

## National Action Plan for Renewable Energy

Progress report 2011  
about the National Renewable Action  
Plan 2010 for Austria (NREAP-AT)

under Directive 2009/28/EG of the  
European Parliament and of the Council

Progress  
Report  
2011 for  
Austria  
under  
Directive  
2009/28/EG



Austrian Institute of Economic Research  
+43 (1) 798-2601-0



Wegener Centre for Climate and Global Change at the  
University of Graz  
+43 (316) 380-8430

National Renewable Energy Action Plan (NREAP-AT)  
-  
Progress Report 2011 for Austria under Directive 2009/28/EG

**Authors**

Angela Köppl  
Austrian Institute of Economic Research (WIFO)

Kathrin Reinsberger  
Wegener Centre for Climate and Global Change at the University  
of Graz and WIFO

Stefan Schleicher  
Wegener Centre for Climate and Global Change at the University  
of Graz and WIFO

A special thanks for his invaluable assistance in drafting the  
report goes to Wolfgang Bittermann of Statistics Austria

**Contact**

Stefan Schleicher  
Stefan.Schleicher@wifo.at  
+43 (676) 591-3150

# Content

- 1 Sectoral and overall shares and actual consumption of energy from renewable sources in the previous two years (n-1; n-2, e.g. 2010 and 2009) (Article 22(1)(a) of Directive 2009/28/EG)..... 1**
  - Table 1: The sectoral (heating and cooling, electricity and transport) and overall shares of energy from renewable sources..... 1
  - Table 1a: Calculation table for the renewable energy contribution of each sector to final energy consumption (ktoe)..... 1
  - Table 1b: Total actual contribution (installed capacity, gross electricity generation) from each renewable technology in Austria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable sources in electricity..... 2
  - Table 1c: Total actual contribution (final energy consumption) from each renewable energy technology in Austria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling (ktoe)..... 3
  - Table 1d: Total actual contribution from each renewable energy technology in Austria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable sources in transport (ktoe) , ..... 3
  
- 2 Measures taken in the previous two years and/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 (Article 22(1)(a)of Directive 2009/28/EG)..... 4**
  - Table 2: Overview of all policies and measures ..... 4*
  - 2.1 Describe the progress made in evaluating and improving administrative procedures to remove regulatory and non-regulatory barriers to the development of energy from renewable sources (Article 22(1)(e) of Directive 2009/28/EG). ..... 5
  - 2.2 Describe the measures taken to ensure the transmission and distribution of electricity produced from renewable energy sources and to improve the framework of rules for bearing and sharing grid connection and reinforcement costs (Article 22(1)(f) of Directive 2009/28/EG). ..... 6

<b>3</b>	<b>Describe the existing incentive measures and other measures taken to support energy from RES, as well as any further development of measures with respect to those described in the NREAP-AT (Article 22(1)(b) of Directive 2009/28/EG).</b> .....	<b>9</b>
	Table 3: Support measures for renewable energies.....	14
3.1	Indicate how the subsidised electricity will be allocated to end consumers (for the purposes of Article 3(6) of Directive 2003/54/EC) (Article 22(1b) of Directive 2009/28/EG). .....	15
<b>4</b>	<b>Where needed, provide information about how support measures were structured in order to take into account also renewable energy applications that could bring additional benefits but are possibly too expensive (e.g. biofuels made from wastes, residues, non-food cellulosic material and ligno-cellulosic material) (Article 22(1c) of Directive 2009/28/EG).</b> .....	<b>17</b>
<b>5</b>	<b>Provide information about the functioning of the system of guarantees of origin for electricity and heating and cooling from renewable energy sources and about the measures taken to ensure the reliability and protection against fraud of the system (Article 22(1d) of Directive 2009/28/EG).</b> .....	<b>18</b>
<b>6</b>	<b>Describe the development in the previous two years in the availability and use of biomass resources for energy purposes (Article 22 (1g) of Directive 2009/28/EG).</b> .....	<b>20</b>
	Table 4: Biomass supply for energy production .....	21
	Table 4a: Agricultural land use for production of domestic energy crops (ha) .....	23
<b>7</b>	<b>Indicate any changes in commodity prices and land use in Austria in the previous two years associated with its increased use of biomass and other forms of energy from renewable sources. Indicate the relevant documentation supporting these effects, if any (Article 22(1h) of Directive 2009/28/EG).</b> .....	<b>24</b>
<b>8</b>	<b>Describe the development and specify the share of biofuels made from wastes, residues, non-food cellulosic material and ligno-cellulosic material (Article 22(1i) of Directive 2009/28/EG).</b> .....	<b>25</b>
	Table 5: Production and consumption of biofuels pursuant to Article 21(2) (ktoe) .....	25

<b>9</b>	<b>Provide information about the estimated impact of the production of biofuels and bioliquids on biodiversity, water resources as well as water and soil quality in Austria in the previous two years. ....</b>	<b>26</b>
<b>10</b>	<b>Indicate the estimated value of greenhouse gas emission saving due to the use of energy from renewable sources (net values) (<i>Article 22 (1k) of Directive 2009/28/EG</i>). ....</b>	<b>27</b>
	Table 6: Estimated greenhouse gas emission saving due o the use of energy from renewable sources (million tonne CO <sub>2</sub> -equivalent) .....	27
<b>11</b>	<b>Specify, for the previous two years, the excess production/deficit of energy from renewable energy sources compared to the indicative trajectory which could be transferred to other Member States and/or Third countries and indicate estimated values for future years up to 2020. Furthermore, indicate the estimated potential for joint projects, until 2020. (<i>Article 22(1l and m) of Directive 2009/28/EG</i>). ....</b>	<b>28</b>
	Table 7: Actual and estimated excess production/deficit (-) of energy from renewable energy sources compared to the indicative trajectory which could be transferred to other Member States and/or Third countries for Austria (ktoe) , .....	28
	11.1 Provide information about statistical transfers, joint projects and decision rules for joint financial support schemes. ....	28
<b>12</b>	<b>Provide information on how the share of biodegradable waste in waste used for producing energy has been estimated and what steps have been taken to improve and verify such estimates (<i>Article 22(1n) of Directive 2009/28/EG</i>). ....</b>	<b>29</b>

## Figures:

Figure 1: UFI subsidies based on 2009 Directives	11
Figure 2: Feed-in tariffs pursuant to Eco-electricity Order 2010 (ÖSVO 2010)	14

## Abbreviations

BGBI.	Bundesgesetzblatt (Federal Law Gazette)
E-Control GmbH	Energy-Control, Austrian company with limited liability which regulates the electricity and natural gas sectors
EIWOG	Elektrizitätswirtschafts- und -organisationsgesetz (Electricity Industry and Organisation Act)
ha	Hectare
C of O	Certificate of origin
HR	Heating requirement
as am.	as amended
CR	Cooling requirement
kWh	kilowatt hour
CHP	Combined heat and power
ÖSG	Ökostromgesetz (Green Electricity Act)
ÖSVO	Ökostrom-Verordnung (Eco-Electricity Order)
O	Order
toe	tonnes of oil equivalent (1 000 toe = 41.87TJ)
SNT-VO	Use of Systems Charges Order
t	tonne
Reg.	Regulation





## 1 Sectoral and overall shares and actual consumption of energy from renewable sources in the previous two years (n-1; n-2, e.g. 2010 and 2009) (Article 22(1)(a) of Directive 2009/28/EG).

