	85 645.0	88 062.0

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009 and 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>).

## Annex 2

<b>Proportion of gross final consumption of energy accounted for by renewables in Member States in the years 2009 and 2012, including the target for 2020[%]</b>			
<b>Member state</b>	<b>2009</b>	<b>2012</b>	<b>Renewables target for 2020</b>
Malta	0.88	2.7	10
Luxembourg	2.93	3.13	11
Belgium	4.51	6.81	13
Cyprus	5.4	7.7	13
Hungary	8.18	9.6	13
<b>Czech Republic</b>	<b>7.4</b>	<b>11.22</b>	<b>13</b>
Netherlands	4.1	4.5	14
Slovakia	10.3	11.7	14
United Kingdom	3	4.2	15
Poland	8.9	11.04	15
Ireland	5	7.1	16
Bulgaria	11	16.4	16
Italy	8.86	13.53	17
Germany	10.2	12.4	18
Greece	8.43	13.83	18
Spain	12.5	14.3	20
France	12.4	13.7	23
Lithuania	19.96	21.72	23
Romania	21.75	22.9	24
Slovenia	18.99	20.23	25
Estonia	22.7	24.8	25
Denmark	19.86	25.97	30
Portugal	24.63	24.6	31
Austria	30.9	32.2	34
Finland	32	35.1	38
Latvia	34.3	35.78	40
Sweden	47.3	51	49

*Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009 and 2012); Energy Challenges and Policy (European Commission).*

## Annex 3

Electricity production by hydropower stations 2009 - 2012 [GWh]					
Member state		2009	2010	2011	2012
1.	France	69 597.0	68 643.0	68 369.0	67 659.0
2.	Sweden	68 326.0	68 294.0	68 509.0	68 506.0
3.	Italy	42 279.0	43 393.0	44 012.0	44 141.0
4.	Austria	38 757.0	39 237.0	38 659.0	39 311.0
5.	Spain	30 395.0	31 545.0	28 833.0	27 594.0
6.	Germany	21 988.0	21 575.0	21 970.0	21 880.0
7.	Romania	17 360.0	17 573.0	17 201.0	16 948.7
8.	Finland	13 898.0	13 877.0	14 020.0	14 241.0
9.	Portugal	11 270.0	11 775.0	12 114.0	6 660.0
10.	Greece	5 621.0	7 498.0	4 446.0	4 468.0
11.	United Kingdom	4 910.0	4 790.0	5 115.0	5 186.0
12.	Slovakia	4 600.0	4 612.0	4 562.0	4 522.0
13.	Slovenia	4 315.0	4 326.0	4 196.6	4 158.4
14.	Bulgaria	3 598.0	3 709.0	4 413.0	4 488.0
15.	Latvia	2 927.0	3 033.0	3 097.2	3 140.2
16.	Czech Republic	2 430.0	2 789.0	2 118.0	2 129.0
17.	Poland	2 355.6	2 390.3	2 352.3	2 358.7
18.	Belgium	1 801.3	1 720.9	379.0	371.7
19.	Ireland	1 109.0	931.0	752.0	971.0
20.	Lithuania	419.0	419.0	425.0	430.0
21.	Hungary	212.0	211.0	217.0	219.0
22.	Luxembourg	106.0	108.0	102.0	103.0
23.	Netherlands	100.0	101.0	100.0	100.0
24.	Estonia	25.0	22.0	13.0	23.0
25.	Denmark	22.0	22.0	22.1	22.1
26.	Malta	0.0	0.0	0.0	0.0
27.	Cyprus	0.0	0.0	0.0	0.0

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)

