

**Report on progress in the promotion and use of energy from renewable sources in the Czech Republic under Art 22 of the European Parliament and Council Directive 2009/28/EC, on support for the use of energy from renewable sources (2011 and 2012)**

**1. Sectoral and overall shares and actual energy consumption from renewable sources in the preceding two year.**

**Table 1: Sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources<sup>1</sup>**

	2011	2012
RES-H&C <sup>2</sup> (%)	12.65	13.64
RES-E <sup>3</sup> (%)	10.60	11.64
RES-T <sup>4</sup>	5.90	5.59
Overall RES <sup>5</sup> share (%)	10.47	11.22
<i>Of which from cooperation mechanism<sup>6</sup> (%)</i>	0	0
<i>Surplus for cooperation mechanism<sup>7</sup> (%)</i>	0	0

**Table 1a: Calculation table for the renewable energy contribution of each sector to final energy consumption (ktoe)<sup>8</sup>**

	2011	2012
(A) Gross final consumption of RES for heating and cooling	1800	1904
(B) Gross final consumption of electricity from RES	623	693
(C) Gross final consumption of electricity from RES in transport	307	290
(D) Gross total RES consumption <sup>9</sup>	2731	2888
(E) Transfer of RES to other Member States	0	0
(E) Transfer of RES from other member states and 3 <sup>rd</sup> countries	0	0
(G) RES consumption adjusted for target (D)-(E)+(F)	2731	2888

1. Facilitates comparison with Table 3 and Table 4a of the NREAPs

2 Share of renewable energy in heating and cooling: gross final consumption of energy from renewable sources for heating and cooling (as defined in Articles 5(1)b) and 5(4) of Directive 2009/28/EC divided by gross final consumption of energy for heating and cooling. The same methodology as in Table 3 of NREAPs applies.

3 Share of renewable energy in electricity: gross final consumption of electricity from renewable sources for electricity (as defined in Articles 5(1)(a) and 5(3) of Directive 2009/28/EC) divided by total gross final consumption of electricity. The same methodology as in Table 3 of NREAPs applies.

4 Share of renewable energy in transport: final energy from renewable sources consumed in transport (see Article 5(1)(c) and 5(5) of Directive 2009/28/EC) divided by the consumption in transport of 1) petrol; 2) diesel; 3) biofuels used in road and rail transport and 4) electricity in land transport (as reflected in row 3 of Table 1). The same methodology as in Table 3 of NREAPs applies.

5 Share of renewable energy in gross final energy consumption.: The same methodology as in Table 3 of NREAPs applies.

6 In percentage points of overall RES share.

7 In percentage points of overall RES share.

8 Facilitates comparison with Table 4a of the NREAPs

9 According to Article 5(1) of Directive 2009/28/EC gas, electricity and hydrogen from renewable energy sources shall only be considered once. No double counting is allowed.

**Table 1.b: Total actual contribution (installed capacity, gross electricity generation) from each renewable energy technology in [Member State] to meet the binding 2020 targets <sup>10</sup>**

	2011		2012	
	MW	GWh	MW	GWh
Hydro <sup>11</sup>	1050	1963	1064	2129
<1 MW	142	397	149	391
1 MW- 10 MW	155	498	163	526
>10MW	753	1069	753	1212
<i>pumped:</i> <sup>*1</sup>	-	-	-	-
<i>mixed</i> <sup>12</sup>				
Geothermal	0	0	0	0
Solar:	1913	2182	2022	2149
<i>photovoltaic</i>	1913	2182	2022	2149
<i>concentrated solar power</i>	0	0	0	0
Tide, wave, ocean				
Wind:	213	397	258	416
<i>onshore</i>	213	397	258	416
<i>offshore</i>	0	0	0	0
Biomass <sup>13</sup> :	177	2704	300	3372
<i>solid biomass</i>	-	1775	-	1904
<i>biogas</i>	177	929	300	1468
<i>bioliquids</i>	-	-	-	-
<b>TOTAL</b>	<b>3353</b>	<b>7246</b>	<b>3644</b>	<b>8066</b>
of which in CHP	-	1888	-	2848

\*1 Under the methodology given in 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 and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC and in the Commission Decision of 30 June 2009 establishing a template for National Renewable Energy Action Plans under Directive 2009/28/EC, pumped hydro stations are not considered a renewable energy source.

**Table 1c: Total actual contribution (final energy consumption<sup>14</sup>) from each renewable energy technology in the Czech Republic to meet the binding 2020 targets from renewable resources (ktoe)<sup>15</sup>**

	2011	2012
Geothermal (excluding low temperature geothermal heat in heat pump applications)	0	0
Solar:	11	13
Biomass <sup>16</sup> :	1737	1829
<i>solid biomass</i>		1721
<i>biogas</i>		108
<i>bioliquids</i>	0	0
Renewable energy from heat pumps:		
- of which aerothermal		
- - of which geothermal	52	62
- - of which hydrothermal		
<b>TOTAL</b>	<b>1800</b>	<b>1904</b>
<i>of which DH</i> <sup>17</sup>	79	79
<i>of which biomass in households</i> <sup>18</sup>	1106	1140
	1106	1140

10 Facilitates comparison with Table 10a of the NREAPs

11 Normalised in accordance with Directive 2009/28/EC and Eurostat methodology.

12 In accordance with new Eurostat methodology.

13 Take into account only those complying with applicable sustainability criteria, see Article 5(1) last subparagraph of Directive 2009/28/EC.