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

	2009	2010
Renewable energy sources – heating and cooling <sup>2</sup> (%)	32.3	32.2
Renewable energy sources – Electricity <sup>3</sup> (%)	67.4	65.3
Renewable energy sources – Transport <sup>4</sup> (%)	8.0 %	7.9 %
Overall share of renewable energy sources <sup>5</sup> (%)	30.9	30.8
Of which from cooperation mechanism <sup>6</sup> (%)	0	0
Surplus for cooperation mechanism <sup>7</sup> (%)	0	0

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

	2009	2010
<b>A) Gross final consumption of energy from RES for heating and cooling</b>	3 678	4 070
<b>B) Gross final consumption of electricity from RES</b>	3 886	3 948
<b>C) Gross final consumption of energy from RES in the transport sector</b>	728	716
<b>D) Gross final consumption of energy from RES<sup>9</sup></b>	8 100	8 539
<b>E) Transfer of energy from RES to other Member States</b>	0	0
<b>F) Transfer of energy from RES to other Member States and Third Countries</b>	0	0
<b>G) Consumption of energy from RES after adjustment for the target (D)-(E)+(F)</b>	8 100	8 539

<sup>1</sup> Facilitates comparison with Table 3 and Table 4a of the NREAP-AT.

<sup>2</sup> Share of renewable energy sources with respect to heating and cooling generation: gross final national consumption of energy from renewable sources for heating and cooling (pursuant to Articles 5(1)(b) and 5(4) of Directive 2009/28/EG), split into gross final national consumption for heating and cooling. The same method as that used for Table 3 of the NREAP-AT applies.

<sup>3</sup> Share of renewable energy sources in the electricity sector: gross final national consumption of energy from renewable sources for electricity (pursuant to Articles 5(1)(a) and 5(3) of Directive 2009/28/EG), split into gross final national consumption for total energy. The same method as that used for Table 3 of the NREAP-AT applies.

<sup>4</sup> Share of renewable energy sources in the transport sector: final consumption of energy from renewable sources in the transport sector (cf. Articles 5(1)(c) and (5)(5) of Directive 2009/28/EG), split into consumption in the transport sector of 1) Petrol, 2) Diesel, 3) Biofuels for road and rail transport and 4) Electricity for land transport (cf. row 3 of Table 1). The same method as that used for Table 3 of the NREAP-AT applies.

<sup>5</sup> share of renewable energy sources in the gross final national consumption. The same method as that used for Table 3 of the NREAP-AT applies.

<sup>6</sup> as percentage points of the overall share of renewable energy sources.

<sup>7</sup> as percentage points of the overall share of renewable energy sources.

<sup>8</sup> Facilitates comparison with Table 4a of the NREAP-AT.

<sup>9</sup> Pursuant to Article 5(1) of Directive 2009/28/EG, gas, electricity and hydrogen from RES can only be considered once. They cannot be counted twice.

Table 1b: Total actual contribution (installed capacity, gross electricity generation) from each renewable technology in Austria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable sources in electricity.<sup>10</sup>

	2009		2010	
	MW	GWh	MW	GWh
Hydro <sup>11</sup>	10 651	38 757	10 600	39 237
<i>non pumped</i>	7 828	34 653	7 843	34 647
<i>&lt;1MW</i>	222	1 610	134	1 677
<i>1MW-10 MW</i>	630	3 251	762	3 343
<i>&gt;10MW</i>	6 976	29 793	6 947	29 627
<i>pumped</i>	2 823	4 104	2 757	4 590
<i>Mixed</i> <sup>12</sup>	10 651	38 757	10 600	39 237
<i>Geothermal</i>	1	2	1	1
<i>Solar:</i>	51	49	93	89
<i>photovoltaic</i>	51	49	93	89
<i>concentrated solar power</i>	0	0	0	0
<i>Tide, wave, ocean</i>	0	0	0	0
<i>Wind:</i>	994	2 024	977	2 035
<i>onshore</i>	994	2 024	994	2 035
<i>offshore</i>	0	0	0	0
<i>Biomass</i> <sup>13</sup>	1 150	4 370	1 198	4 554
<i>feste Biomassesolid biomass</i>	684	2 599	704	2 674
<i>biogas</i>	161	611	171	649
<i>bioliquids</i>	305	1 160	324	1 232
<b>Total:</b>	14 709	45 201	14 971	45 916
<i>of which CHP</i>	563	2 141	616	2 339

<sup>10</sup> Facilitates comparison with Table 10a of the NREAP-AT.

<sup>11</sup> Normalised in accordance with Directive 2009/28 EC and Eurostat methodology

<sup>12</sup> In accordance with new Eurostat methodology

<sup>13</sup> Take into account only those complying with applicable sustainability criteria (cf. the last subparagraph of Article 5(1) of Directive 2009/28/EG).

Table 1c: Total actual contribution (final energy consumption<sup>14</sup>) from each renewable energy technology in Austria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling (ktoe)<sup>15</sup>

	2009	2010
<i>Geothermal (excluding low temperature geothermal heat in heat pump applications)</i>	19	20
<i>Solar</i>	123	164
Biomass <sup>16</sup>	3 421	3 767
<i>solid biomass</i>	3 388	3 734
<i>Biogas</i>	27	28
<i>Bioliquids</i>	6	4
<i>Renewable energy from heat pumps:</i>	115	119
- of which aerothermal		
- of which geothermal		
- of which hydrothermal		
<b>TOTAL</b>	3 678	4 070
Of which district heating <sup>17</sup>	614	727
Of which domestic biomass <sup>18</sup>	1 504	1 681

Table 1d: Total actual contribution from each renewable energy technology in Austria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable sources in transport (ktoe),<sup>19, 20</sup>

	2009	2010
Bioethanol/ Bio-ETBE	63	68
<i>of which biofuels pursuant to Article 21(2)<sup>21</sup></i>		
<i>of which, imported<sup>22</sup></i>	34	39
Biodiesel	355	374
<i>of which biofuels pursuant to Article 21(2)<sup>23</sup></i>		
<i>of which, imported<sup>24</sup></i>	278	322
Hydrogen from renewables	0	0
Renewable electricity	193	194
<i>of which road transport</i>	0	0
<i>of which non-road transport</i>	193	194
Others (as biogas, <b>vegetable oils</b> , etc.) – please specify	114	77
<i>of which biofuels pursuant to Article 21(2)<sup>25</sup></i>		
<b>Total</b>	728	720

<sup>14</sup> Facilitates comparison with Table 10a of the NREAP-AT.