## Annex 4

Electricity production by photovoltaics 2009 - 2012 [GWh]					
Member state		2009	2010	2011	2012
1.	Germany	6 583.0	11 729.0	19 599.0	26 380.0
2.	Italy	676.0	1 906.0	10 796.0	18 862.0
3.	Spain	5 961.0	6 413.0	7 441.0	8 193.0
4.	France	220.0	676.0	2 358.0	4 446.0
5.	Czech Republic	89.0	616.0	2 182.0	2 149.0
6.	Belgium	169.4	557.5	1 169.6	2 148.3
7.	Greece	54.0	167.0	610.0	1 694.0
8.	United Kingdom	20.0	33.0	244.0	1 188.0
9.	Bulgaria	3.0	15.0	1 013.0	814.0
10.	Slovakia	0.0	11.0	397.0	424.0
11.	Portugal	160.0	201.0	280.0	393.0
12.	Austria	49.0	89.0	174.0	337.0
13.	Netherlands	46.0	60.0	100.0	254.0
14.	Slovenia	4.0	13.0	65.7	162.8
15.	Denmark	4.0	6.0	15.0	103.9
16.	Luxembourg	20.0	21.0	26.0	38.0
17.	Cyprus	3.8	6.4	11.9	21.4
18.	Sweden	7.0	9.0	11.0	19.0
19.	Malta	0.5	1.7	12.4	13.6
20.	Hungary	1.0	1.0	2.0	8.0
21.	Romania	0.0	0.0	1.4	8.0
22.	Finland	4.0	5.0	5.0	5.0
23.	Lithuania	0.0	0.0	-	2.0
24.	Poland	1.3	1.7	0.2	1.1
25.	Ireland	0.4	0.5	0.5	0.5
26.	Estonia	0.0	0.0	0.0	0.0
27.	Latvia	0.0	0.0	0.0	0.0

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>).

Proportion of total gross electricity production from renewables accounted for by photovoltaics (2009 and 2012)								
Member states		Gross electricity production accounted for by photovoltaics		Total gross electricity production from renewables		Proportion of total gross electricity production from renewables accounted for by photovoltaics		Difference in proportions in 2009 and 2012
		2009	2012	2009	2012	2009	2012	
1.	Czech Republic	89.0	2 149.0	4 665.0	8 066.0	1.9	26.6	24.7
2.	Belgium	169.4	2 148.3	7 167.3	9 470.8	2.4	22.7	20.3
3.	Italy	676.0	18 862.0	62 684.0	93 339.0	1.1	20.2	19.1
4.	Greece	54.0	1 694.0	8 172.0	10 229.0	0.7	16.6	15.9
5.	Bulgaria	3.0	814.0	4 017.0	6 407.0	0.1	12.7	12.6
6.	Germany	6 583.0	26 380.0	96 113.0	137 200.0	6.8	19.2	12.4
7.	Slovakia	0.0	424.0	5 143.0	5 893.0	0.0	7.2	7.2
8.	Luxembourg	20.0	38.0	267.0	306.0	7.5	12.4	4.9
9.	France	220.0	4 446.0	82 941.0	92 508.0	0.3	4.8	4.5
10.	Slovenia	4.0	162.8	4 909.0	4 588.5	0.1	3.5	3.5
11.	United Kingdom	20.0	1 188.0	24 861.0	40 243.0	0.1	3.0	2.9
12.	Netherlands	46.0	254.0	10 756.0	12 532.0	0.4	2.0	1.6
13.	Portugal	160.0	393.0	20 998.0	20 654.0	0.8	1.9	1.1
14.	Spain	5 961.0	8 193.0	78 242.0	93 919.0	7.6	8.7	1.1
15.	Denmark	4.0	103.9	10 407.0	13 013.3	0.0	0.8	0.8
16.	Austria	49.0	337.0	45 201.0	46 703.0	0.1	0.7	0.6
17.	Hungary	1.0	8.0	2 886.0	2 584.0	0.0	0.3	0.3
18.	Lithuania	0.0	2.0	695.0	1 212.0	0.0	0.2	0.2
19.	Romania	0.0	8.0	17 075.0	19 813.6	0.0	0.0	0.0
20.	Sweden	7.0	19.0	82 229.0	88 062.0	0.0	0.0	0.0
21.	Finland	4.0	5.0	22 899.0	25 566.0	0.0	0.0	0.0
22.	Estonia	0.0	0.0	542.0	1 524.0	0.0	0.0	0.0
23.	Latvia	0.0	0.0	3 030.0	3 527.3	0.0	0.0	0.0
24.	Ireland	0.4	0.5	4 067.4	5 659.0	0.0	0.0	0.0
25.	Poland	1.3	1.1	8 747.4	16 964.2	0.0	0.0	0.0
26.	Cyprus	3.8	21.4	30.4	256.3	12.6	8.4	-4.3
27.	Malta	0.5	13.6	0.5	16.6	99.7	81.8	-17.9

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2009 and 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>).