14 Direct use and district heat as defined in Article 5 (4) of Directive 2009/28/EC.

15 Facilitates comparison with Table 11 of the NREAPs

16 Take into account only those complying with applicable sustainability criteria, see Article 5(1) last subparagraph of Directive 2009/28/EC.

17 District heating and / or cooling from total renewable heating and cooling consumption (RES-DH).  
18 From the total renewable heating and cooling consumption.

**Table 1d: Total actual contribution from each renewable energy technology in Czech Republic to meet the binding 2020 targets for energy from renewable resources (ktoe) <sup>19,20</sup>**

	2011	2012
Bioethanol/ bio-ETBE	59	59
<i>of which biofuels <sup>21</sup> (Art. 21 (2))</i>		
<i>of which imported <sup>22</sup></i>		
Biodiesel	241	221
<i>of which biofuels <sup>23</sup> (Art. 21 (2))</i>		
<i>of which imported <sup>24</sup></i>		
Hydrogen from renewables	0	0
Renewable electricity	8	9
<i>of which road transport</i>	0	0
<i>of which non- road transport</i>	8	9
Others (e.g. biogas, vegetable oils, etc.) - please specify	0	0
<i>of which biofuels <sup>25</sup> (Art. 21 (2))</i>		
<b>TOTAL</b>	307	290

**2. Measures taken in the preceding 2 years or planned at national level to promote the growth of energy from renewable sources taking into account the indicative trajectory for achieving the national RES targets as outlined in your National Renewable Energy Action Plan (Art. 22(1)(a) of Directive 2009/28/EC).**

**Table 2: Overview of all policies and measures**

Name and reference of the measure	Type of measure*	Expected result**	Targeted group and or activity***	Existing or planned****	Start and end dates of the measure
1. Act No 165/2012 on subsidised energy sources	Regulatory	Installed capacity	Public administration, investors, planners	Existing/Completed	<u>Approved: 31 January 2012</u> <u>Effective: 1 January 2013</u>
2. Amendment to Act No 183/2006	Regulatory	Installed capacity	Public administration, investors, planners	Existing/Completed	<u>Approved: 19 September 2012</u> <u>Effective: 1 January 2013</u>
3. Amendment to Act No 184/2006	Regulatory	Installed capacity	Public administration, investors, planners	Existing/Completed	<u>Approved: 25 October 2012</u> <u>Effective: 1 January 2013</u>
4. Amendment to Act No 416/2009	Regulatory	Installed capacity	Public administration, investors, planners	Existing/Completed/Complements	<u>Approved: 25 October 2012</u> <u>Effective: 1 February 2013</u>

19 For biofuels take into account only those compliant with the sustainability criteria, see last subparagraph of Article 5(1).

20 Facilitates comparison with Table 12 of the NREAPs

21 Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

22 From the whole amount of bioethanol / bio-ETBE

23 Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

24 From the whole amount of biodiesel.

25 Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

4. Amendment to Act No 458/2000 (measures to simplify authorisation for so-called micro sources)	Regulatory	Installed capacity	Public administration, investors, planners	Planned/Complements	Expected start of legislative process: 1st half 2014 Expected effective: 1 January/July 2015
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\* Indicate if the measure is (predominantly) regulatory, financial or soft (i.e. information campaign). \*\*Is the expected result behavioural change, installed capacity (MW; t/year), energy generated (ktoe)?

\*\*\*Who are the targeted persons: investors, end users, public administration, planners, architects, installers, etc.? Or what is the targeted activity / sector: biofuel production, energy use of animal manure, etc)?

\*\*\*\* Does this measure replace or complement measures contained in Table 5 of the NREAP?

## 2.a Please describe the progress made in evaluating and improving administrative procedures to remove regulatory and non-regulatory barriers to the development of renewable energy (*Article 22(1)(e) of Directive 2009/28/EC*).

In the case of measures to speed up approvals procedures for infrastructure and coordination of its approval with administrative and planning procedures, the following measures were adopted during 2011 and 2012:

- an amendment was approved to Act No 183/2006, on land-use planning and the building code (the Building Act), which permitted the consolidation of several processes and thereby shortening the entire authorisation process. The purpose of the extensive amendment to the Building Act was in part to refine the current wording and also to simplify a number of procedures and institutions; in particular, this affected the whole spatial planning process and also plans for which no environmental impact assessment was required. The amendment to the Building Act contained the following points in particular:
  - a refinement of the procedures within the simplified territorial planning process
  - a change to the wording of the planning consent
  - an amendment to procedures for concluding public contracts, which replace planning decisions
  - an amendment to time limits for the issue of a planning decision
  - an expansion of deregulation in land-use planning and building procedures, i.e. an expansion of the list of plans for which neither a planning decision nor planning consent (building permission or declaration) are required.
  - a change in the wording for the procedures of an authorised inspector
  - refinement of the wording of offences
  - elimination of some irregularities and duplicates in the process working in relation to the Administrative Code, e.g. on the publication of documents.
- an amendment was approved to Act No 184/2006, on removing or limiting ownership rights to land or a building (the Expropriation Act); this introduced, or amended some time limits and thus made it possible to shorten the entire authorisation process. The amendment to the Expropriation Act contained the following points in particular:
  - a partial easing of the conditions for the admissibility of expropriation, inter alia shortening the deadline for negotiations from the current six months to 90 days; it will be possible to proceed to expropriation, if the expropriating party fails within 90 days of the submission of the proposal to conclude a contract for the acquisition of rights to the land or structure
  - the introduction of a new requirement to submit an expert opinion, on which the expropriating party bases its assessment of compensation which will have to be attached to the draft contract
  - the right to lease does not automatically disappear with expropriation, but notice may be given on it, if it obstructs the purpose of the expropriation
  - the regulation of compensation for expropriation is modified – account is no longer

taken of the appreciation or depreciation of real estate in connection with the purpose of the expropriation

- decision-making in expropriation proceedings will be divided into a verdict on expropriation and a verdict on compensation, when an appeal against the verdict on compensation will not prevent the coming into force of the verdict on expropriation
  - during appeal proceedings the verdict on compensation may not be changed to the detriment of the expropriated party or third parties
  - there is a change in jurisdiction in judicial review of an Expropriation Ruling: the verdict on expropriation will be assessed by the Administrative Court, while the verdict on compensation by the civil court
  - the court will be entitled in exceptional cases to increase the compensation by fixed coefficients.
- an amendment was approved to Act No 416/2009, on accelerating the construction of transport, water and energy infrastructure.

On the basis of these changes there will be a simplification of approval processes and thereby a shortening of the time needed for preparation and implementation of construction of energy infrastructure, including that area aimed at renewable energy sources.

**2.b Please describe the measures for ensuring the transmission and distribution of electricity produced from renewable energy sources and improving the framework or rules for bearing and sharing of costs related to grid connections and grid reinforcements (Art.22 (1)(f) of Directive 2009/28/EC).**

Connection and operation of electricity generating plants:

In respect of measures for ensuring the transmission and distribution of electricity produced from renewable energy sources and improving the framework or rules for bearing and sharing of costs related to grid connections and grid reinforcements the following measures were adopted during 2012.

In 2012 a law on supported energy sources was approved, which introduced provisions for connecting electricity generation from renewable energy sources to the electricity grid.

There is another proposed amendment to the Energy Act, which will probably be submitted to the legislative process during 2014. This amendment will introduce simplified authorization for the micro sources that will produce electricity for the internal consumption by an electricity producer. Such sources in the future will not require an electricity production license from the Energy Regulatory Office ("ERO"). This an amendment to the provisions of Section 3 (3), and the provisions of Sections 24 and 98a of the Energy Act. Electricity generating plants with small installed capacity (used mainly for the production of electricity for internal consumption by an electricity producer) already currently have simplified connection of the generating plant to the electricity grid.

Investment in the development of transmission and distribution systems:

*a) Already implemented, and planned, investment in the transmission and distribution networks in the Czech Republic*

In the Czech Republic the largest investors and operators of transmission and distribution networks are ČEPS, a.s., E.ON Distribuce, a.s., ČEZ, a.s. and Pražská energetika, a.s. Each of these companies publishes on its website information on the financial costs invested in transmission and distribution networks and also publishes its future plans in this area. The attached table gives a summary of investment costs for 2011 and 2012, and then gives a summary of planned investment up to 2015.

Total planned and completed investment by distribution and transmission network operators					
Company name	Completed investment		Planned investment		
	2011	2012	2013	2014	2015
ČEPS	3.734 bn CZK	3.628 bn CZK	See 2013-2022 10-Year transmission system Plan for the Czech Republic		
E.ON	3.3 bn CZK	3.5 bn CZK	3.63 bn CZK	3.65 bn CZK	4.09 bn CZK
ČEZ	10.2 bn CZK	8.6 bn CZK	8.2 bn CZK	7.7 bn CZK	7.6 bn CZK
Pražská energetika	1.8 bn CZK	1.8 bn CZK	1.8 bn CZK	1.8 bn CZK	1.8 bn CZK

In accordance with Czech legislation, ČEPS, a.s. prepares a ten-year plan for the development of the transmission system incl. an investment plan. Currently the plan for 2014 – 2023 has been prepared and approved, and is publicly available on the company's website. Under this plan, the total amount of investment over 2013 – 2026 amounts to a total of 72.87 bn CZK with an annual average investment of 5.2 bn CZK.

E.ON Distribuce a.s. publishes on its website on an ongoing basis "Expected developments in the E.ON Distribuce, a.s. distribution system for 2013 – 2018", made up of the most significant investment projects for the period in question. The value of future investment in the development and renewal of the network in the coming years is due to continue at the same value as before. Publication of a development plan on their websites is also carried out by other DSOs - ČEZ, a.s and Pražská energetika, a.s. Pražská energetická plans to maintain this level of investment over the long term.