<sup>15</sup> Facilitates comparison with Table 10a of the NREAP-AT.

<sup>16</sup> Take into account only those complying with applicable sustainability criteria (cf. Article 5(1) last subparagraph of Directive 2009/28/EG).

<sup>17</sup> District heating and/or cooling from total renewable heating and cooling consumption

<sup>18</sup> From the total renewable heating and cooling consumption

<sup>19</sup> Facilitates comparison with Table 12 of the NREAP-AT.

<sup>20</sup> Take into account only biofuels complying with applicable sustainability criteria pursuant to the last subparagraph of Article 5(1).

<sup>21</sup> Biofuels that comply with the definition at Article 21(2) of Directive 2009/28/EG.

<sup>22</sup> From the whole amount of bioethanol/bio-ETBE.

<sup>23</sup> Biofuels that comply with the definition at Article 21(2) of Directive 2009/28/EG.

<sup>24</sup> From the whole amount of biodiesel

<sup>25</sup> Biofuels that comply with the definition at Article 21(2) of Directive 2009/28/EG.

**2 Measures taken in the previous two years and/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 (Article 22(1)(a) of Directive 2009/28/EG).**

Table 2: Overview of all policies and measures

<b>Name and reference of the measure</b>	<b>Type of measure*</b>	<b>Expected result**</b>	<b>Targeted group and/or activity***</b>	<b>Existing/ planned**</b>	<b>Start and end dates of the measure</b>
<b>Horizontal measures</b>					
<b>Climate Change Act</b>	Regulatory	Establishment of binding climate targets and responsibilities	Federal states and affected federal ministries	Existing	From end 2011
<b>Environmental tax reform</b>	Regulatory	Increased taxation of resources and energy consumption	End consumers	In discussion	In discussion
<b>Energy spatial planning</b>	Regulatory	Integration of climate and energy targets in the Austrian Spatial Planning Concept	Federal government, state governments, OEROK	Existing	From 2010
<b>Energy Efficiency Act</b>	Regulatory	Statutory regulations to increase energy efficiency	End consumers, enterprises	Planned	In preparation
<b>klima.aktiv</b>	Financial	Promotion of renewable energy	Federal government, state governments, municipalities, end consumers	Existing, ongoing implementation	Gradual implementation up to 2020
<b>Buildings</b>					
<b>Technical rules in the building code of state governments</b>	Regulatory	Promotion of renewable energy systems in the building sector	Building permit applicants	Existing, revision planned	Continuous updating
<b>Further development of eligibility criteria and tools in the building sector</b>	Financial	Stronger focus of housing support on thermal remediation and the use of renewable energy for heating systems	Federal government, state governments, end consumers	Planned	Should enter into force in 2013
<b>Mobility</b>					
<b>klima.aktiv mobil</b>	Financial	Promotion of vehicles with low-emission and energy-efficient engines	Federal government, state governments, end consumers	Existing, expansion planned	Gradual implementation up to 2020
<b>Energy supply</b>					
<b>Green Electricity Act (ÖSG)</b>	Regulatory	Promotion of eco-electricity	Producers	Existing	Amended several times; latest amendment: 07/2011
<b>Use of Systems Charges Order</b>	Regulatory	Order of the Energy-Control Commission which determines Use of Systems Charges	Producers, end customers	Existing	SNT-VO 2010, amended in 2011

<b>Name and reference of the measure</b>	<b>Type of measure*</b>	<b>Expected result**</b>	<b>Targeted group and/or activity***</b>	<b>Existing/ planned**</b>	<b>Start and end dates of the measure</b>
<b>Gas Use of Systems Charges Order (GSNT-VO)</b>	Regulatory	Order of the Energy-Control Commission which determines Use of Systems Charges for the gas industry	Producers, end customers	Existing	GSNT-VO 2008, amended in 2011
<b>Security of energy supply</b>					
<b>Development of the Austrian transmission and distribution network</b>	Strategy (Masterplan 2009-2020)	Medium and long-term creation of a demand-orientated network infrastructure	Federal government, state governments, network operators	In implementation	From 2010
<b>Development of district heating and cooling</b>	Financial	Infrastructure development and strengthening of security of supply	Energy suppliers	Existing/planned	From 2010
<b>Development and enabling of environmentally beneficial electricity storage</b>	Financial	Development and protection of storage units for the integration of renewable energies	Energy suppliers	Existing/planned	From 2010

\*Please indicate whether the measure is (mainly) regulatory, financial or "soft" (e.g. awareness campaign).

\*\*Is the expected result a behavioural change, installed capacity (MWt/year), energy production (ktoe)?

\*\*\* Which is the target group: investors, end consumers, public administration, engineering consultancies, architects, installers, etc.? Which is the target activity/target sector: production of bio-fuels, energetic use of animal manure, etc.?

\*\*\*\* Does this measure substitute or supplement measures in Table 5 of the NREAP-AT?

## **2.1 Describe the progress made in evaluating and improving administrative procedures to remove regulatory and non-regulatory barriers to the development of energy from renewable sources (Article 22(1)(e) of Directive 2009/28/EG).**

In order to speed up the development of energy from RES, various incentives are offered for plants that produce eco-electricity. Plants are authorised pursuant to legal requirements, whereby plants are not discriminated on the basis of energy from renewable sources. The procedure for granting incentives to eco-electricity plants can be subdivided into three stages (e-control, 2011).

### **1. Permit under the Electricity Act**

Electric power plants as such must be authorised under the Electricity Law. The relevant legal framework is the ElWOG (BGBl. I, No 143/1998, BGBl. I No 112/2008) and the relevant implementing laws of the federal states. Different permits may have to be submitted in individual cases, such as: permit under the Electricity Act, operating plant notification, building notification, permit under the Water Act, permit under the Forestry Act, permit under the Waste Management Act, environmental impact analysis (EIA).

### **2. Recognition as Eco-electricity plants**

Moreover, an eco-electricity plant must be recognised as such by the *Landeshauptmann* (governor) of the Federal State where the plant shall be built (recognition certificate pursuant to Section 7 of the ÖSG)

### **3. Grant application to the OeMAG (Clearing and Settlement Agency)**

A way of promoting eco-electricity plants is that of supporting them via feed-in tariffs through the OeMAG. This possibility can be exploited for both technologies that depend on raw materials and those that do not depend on raw materials, with the exception of solar PV plants under 5 KWp<sup>2</sup> and small and medium-sized hydropower plants, using available budget funds.

Only energy quantities stored in the public network can be subsidised. Therefore, a grid access contract with the local grid operator is needed. The OeMAG has a purchase obligation only when all electrical energy input in the public network by an eco-electricity plant is provided to the OeMAG within a timeframe of at least twelve calendar months and the plant operator is a member of the eco-balance group. Own consumption shall be deducted.