## Annex 6

Electricity production by wind turbines 2009 - 2012 [GWh]					
	Member state	2009	2010	2011	2012
1.	Germany	41 268.0	43 074.0	46 746.0	49 335.0
2.	Spain	38 295.0	42 732.0	44 644.0	47 560.0
3.	United Kingdom	9 333.0	11 239.0	14 104.0	18 666.0
4.	France	8 087.0	10 499.0	12 531.0	14 186.0
5.	Italy	6 830.0	8 787.0	10 266.0	12 402.0
6.	Portugal	7 000.0	8 395.0	9 162.0	10 260.0
7.	Denmark	7 029.0	7 729.0	8 699.5	9 333.2
8.	Sweden	2 485.0	3 502.0	5 591.0	7 348.0
9.	Netherlands	4 481.0	4 503.0	4 725.0	4 939.0
10.	Poland	1 164.2	1 700.3	2 922.0	4 510.3
11.	Ireland	2 936.0	3 228.0	3 830.0	4 247.0
12.	Greece	2 547.0	2 714.0	3 356.0	3 870.0
13.	Romania	9.8	299.1	1 299.5	2 645.1
14.	Belgium	1 092.7	1 589.3	2 055.3	2 602.8
15.	Austria	2 024.0	2 035.0	2 089.0	2 412.0
16.	Bulgaria	412.0	722.0	802.0	1 039.0
17.	Hungary	338.0	518.0	645.0	701.0
18.	Lithuania	174.0	244.0	409.0	562.0
19.	Estonia	204.0	247.0	348.0	500.0
20.	Finland	279.0	314.0	402.0	474.0
21.	Czech Republic	288.0	335.0	397.0	416.0
22.	Cyprus	0.0	31.4	113.8	184.6
23.	Latvia	50.0	49.0	64.6	98.4
24.	Luxembourg	63.0	55.0	67.0	74.0
25.	Slovakia	6.0	6.0	6.0	6.0
26.	Malta	0.0	0.0	0.0	0.0
27.	Slovenia	-	-	0.0	0.0

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>).

## Annex 7

Electricity production by biomass 2009 - 2012 [GWh]					
	Member state	2009	2010	2011	2012
1.	Germany	26 255.0	29 560.0	32 839.0	39 580.0
2.	United Kingdom	10 596.0	11 914.0	13 200.0	15 198.0
3.	Italy	7 557.0	9 440.0	10 832.0	12 342.0
4.	Finland	10 718.0	10 948.0	10 953.0	10 846.0
5.	Sweden	11 411.0	12 191.0	9 674.0	10 527.0
6.	Poland	5 223.4	6 303.6	7 599.5	10 094.1
7.	Netherlands	6 129.0	7 059.0	7 071.0	7 239.0
8.	France	4 539.0	4 876.0	5 513.0	5 708.0
9.	Belgium	4 103.8	4 413.8	3 652.8	4 348.0
10.	Spain	3 488.0	3 894.0	3 814.0	4 262.0
11.	Austria	4 370.0	4 554.0	3 898.0	4 003.0
12.	Denmark	3 352.0	4 632.0	3 426.0	3 554.0
13.	Czech Republic	1 847.0	2 127.0	2 704.0	3 372.0
14.	Portugal	2 384.0	2 904.0	3 219.0	3 195.0
15.	Hungary	2 335.0	2 291.0	1 844.0	1 656.0
16.	Estonia	313.0	740.0	781.0	1 001.0
17.	Slovakia	537.0	668.0	819.0	941.0
18.	Ireland	22.0	27.0	339.0	441.0
19.	Latvia	49.0	66.0	119.4	288.6
20.	Slovenia	193.0	222.0	251.8	267.3
21.	Lithuania	102.0	147.0	158.0	218.0
22.	Romania	5.2	69.5	196.7	211.7
23.	Greece	218.0	216.0	199.0	197.0
24.	Luxembourg	78.0	84.0	96.0	91.0
25.	Bulgaria	4.0	16.0	56.0	66.0
26.	Cyprus	26.5	35.1	51.6	50.2
27.	Malta	0.0	0.0	1.6	3.0

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)