*b) Selected completed and planned projects*

As has already been stated, detailed information on projects in the distribution and transmission networks which have been the subject of past investment are available to the public on the websites of the individual companies. Nevertheless, for more detailed information the attached tables contain a summary of some of the completed and planned projects.

**ČEPS, a.s.**

Completed Projects				
Project name	Location	Capacity	Completion	Investment cost
New substation	Kletná	400 kV	12/2011	828.4 mill. CZK
New substation	Chotějovice	400 kV	12/2011	926.1 mill. CZK
New dual lines	Chotějovice - Výškov	400 kV	12/2011	827.1 mill. CZK

Planned projects				
Project name	Location	Capacity	Completion	Investment cost
Wind farm	Chomutov	140 MW	1 <sup>st</sup> phase 2014 2 <sup>nd</sup> phase 2017	23.2 mill. CZK
New substation	Vernéřov	400 kV	10/2017	728.7 mill. CZK
Transformation	Prosenice	400/110 kV	12/2014	195.8 mill. CZK

New substation	Vítkov	400 kV	12/2019	885.0 mill. CZK
New substation	Dětmarovice	400 kV	12/2020	1200 mill. CZK
New transformer	Prague - Chodov	400 kV	10/2014	311.0 mill. CZK
New substation	Prague - Sever	400 kV	9/2025	2518 mill. CZK
New dual lines	Přeštice, Vítkov	400 kV	12/2021	2660 mill. CZK
(reconstruction)	Přeštice, Vítkov	400 kV	12/2021	2660 mill. CZK
New dual lines	Vítkov, Verněřov	400 kV	12/2019	2475 mill. CZK
(reconstruction)	(Chomutov region)			
New dual lines				
(loop on the current line to the new R400)	Prague - Sever	400 kV	12/2024	259.0 mill. CZK

### **ČEZ, a.s.**

This summary contains selected projects linked (related to) ČEPS, a.s. projects and projects to be implemented in the immediate future.

Completed Projects				
Project name	Location	Capacity	Completion	Investment cost
New transformer station	Kletná	220/110 kV	12/2011	1200.4 mill. CZK
New transformer station	Chotějovice	400/110 kV	12/2011	41.4 mill. CZK
New transformer station	Chýně	110/22 kV	12/2013	205 mill. CZK
Substation reconstruction	Prague - Řeporyje	110 kV	12/2013	750 mill. CZK
New transformer station	Jablonec - Jih	110/22 kV	12/2012	345 mill. CZK
New substation	Ústí nad Labem - centre	110 kV	10/2012	239 mill. CZK

Planned projects				
Project name	Location	Capacity	Completion	Investment cost
New transformer station	Verněřov	400/110 kV	10/2017	196 mill. CZK
Transformation	Prosenice	400/110 kV	12/2014	91 mill. CZK
New substation	Vítkov	400/110 kV	12/2019	105 mill. CZK
New transformer station	Dětmarovice	400/110 kV	12/2020	1500 mill. CZK
New transformer station	Jirny	110/22 kV	10/2016	212 mill. CZK
Line splitting	Červenka - Šternberk	110 kV	12/2016	157 mill. CZK
Substation reconstruction	Přeštice	110 kV	12/2016	560 mill. CZK
Substation reconstruction	Albrechtice	110 kV	10/2016	548 mill. CZK

### **E.ON, a.s.**

Completed Projects			
Project name	Location	Completion	Investment cost
New substation construction R 110/22 kV	Brno -Jih (Moravany)	2011	119 mill. CZK
Line reconstruction 110 kV	Sokolnice - Pohořelice	2012	97 mill. CZK
Substation reconstruction 110/22 kV	Vranov nad Dyjí	2012	29 mill. CZK
Renewal of Ripple control transmitters and automation	-	2010-2012	80 mill. CZK



### Regulatory framework:

The Energy Regulatory Office ("ERO") sets the prices for electricity transmission and distribution, as well as for other activities of the transmission system operator (TSO) and Distribution System Operators (DSO) to cover the costs reasonably incurred to ensure reliable, safe and efficient performance of the licensed activity, as well as depreciation and a reasonable profit to ensure a return on the investment made in facilities used to perform the licensed activity (see the provisions of Section 17 (11 and 12) and Section 19a of Act No. 458/2000, the Energy Act, the "Energy Act"). This provides the appropriate investment incentive for the TSO and DSO.

The TSO and DSOs are required to ensure the safe, reliable and efficient operation, renewal and development of the system (see Section 24 (1) a) et seq., regarding the obligations of the TSO, and Section 25 (1) a) et seq., regarding the obligations of the DSO) in conjunction with the obligation to preferentially connect producers of energy from renewable sources according to Section 7 (1) of Act No. 165/2012 on supported energy sources.

In conjunction with the Office's powers to supervise compliance by the TSO and the DSOs (see the provisions of Section 17(7) f) and Section 18 of the Energy Act), these obligations ensure that in the development of their systems the TSO and the DSOs have to take into account the development of electricity from renewable sources.