Apart from financial support through the reimbursement of eco-electricity fed into the grid via feed-in tariffs, there is also the possibility of investment grants and special state funding, as well as occasional special funding programmes of the Federal State, such as the Solar PV Subsidy Scheme in the years 2009 and 2008 of the Klima- und Energiefonds (KLiEN).

## **2.2 Describe the measures taken to ensure the transmission and distribution of electricity produced from renewable energy sources and to improve the framework of rules for bearing and sharing grid connection and reinforcement costs (Article 22(1)(f) of Directive 2009/28/EG).**

### **Transmission and distribution of electricity produced from renewable energy sources**

It is the grid operator's responsibility and duty to connect electricity production plants to the grids, in line with EIWOG and the Use of Systems Charges Order (E-Control, SNT-VO; current SNT-VO 2010), as well as taking into account the Technical and Organisational Rules for grid operators and users (TOR) defined by the e-control, the regulatory authority for electricity and gas. Guaranteeing the supply of customers falls within the obligations defined by the EIWOG for the grid operator. Transmission and distribution operators must take all necessary steps and integrate them in their regular grid planning. The principle of non-discrimination with respect to electricity grids is fully complied with by legal regulations.

**Excerpt from the ÖSG 2002, as am. by BGBl. I, No 75/2011:**

**Section 6 Grid connection**

*(1) Each plant has the right to be connected to the grid of the grid operator in whose licence area the plant is located.*

*(2) Within the framework of its competition authority duties, E-Control shall ensure in particular that the grid operator treats all connection applicants in the same, transparent way. To this end, it can ask the grid operator to disclose its procedures for enquiries and requests submitted by connection applicants, for instance about how and within what timescales enquiries and requests were fulfilled, what criteria were used for competing grid access requests and what measures were taken in order to ensure the equal treatment of connection applicants. If the procedure that has been disclosed or actually implemented does not appear adequate to ensure fair competition, E-Control can implement measures pursuant to Section 24(2) of the Energy Control Act, BGBl. I No. 110/2010, as amended by Federal Act BGBl. I Nr. 75/2011.*

**Grid connection and reinforcement costs**

If the connection of another energy production plant causes grid reinforcement costs, these are paid by the grid operator. In this case, no distinction is made between conventional and eco-electricity plants (e-control, 2011).

The relevant provisions for grid connection costs are established in the Use of Systems Charges Order (SNT-VO 2010) – with particular references to grid access and grid provision charges.

At the moment, both infeed suppliers and off-takers have to pay grid access charges, which correspond to the costs directly linked to access creation. Moreover, off-takers must pay a grid provision charge.

Pursuant to Section 2 of the SNT-VO, the one-off grid connection charges payable by the grid user compensate grid operators for all relevant expenses, calculated on the basis of generally accepted market prices, that are directly linked to the initial creation of a grid access or to the modification of an existing access due to the increased connected load of a grid user.

Section 3 of the SNT-VO establishes that the grid provision charges payable by a grid customer correspond to an amount for performance-dependent grid use payable to compensate indirect upstream grid expenses. Thanks to investments implemented in the grid in this way, grid customers can therefore use the grid at correspondingly lower prices.

**Excerpt from the Use of Systems Charges Order 2010  
(SNT-VO 2010):**

**Section 2 Grid access charges**

The one-off grid connection charges compensate grid operators for all expenses that are directly linked to the initial creation of a grid access or to the modification of an existing access due the increased connected load of a grid user between the grid access pursuant to Section 7 Z 25 ElWOG and the customer plant. Grid access charges do not apply when the grid user has paid the grid connection costs himself/herself.

Costs relating to the initial creation or modification of a grid connection are actually incurred costs supported by invoice documentation (original value of the plant at the time of supply). In exceptional cases, the connecting installation (physical connection between the grid user plant and the grid system) can include up to two grid levels, for instance for access to yet undeveloped areas for individual customers.

**Section 3 Grid provision charges**

*Grid provision charges are payable as a lump-sum amount for the already executed and pre-financed development of grid levels to enable the grid connection described in Section 25(5)(3-7) of the ElWOG, that is actually taken up to the agreed level for grid usage.*

*(2) Grid provision charges must comply with the basic principle of cost and cause and easy administration. The contractual agreement of a minimum performance level is allowed.*

*(3) The measurement is based on average development costs for new and transmission and distribution grids and for the enhancement of existing ones. The proceeds received from the settlement of grid provision charges cannot exceed 30 % of the average grid investments needed on a yearly basis over the previous five years.*

*(4) The reference value for determining grid provision charges is the agreed size of grid usage in kW.*



**3 Describe the existing incentive measures and other measures taken to support energy from RES, as well as any further development of measures with respect to those described in the NREAP-AT (Article 22(1)(b) of Directive 2009/28/EG).**

Incentive measures to support energy from RES.

The most important support instruments in the field of renewable energy are described as follows.

Incentives within the framework of the Climate and Energy Fund:

Title	Subsidy scheme wood heating 2011
Target group	Households
Description	Subsidy scheme for the implementation of pellet and wood-chip central heating systems and pellet stoves.
Subsidy size	The subsidy applies to the substitution of fossil fuel-based heating systems with renewable energy-based ones. Installations must be operated either with wood chips or pellets. Log wood boilers are not subsidised. Each boiler applied for attracts a subsidy of EUR 500. When the central heating boiler is substituted, the disposal of the old appliance must be traceable. A total of EUR 3 m is available for the subsidy scheme 2011.

Title	Sample remediation
Target group	Accommodation establishments, contractors, public institutions and authorities, places of worship and associations.
Description	Extensive remediation projects for commercial and public buildings can be subsidised. Production measures for the improvement of heat insulation, as well as measures for the use of renewable energy sources and for the increase of energy efficiency fall within the remit of extensive remediation projects.
Subsidy scope	The subsidy applies to measures in the field of thermal-energetic building renovation (insulation, window replacement) and renewable energy applications and well as energy efficiency (biomass-fired heating systems, CHP, solar PV, etc.)

Title	Subsidy for solar PV plants up to 5 kW
Target group	Natural persons
Description	Through the subsidy scheme for solar PV plants up to 5 kWp, the Climate and Energy Fund wants to create attractive incentives for the environmentally and climate-friendly energy supply of Austrian households. The scheme's objective is that of promoting individual, private solar PV plants through an investment cost subsidy.
Subsidy size	Up to the time of writing, approved subsidies for a total value of EUR 112 m were granted to over 16 000 private solar PV plants. The current subsidy amount is adjusted to the market situation.