## Annex 8

Member state	Electricity production from renewables in 2009 and 2012 [GWh]								Electricity production growth rate accounted for selected renewables between 2009 – 2012 [%]			
	WATER		PV		WIND		BIOMASS		WATER	PV	WIND	BIOMASS
	2009	2012	2009	2012	2009	2012	2009	2012	R			SS
Czech Republic	2 430.0	2 129.0	2 89.0	2 149.0	288.0	416.0	1 847.0	3 372.0	-12.4	2 314.6	44.4	82.6
Belgium	1 801.3	371.7	169.4	2 148.3	1 092.7	2 602.8	4 103.8	4 348.0	-79.4	1 168.2	138.2	6.0
Bulgaria	3 598.0	4 488.0	3.0	814.0	412.0	1 039.0	4.0	66.0	24.7	27 033.3	152.2	1 550.0
Denmark	22.0	22.1	4.0	103.9	7 029.0	9 333.2	3 352.0	3 554.0	0.5	2 497.5	32.8	6.0
Estonia	25.0	23.0	0.0	0.0	204.0	500.0	313.0	1 001.0	-8.0	0.0	145.1	219.8
Finland	13 898.0	14 241.0	4.0	5.0	279.0	474.0	10 718.0	10 846.0	2.5	25.0	69.9	1.2
France	69 597.0	67 659.0	220.0	4 446.0	8 087.0	14 186.0	4 539.0	5 708.0	-2.8	1 920.9	75.4	25.8
Ireland	1 109.0	971.0	0.4	0.5	2 936.0	4 247.0	22.0	441.0	-12.4	19.0	44.7	1 904.5
Italy	42 279.0	44 141.0	676.0	18 862.0	6 830.0	12 402.0	7 557.0	12 342.0	4.4	2 690.2	81.6	63.3
Cyprus	0.0	0.0	3.8	21.4	0.0	184.6	26.5	50.2	0.0	459.8	18 460.0	89.4
Lithuania	419.0	430.0	0.0	2.0	174.0	562.0	102.0	218.0	2.6	200.0	223.0	113.7
Latvia	3 457.0	3 140.2	0.0	0.0	50.0	98.4	49.0	288.6	-9.2	0.0	96.8	489.0
Luxembourg	106.0	103.0	20.0	38.0	63.0	74.0	78.0	91.0	-2.8	90.0	17.5	16.7
Hungary	212.0	219.0	1.0	8.0	338.0	701.0	2 335.0	1 656.0	3.3	700.0	107.4	-29.1
Malta	0.0	0.0	0.5	13.6	0.0	0.0	0.0	3.0	0.0	2 466.0	0.0	300.0
Germany	21 988.0	21 880.0	6 583.0	26 380.0	41 268.0	49 335.0	26 255.0	39 580.0	-0.5	300.7	19.5	50.8
Netherlands	100.0	100.0	46.0	254.0	4 481.0	4 939.0	6 129.0	7 239.0	0.0	452.2	10.2	18.1
Poland	2 355.6	2 358.7	1.3	1.1	1 164.2	4 510.3	5 223.4	10 094.1	0.1	-17.2	287.4	93.2
Portugal	11 270.0	6 660.0	160.0	393.0	7 000.0	10 260.0	2 384.0	3 195.0	-40.9	145.6	46.6	34.0
Austria	38 757.0	39 311.0	49.0	337.0	2 024.0	2 412.0	4 370.0	4 003.0	1.4	587.8	19.2	-8.4
Romania	17 360.0	16 948.7	0.003	8.0	9.8	2 645.1	5.2	211.7	-2.4	266 566.7	27 020.9	3 966.5
Greece	5 621.0	4 468.0	54.0	1 694.0	2 547.0	3 870.0	218.0	197.0	-20.5	3 037.0	51.9	-9.6
Slovakia	4 600.0	4 522.0	0.0	424.0	6.0	6.0	537.0	941.0	-1.7	42 400.0	0.0	75.2
Slovenia	4 315.0	4 158.4	4.0	162.8	0.0	0.0	193.0	267.3	-3.6	3 970.0	0.0	38.5
United Kingdom	4 910.0	5 186.0	20.0	1 188.0	9 333.0	18 666.0	10 596.0	15 198.0	5.6	5 840.0	100.0	43.4
Spain	30 395.0	27 594.0	5 961.0	8 193.0	38 295.0	47 560.0	3 488.0	4 262.0	-9.2	37.4	24.2	22.2
Sweden	68 326.0	68 506.0	7.0	19.0	2 485.0	7 348.0	11 411.0	10 527.0	0.3	171.4	195.7	-7.7

Source: reports on progress in the promotion and use of renewables under Article 22 of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (for 2012); CENIA - assessment of renewables indicator (<http://issar.cenia.cz/issar/page.php?id=1943>)