In relation to powers to regulate, and by extension, audit investments within the meaning of Art. 16(1) of the Directive on Renewable Sources, member states have a general duty to ensure that their designated regulatory authorities have the authority to monitor TSO investment plans and consider them in its annual report, under Art. 37(1) g) of the Directive on the Electricity Market. In relation to the TSO, the ERO is entrusted with the authority to approve TSO investment plans (see the provisions of Art.17(7) i) of the Energy Act), and thus to intervene in those plans. With regard to the DSOs, or more specifically the resources to secure their compliance, this obligation is met mainly through the ERO having the authority to exercise supervision in the energy sector (see the provisions of Section 17(7) f) in conjunction with Section 18 of the Energy Act). For any breaches found it may impose fines, corrective measures, and by extension these may lead to the withdrawal of their licence.

The established regulatory framework in the Czech Republic fully supports investment in the networks. In accordance with the wording of Section 19a (1) of the Energy Act the ERO proceeds in the regulation of prices in such a manner that the prices set cover the costs reasonably incurred to ensure a reliable, safe and efficient performance of the licensed activity, as well as depreciation and a reasonable profit for providing a return on the investment made in facilities serving the licensed activity. In doing so the ERO also takes into account the transmission system plan, predictable future demand and the requirements for operational security of the transmission and distribution systems. Section 11(1) c) of the Energy Act also imposes on regulated entities the obligation to ensure that technical equipment used to perform the licensed activities meets the safety and reliability requirements set out in the legal regulations and technical standards.

The costs arising from activated investment are fully taken into account when determining the tariffs, meaning that companies are motivated to implement investments and in particular to complete them, because, in accordance with the regulation methodology for the III. regulatory period, activated investments increase the RAB (*Regulatory Asset Base*), and thereby the level of income and allowable depreciation.

### **3. Please describe the support schemes and other measures introduced currently to support energy from renewable sources and provide a report on any form of development of measures used in respect of the measures set out in your NREAP (Art. 22(1) b) of Directive 2009/28/EC).**

In the Czech Republic, support for renewable sources may be divided into what is known as operational

support in the form of purchase prices or green bonuses, investment support from grant programmes and tax measures.

Operational support is provided on the basis of Act No 165/2012 on subsidised energy sources and a change to certain other laws. The Act was adopted in 2012, having come about to implement the European Parliament and Council Directive 2009/28/EC and to streamline existing forms of support. The Act establishes two systems of operational support for production of electricity from renewable energy sources, through purchase prices and green bonuses. These schemes cannot be combined, a producer must select a system under which it will produce, with support in the form of the purchase price being available only to selected production units, in order to give priority to support in the form of green bonuses. Green bonuses are paid out by the market operator and the purchase price by a trader obliged to purchase and designated by the state.

Purchase prices were calculated having regard to the wording of Section 4 of Act No 165/2012 and are set in such a way that over the lifetime of the relevant kinds of electricity plants, producers were guaranteed a fifteen-year return on their investment. Over the lifetime of the source purchase prices are increased by 2% having regard to the index of industrial producer prices.

The Energy Regulation Office sets the value of green bonuses in such a way that it takes account of the value of market price of electricity for individual types of renewable energy sources. Under this system a producer may sell his electricity output to any customer or electricity trader at market price, gaining in a green bonus in addition. The bonus scheme also permits the use of generated electricity for one's own use and to apply a green bonus against this use. Compared with purchase prices they are at an advantage, because their value reflects the increased level of risk associated with selling the electricity produced in the market.

The value of purchase prices and green bonuses for different types of renewable energy sources for 2011 are included in Energy Regulatory Office Price Decision No 2/2010 dated 8 November 2010 laying down support for electricity from renewable energy sources, combined heat and power and secondary energy sources. The value of purchase prices and green bonuses for different types of renewable energy sources for 2012 are included in Energy Regulatory Office Price Decision No 7/2011 dated 23 November 2011 laying down support for electricity from renewable energy sources, combined heat and power and secondary energy sources.

The basic technical parameters for various types of renewable energy sources that go into the support calculations are listed in Annex 3 of Energy Regulatory Office Decree No. 475/2005 Coll., implementing certain provisions of the Act on support for the use of renewable energy sources, as amended. The investment costs related to a unit of installed capacity and estimated hourly usage are the basic parameters for each type of renewable energy.

**Table 3: Operational support schemes for energy from renewable sources**

<b>Actual support costs for RES</b>	<b>2011</b>	<b>2012</b>
	<b>[000 CZK p.a.]</b>	<b>[000 CZK p.a.]</b>
Small hydro stations	1,452,459.02	1,448,283.79
Photovoltaic stations	23,583,546.09	24,734,572.96
Wind farms	630,844.81	747,271.00
Geothermal sources	0.00	0.00
Biogas stations	2,506,294.66	4,033,169.87
Biomass	2,315,881.73	2,532,611.79
<b>Total RES</b>	<b>30,489,026.31</b>	<b>33,495,909.42</b>
Costs of variation and corrections	2,141,683.29	2,006,597.25
<b>Total RES incl. variation and corrections</b>	<b>32,630,709.60</b>	<b>35,502,506.67</b>

Investment aid for the construction of renewable energy plants is provided in the Czech Republic mainly from the following Operational Programmes - Entrepreneurship and Innovation (Ministry of Industry and

Trade).the Environment (Ministry of Environment), the Green Light for Savings Scheme (Ministry of the Environment) and Rural Development (Ministry of Agriculture).