Title	Solar thermal – Large-scale solar plants
Target group	All natural and legal persons who exercise an activity (albeit not limited to those in the Trade Regulation Act), particularly manufacturing companies, business and service enterprises, district heating network operators, energy suppliers, tourism businesses, public sector entities that qualify as market producers.
Description	Within the framework of this programme, the Climate and Energy Fund supports innovative, large-scale solar thermal plants with a collector surface of 100 to 2 000 m <sup>2</sup>
Subsidy size	The subsidy rate is of maximum 40 % of environmentally-relevant additional investment costs plus any surcharges. A meeting with research consultants must take place at the project design stage.

Current subsidies within the framework of the National Environmental Support (UFI):

Target group	An Austrian company or non-profit organisations, places of worship as well as local authorities (as long as they qualify as market producers) can be granted the subsidy.
Description	The subsidy applies to measures for the use of renewable energy sources, the increase of energy efficiency and mobility measures but also to measures for the prevention and reduction of atmospheric pollution, noise or hazardous waste.
Subsidy size	The subsidy is an investment cost subsidy. Depending on the main focus of the aid, it can cover up to 15-30 % of environmentally-relevant costs. At the moment, EUR 90.2 m of federal funds is earmarked for subsidy applicants on a yearly basis within the framework of the National Environmental Support. Furthermore, funding from the European Regional Development Fund (ERDF) and the European Agricultural Fund for Rural Development (EAFRD) is allocated through the National Environmental Support.

Subsidy area		Subsidy rate
<b>Biomass stand-alone plants &lt; 400 kW</b>	Flat-rate subsidy	120 EUR/kW (0-50kW), 60 EUR/kW for each additional kW (51-400 kW)
<b>District heating &lt; 400 kW</b>	Flat-rate subsidy	56 EUR/kW (0-100kW), 32 EUR/kW for each additional kW (100-400 kW) for fossil networks: half the flat-rate
<b>Heat pumps &lt; 400 kW<sub>th</sub></b>		
<i>water/water</i>	Flat-rate subsidy	85 EUR/kW (0-80kW), 45 EUR/kW for each additional kW (81-400kW)
<i>air/water</i>	Flat-rate subsidy	70 EUR/kW (0-80kW), 35 EUR/kW for each additional kW (81-400kW)
<b>Solar plants &lt; 100 m<sup>2</sup></b>	Flat-rate subsidy	Standard: 100 EUR/m <sup>2</sup> Vacuum: 150 EUR/m <sup>2</sup>
<b>Biomass co-generation</b>	Investment subsidy	10 % heat recovery
<b>Biomass near-heating, heat distribution and biomass Micro networks</b>	Investment subsidy	25 %
<b>Energy use of biogenic raw material and waste</b>	Investment subsidy	10-30 % (depending on biogenic share, heat recovery)
<b>Production of biogenic heating and motor fuels</b>	Investment subsidy	25 %
<b>Material use of sustainable raw material derivatives</b>	Investment subsidy	25 %

<b>Subsidy area</b>		<b>Subsidy rate</b>
<b>Electricity generation plants (stand-alone systems)</b>	Investment subsidy	30 %
<b>Resource management</b>	Investment subsidy	20 % (reduction of raw material consumption) 30 % (services for the reduction of raw material consumption)
<b>Use of geothermics</b>	Investment subsidy	30 %
<b>Company transport measures</b>	Investment subsidy	20 %
<b>Alternative fuel stations</b>		
<i>vegetable oil</i> <i>E85,</i>	Flat-rate subsidy	4 000 EUR/pump
<i>natural gas</i>	Flat-rate subsidy	10 000 EUR/pump
Prevention and use of hazardous waste	Investment subsidy	
<i>prevention</i>	Investment subsidy	30 % ( $\geq 90$ % reduction) 25 % ( $< 90$ % reduction)
<i>material use</i>	Investment subsidy	20 % ( $\geq 90$ % reduction) 15 % ( $< 90$ % reduction)
<i>thermal treatment or other treatment</i>	Investment subsidy	10 % ( $\geq 90$ % reduction) 10 % ( $< 90$ % reduction)
<b>Particulate filter for building or special vehicles</b>	Investment subsidy	EUR 2 500/system
<b>Prevention and reduction of air pollution</b>	Investment subsidy	
<i>reduction</i> <i>dust</i>	Investment subsidy	25 %
<i>prevention</i>	Investment subsidy	30 % ( $> 30$ % reduction) 25 % ( $\leq 30$ % reduction)
<i>reduction</i>	Investment subsidy	20 % ( $> 30$ % reduction) 15 % ( $\leq 30$ % reduction)
<b>Noise prevention and reduction</b>	Investment subsidy	20 % (primary measures) 10 % (secondary measures)
<b>Biomass stand-alone plants &gt; 400 kW</b>	Investment subsidy	20 %
<b>District heating &gt; 400 kW</b>	Investment subsidy	10 % (biogenic) 10 % (fossil)
<b>Heat pumps &gt; 400 kWth</b>	Investment subsidy	15 %
<b>Solar plants &gt; 100 m<sup>2</sup></b>	Investment subsidy	20 %
<b>Efficiency energy use</b>	Investment subsidy	30 %
<b>Air conditioning and cooling</b>	Investment subsidy	30 %
<b>Fossil CHP</b>		25 %
<b>Thermal renovation of new commercial buildings in low-energy buildings</b>	Investment subsidy	30 % (-25 % OIB Standard) 25 % (-15 % OIB Standard) 15 % ( $\Delta$ KB) 0.2 EUR/kW ( $\Delta$ HWB) 0.6 EUR/kW ( $\Delta$ KB)
<b>Other climate protection measures</b>	Investment subsidy	30 %

Figure 1: UFI subsidies based on 2009 Directives

## Subsidies pursuant to ÖSG 2002, as amended by BGBl. I, No 75/2011

Title	Investment subsidy pursuant to Green Electricity Act
Target group	Natural and legal persons
Description	Small-scale hydropower plants up to 10 MW, CHP plants and medium-scale hydropower plants are supported with an investment subsidy pursuant to the Green Electricity Act (Sections 12, 12a and 13a)

Title	Feed-in tariff subsidy pursuant to Green Electricity Act
Target group	Private persons, enterprises, local and regional authorities;
Description	The subsidy applies to renewable energy plants pursuant to Green Electricity Act. They must be officially recognised as eco-electricity plans with a decision of the relevant <i>Landeshauptmann</i> (Governor of the State). The subsidy is provided through fixed feed-in tariffs for the eco-electricity produced.

On 29 July 2011, the Green Energy (Amendment) Act was announced (BGBl I No 75/2011), which had been approved by the National Council on 7 July 2001. The reduction of waiting lists (for solar PV and wind energy) was implemented immediately; all other provisions of the Amendment can only come into force after the European Commission has approved or not prohibited them with four months' notice, possibly on 1 April 2012 or 1 July 2012.