Fiscal measures consist of tax exemption, reduction or refund:

- a) Exemption from income tax. In line with the provision of Act No 586/1992, on income taxes. Exemption concerns only income from operation of the facility in the calendar year in which it was brought on-stream and the five years immediately following. This support has been cancelled (the scheme is running to completion), and no longer applies to new sources. Under transitional and final provisions sources brought on-stream no later than 2010 were entitled to this support.
- b) Tax depreciation. In line with the provision of Act No 586/1992, on income taxes.
- c) Exemption from Electricity Tax. In line with Act No 261/2007 on stabilisation of public budgets. Here guarantees on the origin of electricity from renewable sources are used.
- d) Exemption from Property Tax. In line with Act No 338/1992 on Property Tax.

**3.1 Please provide information on how electricity which is the subject of support is divided between final energy consumers for the purposes of Art. 3(6) of Directive 2003/54/EC (Art. 22(1) b) of Directive 2009/28/EC).**

Information on how electricity which is the subject of support is divided between final energy consumers for the purposes of Art. 3(9) of 2009/72/EC (which replaced Directive 2003/54/EC) are given in line with the provisions of Act No 458/2000, on conditions for business and the execution of state administration in the energy sector and a change to certain other laws (the Energy Act) and Decree No 210/2011 on the scope, prerequisites and deadlines for billing for supplies of electricity, gas or heat energy and related services, on invoices at the end user.

**4. Please provide information on how, if at all, support schemes were proposed with the aim of taking into account the ways of using energy from renewable sources which offer additional benefits, but may also be more costly, including biofuels produced from waste, remains, non-food cellulose materials and ligno-cellulose materials (Art. 22 (1) c) of Directive 2009/28/EC).**

Support for different kinds of renewable sources is not discriminatory and there is no preferential support for one kind of renewable energy over another. The Czech Republic does not have any special support which would give preferential treatment to biofuels produced from waste, residues, non-food cellulose materials and ligno-cellulose materials, in contrast to other biofuels.

**5. Please provide information on how the system of guarantees of origin functions for electricity, heating and cooling from renewable energy sources and on measures adopted to ensure the reliability of the system and its protection against fraud (Art. 22 (1) d) of Directive 2009/28/EC).**

Guarantees of origin in the Czech Republic are issued under Act No 165/2012 on subsidised energy sources and the relevant accompanying Decree No 440/2012. Guarantees of origin for energy from renewable energy sources are issued in the Czech Republic only for electricity from renewable energy sources as required by the original Directive 2001/77/EC, on support for electricity produced from renewable energy sources on the internal electricity market and the current Directive 2009/28/EC. Guarantees of origin for heat and cooling from renewable energy sources are not issued in the Czech Republic.

Guarantees of origin in the Czech Republic are issued by the responsible organisation, which is the market operator. Currently, guarantees of origin issued by the market operator are used to authenticate the right to exemption from the electricity tax introduced by Directive 2003/96/EC on the taxation of energy products and electricity.

Validation of the data in a manufacturer's request for the issue of a guarantee of origin takes place in the market operator's secure system. The period and amount of electricity for which a guarantee of origin is requested is also compared in a secure manner with the database of subsidies paid by the operators of the distribution systems.

The price for the issue of a guarantee of origin contains both fixed and variable elements. The fixed

element is payable for each month in which at least one guarantee of origin is issued, to the value of 25 CZK. The variable element is payable per issued guarantee of origin (to the volume of 1 MWh) to the value of 0.17 CZK.

**6. Please describe the developments in the preceding 2 years in the availability and use of biomass resources for energy purposes (Art. 22 (1) g) of Directive 2009/28/EC).**

*It is suggested that tables 4 and 4a are used to provide more detailed information on the biomass supply.*

**Table 4: Biomass supply for energy use**

	Amount of domestic raw material (*)		Primary energy in domestic raw material (ktoe)		Amount of imported raw material from EU (*)		Primary energy in amount of imported raw material from EU (ktoe)		Amount of imported raw material from non EU(*)		Primary energy in amount of imported raw material from non EU (ktoe)	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
<b>Biomass supply for heating and electricity:</b>												
Direct supply of wood biomass from forests and other wooded land energy generation (fellings etc.)**	3521	3649	1093	1133	25	20	8	6	3	12	1	4
Indirect supply of wood biomass (residues and by-products from wood industry etc.)**	3364	3385	865	895	168	264	53	78	33	27	10	8
Energy crops (grasses, etc.) and short rotation trees	302	355	120	124								
Agricultural by-products / processed residues and fishery by-products **	2429	4189	180	304								
Biomass from waste (municipal, industrial etc.) **	4380	4442	173	178								
Others												
<b>Biomass supply for transport:</b>												
Common arable crops for biofuels	1156 thousand t (beet, sugar beet)	1335 thousand t (beet, sugar beet and maize)	174	218	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Energy crops (grasses, etc.) and short rotation trees for biofuels	0	0	0	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0	0	0	0	0

\* Amount of raw material if possible in m<sup>3</sup> for biomass from forestry and in tonnes for biomass from agriculture and fishery and biomass from waste

\*\* The definition of this biomass category should be understood in line with Table 7 of part 4.6.1 of Commission Decision C(2009) 5174 final, establishing a template for National Renewable Energy Action Plans under Directive 2009/28/EC.

**Table 4a. Current domestic agricultural land use for production of crops dedicated to energy production (ha)**

Land use	Surface (ha)	
	2011	2012
1. Land used for common arable crops (wheat, sugar beet etc.) and oilseeds (rapeseed, sunflower etc.). (Please specify main types.) *1	189620 (beet and sugar beet)	172 426 (beet, sugar beet and maize)
2. Land used for short rotation trees (willows, poplars). (Please specify main types.)	771,91 (mainly poplars, partly willow)	1292,88 (mainly poplars, partly willow)
3. Land used for other energy crops such as grasses (reed canary grass, switch grass, Miscanthus), sorghum. (Please specify main types.)	Not monitored	Not monitored

\*1 this is not land used, but a reverse estimate of land area needed to produce biofuels.

comment: for short rotation trees this is information on the area on which short rotation trees are actually grown. The area for other cultivated energy crops is not monitored.

Comment: In the previous report this table gave a value of 1,120,000 ha which is the maximum possible potential area which under the Biomass Action Plan for 2012-2020 can be used for purposes other than the production of foodstuffs while maintaining 100% food self-sufficiency for the Czech Republic. This then is the maximum possible area which could be used for other than foodstuffs production, that is for energy use, but not the actual area used for cultivating energy crops.

**7. Please provide information on any changes in commodity prices and land use within the Czech Republic in the preceding 2 years associated with increased use of biomass and other forms of energy from renewable sources. Please provide where available references to relevant documentation on these impacts in your country (Art. 22(1)(h) of Directive 2009/28/EC).**

*When assessing commodity price impacts, it is suggested to consider at least the following commodities: common food and feed crops, energy wood, pellets.*

There was no evidence of an increase in agricultural commodity prices as a result of the use of purpose-grown biomass.

Over the last 2 years there has been no significant change in land use for cultivating raw materials for the production of traditional biofuels. The main raw materials for the production of biofuels were beet, sugar beet, and in 2012, also maize. Wheat, which in 2009 and 2010 was used for bioethanol production, was not used at all in 2011 and 2012.

In the case of land use we give data on crops used for biofuel production (FAME and bioethanol). In 2011 the total area for raw materials cultivation for biofuels production was 189.6 thousand ha; in 2012 this fell to 172.4 thousand ha.

An important aspect in the consideration of the impact of biomass use for energy purposes in the Czech Republic on prices and land use is also the fact that the Czech Republic has available a sufficient area of arable land to secure 100% food self-sufficiency, as well as to meet its 10% RES target in transport, without their being competition for the use of arable land for these different purposes (see the Biomass Action Plan for 2012-2020, approved by the government on 12 September 2012).

**8. Please describe the development and share of biofuels made from wastes, residues, non-food cellulose material, and ligno cellulose material (Art. 22(1)(i) of Directive 2009/28/EC).**

**Table 5: Production and consumption of Article 21(2) biofuels (Ktoe)**

<i>Article 21(2) biofuels</i> <sup>26</sup>	Year 2011	Year 2012
Production – FAME from food waste and animal fats *1	11.23	11.36
Consumption – FAME from food waste and animal fats *1	11.23	11.36
Total production of biofuels under Article 21(2)	0	0
Total consumption of biofuels under Article 21(2)	0	0
% share of fuels under Article 21(2) from total RES-T	0	0

\*1 only non-commercial biofuels production at two pilot projects for research and development purposes.

**9. Please provide information on the estimated impacts of the production of biofuels and bioliquids on biodiversity, water resources, water quality and soil quality within the Czech Republic in the preceding 2 years. Please provide information on how these impacts were assessed, with references where available to relevant documentation on these impacts in the Czech Republic (Art. 22(1)(j) of Directive 2009/28/EC).**

The conditions which a farmer must fulfil for growing biofuel feedstock are no different from those for growing foodstuffs, namely compliance with GAEC. Compliance with these conditions is checked and is linked to the payment of subsidies. Non-compliance would entail the risk of a financial penalty for the farmer. For this reason no impact is expected during as a result of cultivation.

The impact of agricultural production on biodiversity, water resources, water quality, soil quality and other aspects of the environment are routinely monitored in the Czech Republic and are evaluated using a set of appropriate indicators. The values of selected indicators are presented to the government and made public through the annual Report on the State of Agriculture, Report on the State of the Environment and the Sustainable Development Report for the Czech Republic.