An overview of the possible subsidies envisaged by the ÖSG 2012 is shown in the following paragraphs:

### **Reduction of waiting lists**

Eco-electricity tariffs for 2010 were increased within the Green Energy (Amendment) Act 2009, leading to a marked development of technologies for wind and solar PV in particular. Since existing subsidies could not fully cover the 'contracting agreements' submitted, long waiting lists started to build up at the Clearing and Settlement Agency (OeMAG). The current Amendment of the ÖSG provides a one-off amount of EUR 80 m for wind plants and an amount of EUR 28 m for solar PV plants. Wind plants that are registered on the waiting list and would have received a contract in 2012 or 2013, are contracted at the tariff of 9.7 eurocent/kWh as of now. For contracting that would otherwise start in 2014 or later, a tariff of 9.4 eurocent/kWh is envisaged. A similar rule applies to solar PV plants, and provides subsidies from 2.5 % to 22.5 % (depending on time of contracting and amount of the tariff applied for).

### **Increase of support quotas**

Apart from measures to cut existing waiting lists by means of one-off increases, quotas of yearly subsidy volumes are increased. The yearly subsidy amount for eco-electricity plants to be re-contracted amounts to EUR 50 m, of which:

- EUR 8 m for solar PV,
- EUR 10 m for solid and liquid biomass as well as biogas,
- EUR 11.5 m for wind,
- EUR 1.5 m for small-scale hydro and
- EUR 19 m for other RES.

The new split into subcategories should prevent individual technologies from developing more than others, as it was the case in the past.

### **Reduction of feed-in tariffs**

As long as the aforementioned quotas are not exhausted, a contracting obligation continues to apply to contracting applications pursuant to ÖSG 2012. Moreover, a reduction of feed-in tariffs applies only solar PV plants. Tariffs are set yearly by means of an Order and can also span several years. In this case, the previous year's tariffs, reduced by 10 % for solar PV, 2 % for wind and 1 % for other eco-electricity technologies continue to apply until a new Order is issued. From the entry into force of the amendment, therefore, the tariffs provided for in the 2010 Eco-electricity Order, together with said reductions, shall apply.

### **Increase of eco-electricity flat rate**

The European Commission has deemed the reduction of eco-electricity surcharges for energy-intensive companies – the so-called 'industry cap', which should have been introduced with the 2009 Amendment – an inadmissible subsidy. The current Amendment of the Act lays down the long-term reduction of eco-electricity costs by means of feed-in tariff degression. At the same time, it increased the eco-electricity flat rate. Each grid level 1-3 user (maximum voltage 380/220kV to high voltage 110kV) must pay an annual eco-electricity flat rate of EUR 35 000. In this way, based on remarks on the Government Bill, this sector (industry) bears 3 % of the costs through system charges and eco-electricity flat rates.

The 2012 ÖSG amendment enables easier and quicker access to new subsidies for new plants and the quicker processing of already submitted applications; however, it provides lower subsidies due to lower infeed prices. Furthermore, this complicates planning new plants in the long term, because legislators can announce new infeed prices by means of an Order on a yearly basis.

Table 3: Support measures for renewable energies

This table is substituted by the following text, since it does not enable a comprehensive description of support measures.

**Feed-in tariffs  
Eco-electricity  
Order**

– In Austria, the energy volumes that are fed into the network by subsidised eco-electricity plants are compensated by the Clearing and Settlement Agency (OeMAG) by means of feed-in tariffs, if legal requirements are fulfilled. The other instruments detailed in Table 3, such as quotas or certificates, are not used.

Feed-in tariffs for first-time contracting applications for 2011 were announced on 28 January 2011 in the Ökostromverordnung 2011.

Figure 2 shows a tabular overview of the feed-in tariffs determined in the 2011 and 2010 Eco-electricity Order for the purchase of electricity generated by wind, biomass, biogas, landfill and sewage gas, geothermics and solar PV:

<b>FEED-IN TARIFFS FOR NEW ECO-ELECTRICITY PLANTS 2010/2011*)</b>		<b>Tariff in EUR Cent/kWh</b>
<b>Pursuant to BGBl II No 22/2010 and BGBl II No 25/2011</b>		
<b>Raw material-independent technologies</b>		<b>Duration 13 years</b>
<b>Wind</b>		<b>9.70</b>
<b>Solar PV</b>	<b>integrated in buildings</b>	up
to 5 kWp	<b>via KLLLEN (investment subsidy)</b>	
	5 kWp to 20 kWp	<b>38.00</b>
	over 20 kWp	<b>33.00</b>
	<b>on free fields</b>	up
to 5 kWp	<b>via KLLLEN (investment subsidy)</b>	
	5 kWp to 20 kWp	<b>35.00</b>
	over 20 kWp	<b>25.00</b>
<b>Landfill gas and sewage gas</b>		sewage gas
	<b>6.00</b>	
	landfill gas	<b>5.00</b>
<b>Geothermics</b>		
<b>Raw material-dependent technologies</b>		<b>Duration 15 years</b>
<b>Solid biomass</b>		
<b>(such as wood chips, hay)</b>	up to 500 kW	<b>14.98</b>
	500 kW to 1 MW	<b>13.54</b>
	1 to 1.5 MW	<b>13.10</b>
	1.5 to 2 MW	<b>12.97</b>
	2 to 5 MW	<b>12.26</b>
	5 to 10 MW	<b>12.06</b>
	over 10 MW	<b>10.00</b>
<b>Waste with high biogenic content</b>		SN 17, table 2, e.g.
peels, sawdust	<b>- 25 %</b>	
	SN 17, table 1, e.g. peels, particle board residue	
	<b>- 40%</b>	
<i>Co-firing</i>		
<b>Additional heating in thermal power plants</b>		solid biomass (wood chips, hay)
	<b>6.12</b>	
	SN 17, table 2, e.g. peels, sawdust	<b>- 20 %</b>
	other 5-figure SN in tables 1 and 2 tables ÖkoStrG	<b>-30 %</b>
<i>Co-firing</i>		
Liquid biomass	liquid biomass	<b>5.80</b>
	supplement for production in efficient CHP	
	<b>2.00</b>	
<b>Biogas from agricultural products (e.g. corn, manure)</b>		up to 250 kW
	<b>18.50</b>	
	250 to 500 kW	<b>16.50</b>
	over 500 kW	<b>13.00</b>
	biogas from waste co-fermentation	<b>- 20 %</b>

	supplement for production in efficient CHP		
	<b>2.00</b>		
	supplement for processing for natural gas quality		
	<b>2.00</b>		
<i>Co-firing</i>			<b>proportionate</b>
<b>Feed-in tariff for raw-material dependent eco-electricity plants after expiry of the contracting obligation</b>			
<b>Solid biomass</b>			
<b>(e.g. wood chips, hay)</b>	up to 2 MW	<b>8.50</b>	
	2 to 10 MW	<b>7.50</b>	
	over 10 MW	<b>7.00</b>	
<b>Biogas from agricultural products (e.g. corn, manure)</b>			up to 250 kW
	<b>9.50</b>		
	over 250 kW	<b>8.00</b>	
	biogas from waste co-fermentation		<b>- 20 %</b>

\*) First new application in 2010 or 2011 within the framework of the statutory budget constraints

Figure 2: Feed-in tariffs pursuant to Eco-electricity Order 2010 (ÖSVO 2010)

Source: e-control 2011

For eco-electricity plants to be re-contracted, there is a yearly support amount, which equates to EUR 50 m and is allocated as follows (ÖSG 2002, as am. by BGBl. I No 75/2011):

- EUR 8 m for solar PV,
- EUR 10 m for solid and fluid biomass as well as biogas,
- EUR 11.5 m for wind
- EUR 1.5 m for small-scale hydro and
- EUR 19 m for other RES.