Monitoring of land that could be affected by the negative impact of the growing of biomass will be provided through the inclusion of the land in the Ministry of Agriculture electronic information system, which will record all land on which biomass is purpose-grown (agricultural and forest biomass). Other kinds of biomass are so-called waste or residue from agricultural production, e.g. cultivation of grains for the food industry or as waste from paper or furniture production.

The impact of agricultural production on biodiversity, water resources, water quality, soil quality and other aspects of the environment are routinely monitored in the Czech Republic and are evaluated using a set of appropriate indicators. The values of selected indicators are presented to the government and made public through the annual Report on the State of Agriculture, Report on the State of the Environment and the Sustainable Development Report for the Czech Republic. In the 2011 – 2012 monitoring period the value of most of the agricultural environmental impact indicators remained at approximately the same level. This indicates that the impact of biomass production for energy use on agricultural land was neutral during the monitoring period. We attach the following table for information:

26 Biofuels made from wastes, residues, non-food cellulose material, and ligno-cellulose material.

Name of indicator for assessing agricultural environmental impact	2011 value	2012 value
Area of protected territory under Act No 114/1992 on the Protection of Nature and the Landscape	1685 thousand ha	1690 thousand ha
Consumption of plant protection products	1.57 kg/ha	1.61 kg/ha
Consumption of mineral nitrogen fertilizers	100.7 kg N/ha	98.9 kg N/ha

Source: Report on the State of Agriculture 2011, Ministry of Agriculture and Report on the State of Agriculture 2012, Ministry of Agriculture.

**10. Please estimate the net greenhouse gas emission savings due to the use of energy from renewable sources (Art. 22(1)(k) of Directive 2009/28/EC).**

*Table 6: Estimated GHG emission savings from the use of renewable energy (t CO<sub>2</sub>eq)*

Environmental aspects	Year 2011	Year 2012
Total estimated net GHG emission savings from the use of renewable energy <sup>27</sup>	8319495	8766975
- Estimated net GHG emission savings from the use of renewable electricity	4448512	4666088
- Estimated net GHG emission savings from the use of renewable energy in heating and cooling	3402983	3624887
- Estimated net GHG emission savings from the use of renewable energy in transport	468000	476000

**11. Please provide (for the preceding two years) and estimate (for subsequent years up to 2020) the surplus/insufficient renewable energy production compared with the indicative trajectory, which could be transferred to / imported from other member states or third countries, as well the estimated number of joint projects, up to 2020 (Art. 22 (1) (l) and (m) of Directive 2009/28/EC).**

It is not anticipated that the RES targets for the Czech Republic will be met in respect of RES energy transfers from another EU member state before 2020. Nor is it anticipated that the Czech Republic will transfer an RES energy surplus to another EU member state.

**Table 7: Actual and estimated surplus and/or insufficient (-) renewable energy production compared to the indicative trajectory, which could be transferred to / from other member states or third countries, within the Czech Republic (ktoe)<sup>28, 29</sup>**

	Year 2011	Year 2012
Actual/estimated surplus or insufficient production (differentiate by type of energy from renewable sources and by origin/destination of import/export)	0	0

<sup>27</sup> The contribution of gas, electricity and hydrogen from renewable energy sources should be reported in relation to its final use (electricity, heating and cooling, or transport) and should be included just once in the overall estimated net GHG savings.

<sup>28</sup> When preparing the report on surplus production for the two years preceding report presentation and on estimates for the following years up to 2020, use actual numbers. A member state may in each report correct data from previous reports.

<sup>29</sup> When completing insufficient production in the table, designate insufficient production using negative number (e.g. -x ktoe).



### **11.1 Please provide details on statistical transfers, joint projects and decision-making rules for joint support schemes.**

Statistical transfers, joint projects and joint support schemes can provide member states with flexible means for joint use of cheaper renewable energy sources. The benefit for member states who share the financing of the development of renewable energy in another (“consuming”) state is cheaper attainment of their share of the target EU value. Indirect benefits relate to the creation of jobs, increased security of supply, to stronger domestic industry, technological innovation, etc.

Under Directive 2009/28/EC the following target was set by the European Commission for the Czech Republic: A 13% share of energy from renewable sources against gross final energy consumption and a 10% share of renewable energy sources in transport by 2020. Currently the Czech Republic is succeeding in meeting its target and anticipates a similar trend in the next few years. For these reasons the Czech Republic is not currently considering the use of the “cooperation mechanism” facilitating cross-border support for renewable energy, such as statistical transfers, joint projects and joint support schemes.

### **12. Please provide information on how the proportion of biodegradable waste in waste used for energy production was estimated, and what steps have been taken to improve and verify such estimates (*Art. 22(1), (n) of Directive 2009/28/EC*).**

The proportion of biodegradable municipal waste given in Decree No. 477/2012 on determining the types and parameters of supported renewable sources for electricity, heat or biomethane and the establishment and preservation of documents is determined on the basis of consultation and information from the IEA, Eurostat, other EU countries and information from local operators of municipal waste incinerators.