In 2011 - to reduce the waiting list - a one-off amount of EUR 80 m will be allocated to wind plants and one of EUR 28 m will be allocated for solar PV. This applies for the immediate contracting of applications that were submitted on the basis of the ÖSG BGBl. I No 149/2002.

### **3.1 Indicate how the subsidised electricity will be allocated to end consumers (for the purposes of Article 3(6) of Directive 2003/54/EC) (Article 22(1b) of Directive 2009/28/EG).**

**Allocation of subsidised electricity to end consumers**

From an accounting viewpoint, most of the electricity output from renewable energy sources – with the exception of the production of hydro power plants with a bottleneck output of over 10 MW – flows into the eco-balance group of the relevant control areas. The managers of eco-balance groups ensure the nationwide adjustment through the allocation of eco-electricity to all traders with respect to electricity volumes sold to end consumers. A comparatively smaller share of eco-electricity is fed into conventional balance groups by producers: this applies to the balance groups of eco-electricity suppliers on the one hand, and, on the other hand the compensation structure for electricity produced by small-scale hydro plants incentivises operators to switch temporarily from eco-balance groups to the free market. In the latter case, suppliers do not receive feed-in tariffs as set out in the Green Electricity Act, whilst the duration of their potential entitlement to subsidies is shortened (OeMAG, 2011).

**Settlement through the OeMAG:**

The operators of subsidised eco-electricity plants 'sell' their electricity to the Clearing and Settlement (OeMAG) at the prescribed market prices Einspeisetarife. The relevant grid operator has the obligation to distribute this electricity through its network.

The OeMAG allocates this electricity to individual electricity traders, who pay the corresponding transfer price. Apart from the transfer price, eco-electricity is financed by end consumers through the flat metering point charge. If the transfer price is passed on by the electricity trader, the item 'additional charges for end consumers' arises.

How much eco-electricity is allocated to which electricity trader depends on how much electricity the latter supplies to end users. For instance, an electricity trader with a 5 % market share also receives 5 % of the total eco-electricity volume purchase by the OeMAG. This percentage share is set by the OeMAG on a monthly basis.

The EIWOG 2009 provides information about the origin of subsidised electricity from renewable energy sources. Pursuant to Article 45, primary energy sources must be listed by percentage share of electricity (kWh) supplied to end consumers from solid or liquid biomass, biogas, landfill and sewage gas, geothermics, wind and solar energy, hydropower, natural gas, oil and oil derivatives, coal, nuclear energy and other (e-control 2011).

**Excerpt from the EIWOG 2009 [Electricity Industry and Organisation Act]:****Article 45a Identification of origin (Labelling)**

*(1) Pursuant to Article 45(2), primary energy sources must be listed by percentage share of electricity (kWh) supplied to end consumers from solid or liquid biomass, biogas, landfill and sewage gas, geothermics, wind and solar energy, hydropower, natural gas, oil and oil derivatives, coal, nuclear energy and other.*

*(2) The identification of primary energy sources on the electricity bill must be based on the total volumes supplied to end consumers in the previous calendar or financial year.*

*(3) The shares of different primary energy sources pursuant to Paragraph 1 must be indicated as a homogenous trader mix, which considers all the electricity supplied by the trader to end customers. If primary energy traders cannot be identified in a unanimous way, for instance in the event of a purchase over power exchanges, these volumes must be arithmetically allocated on the basis of the current total generation as per UCTE (Union for the Coordination of Electricity Transmission) data.*



- 4 Where needed, provide information about how support measures were structured in order to take into account also renewable energy applications that could bring additional benefits but are possibly too expensive (e.g. biofuels made from wastes, residues, non-food cellulosic material and ligno-cellulosic material) (Article 22(1c) of Directive 2009/28/EG).**

**Structure of support measures**

At the moment, support measures for renewable energies do not include any explicit subsidies for applications that may bring additional benefits but are potentially too expensive. With respect to biofuels made from wastes, residues, etc., the fact that the subsidy can be double-counted has contributed to speed up the development of this technology with regard to the achievement of targets. These aspects are regulated in the Amendment to the Fuel Directive. For support measures, it needs to be remembered that a 'valorisation' of waste could lead to market distortions and relevant critical developments. The overarching objective of waste reduction must be safeguarded.

**Excerpt from Directive 2009/28/EG on the promotion of the use of energy from renewable sources:**

**Article 21 (2):**

*For the purposes of demonstrating compliance with national renewable energy obligations placed on operators and the target for the use of energy from renewable sources in all forms of transport referred to in Article 3(4), the contribution made by biofuels produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material shall be considered to be twice that made by other biofuels.*

**5 Provide information about the functioning of the system of guarantees of origin for electricity and heating and cooling from renewable energy sources and about the measures taken to ensure the reliability and protection against fraud of the system (Article 22(1d) of Directive 2009/28/EG).**

**Guarantees of origin for electricity and heating and cooling from renewable energy sources**

A guarantee of origin is a tool that provides information about the way in which a kilowatt hour of electricity fed into the public grid is produced. Legally, only operators of plants that use renewable energy sources (water, wind, biomass, etc.) can request a guarantee of origin from their grid operator. At the moment, only plants that have been recognised as eco-electricity plants by the *Landeshauptmann* are covered (cf. Article 7 of the Green Electricity Act 2011). Such plants can be further subdivided into subsidised and non-subsidised plants. All plants that are subsidised on the basis of the Green Electricity Act and have a contract with eco-balance group representatives are characterised as subsidised plants. Non-subsidised plants are those that do use renewable energy sources but are not subsidised through the Green Energy Act and, as a result, do not have a contract with eco-balance group representatives. Such plants are mainly large-scale hydro plants or plants that have already left the subsidy scheme because the funding period has elapsed.

The advantage for the plant operator consists in the fact that he/she can provide conclusive proof that renewable energy sources are used to produce electricity. For the electricity trader, this advantage is the fact that submitting guarantees of origin substantially facilitates the annual statutory electricity declaration. The end consumer receives additional information about the purchased electricity product (e-control, 2011).

In Austria, the guarantee of origin for electricity and heating and cooling is governed by Articles 10 and 11 of the Green Electricity Act (ÖSG 2002, as am. by BGBl. I No 75/2011).

The grid operator issues guarantees of origin to the producer on the basis of the electricity fed into the grid. The producer, in turn, supplies such guarantees of origin to a trader/supplier based on an electricity supply contract. The trader/supplier finally supplies electricity to the end user. The evidence for electricity declaration purposes (Labelling), therefore, is provided with guarantees of origin.

**Excerpt from the Green Electricity Act (ÖSG 2002 as am. by BGBl. I No 75/2011):**

**Article 10. Certificate of origin for eco-electricity plans**

*(2) Grid operators to whose grids recognised plants that produce electricity using renewable energy sources are connected must issue a certificate attesting the quantities of electrical energy fed into the grid from these plants upon request of the aforementioned operators. The certificate can be issued by means of electronic data processing.*

*(6) The certificate pursuant to Article 1 must contain the following information:*

- 1. the quantity of the electrical energy produced*
- 2. the type and bottleneck output of the production plant*
- 3. the time and place of production*
- 4. the energy source used*

### **Article 11 Recognition of eco-electricity guarantees of origin from other states**

(1) Guarantees of origin for eco-electricity produced by plants located in another EU Member State, an EEA Member State or a Third Country are considered as guarantees of origin pursuant to this Federal Act when they fulfil the requirements of Article 15 of Directive 2009/28/EG as a minimum.

In principle, the overall system of guarantees of origins constitutes a process chain of information transfers from producer through to consumer with respect to the quality of specific electricity. A central renewable energy guarantee of origin database (REGO database) is used in order to manage all processes in this chain on the same platform. It is an electronic information management system.

After the grid operator has transmitted grid input values for eco-electricity plants to the REGO database in the month following production, guarantees of origin for the month in question are generated and transferred to the REGO account of the eco-electricity plant operator. In this way, the operator can access the guarantees autonomously and, for instance, transfer them to the accounts of electricity suppliers.

- 6 Describe the development in the previous two years in the availability and use of biomass resources for energy purposes (Article 22 (1g) of Directive 2009/28/EG).**



	Amount of domestic resource (*)		Primary energy from domestic resource (ktoe)		Amount of resource imported from the EU (*)		Primary energy from EU-imported resource (ktoe)		Amount of resource imported from non-EU countries (*)		Primary energy from non-EU imported resource (ktoe)	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
<b>Biomass supply for the transport sector:</b>												
Standard arable crops for biofuels (specify main types)												
Energy crops (grasses, etc.) and short rotation trees for biofuels (specify main types)												
Other (specify)												

\* As far as possible, indicate the quantity of resources for **biomass from forestry in m<sup>3</sup>** and **for biomass from agriculture, fishing and waste in t**.

\*\* For the definition of these biomass categories, cf. Table 7 of section 4.6.1 of Commission Decision C(2009) 5174 final, establishing a template for National Renewable Energy Action Plans under Directive 2009/28/EG.

Table 4a: Agricultural land use for production of domestic energy crops (ha)

Land use	Surface (ha)	
	2009	2010
1. Land used for standard arable crops (wheat) and oilseed (rape)	<b>50 000*</b> (115 000)**	<b>50 000*</b> (115 000)**
2. Land used for short rotation trees (80 % poplars, 20 % willows)	<b>900</b>	<b>1 100</b>
3. Land used for other energy crops such as grasses (Miscanthus, etc.)	<b>1 450</b>	<b>1 320</b>

\* Net surface, taking into account surface factoring for coproduction of protein feed (DDGS, rapeseed cake). Only part of ethanol production (starch) and vegetable oil production (oil) yield is used to produce biofuels; most of the raw material is used for high-grade protein feed for livestock and, as such, can substitute protein feed imports (e.g. soya imports from soya-growing areas in South America).

\*\* Gross surface, not taking into account coproduction of high-grade protein feeds (in brackets). Gross surfaces are often used in misleading argumentations about the competitive position of land use, therefore, the indication of net surfaces has greater importance.

**7 Indicate any changes in commodity prices and land use in Austria in the previous two years associated with its increased use of biomass and other forms of energy from renewable sources. Indicate the relevant documentation supporting these effects, if any (Article 22(1h) of Directive 2009/28/EG).**

**Changes in commodity prices and land use associated with the increase use of biomass and other forms of energy from renewable sources**

The growing of energy crops is closely linked to traditional agricultural production. In Austria – as everywhere else in the world – the same types of crops and cultivation systems as those also used for foodstuffs and feeds dominate. Positive effects are determined particularly by the inclusion of surfaces that were not used up until now (e.g. set-aside areas) and by yield increases for existing surfaces and the significant use of by-products (protein feed). No land use changes could be determined on the basis of Article 22(1h) of Directive 2009/28/EG.

At the moment, the impact of the increase use of biomass on agricultural raw material prices in Austria is seen as very limited. In this respect, it is to be noted that weather-dependent yield fluctuations, export restrictions and speculation trigger market-relevant supply fluctuations for both sectors and, therefore, are by far the biggest influencing factors for the price formation of agricultural raw materials.



## 8 Describe the development and specify the share of biofuels made from wastes, residues, non-food cellulosic material and ligno-cellulosic material (*Article 22(1i) of Directive 2009/28/EG*).

### Development and share of biofuels made from wastes, residues, etc.

Several biodiesel plants use used cooking oil for esterification. The approximate quantity is estimated at 50 000 tonnes. Moreover, in a few biogas plants, energy crops and grass are used as raw materials and, subsequently, partly as fuel. Volumes, however, are not market-relevant. Furthermore, at the moment in Austria there are not plants for the production of biofuels from non-food cellulosic material and ligno-cellulosic material apart from experimental ones.

As already highlighted at point 4, when implementing support measures, it needs to be remembered that a 'valorisation' of waste could lead to market distortions and relevant critical developments. The overarching objective of waste reduction must be safeguarded.

Table 5: Production and consumption of biofuels pursuant to Article 21(2) (ktoe)

As per the above explanation, at the moment there are no market-relevant volumes in Austria.

<b>Biofuels pursuant to Article 21 (2) <sup>26</sup></b>	<b>2009</b>	<b>2010</b>
Production – Fuel type X (specify)		
Consumption – Fuel type X (specify)		
Total production of biofuels pursuant to Article 21 (2)		
Total consumption of biofuels pursuant to Article 21 (2)		
% share of RES fuels pursuant to Article 21 (2) for transport		

<sup>26</sup> Biofuels from wastes, residues, non-food cellulosic material and ligno-cellulosic material.

**9 Provide information about the estimated impact of the production of biofuels and bioliquids on biodiversity, water resources as well as water and soil quality in Austria in the previous two years.**

**Impact of the production of biomass on biodiversity, etc.**

With the Convention on Biological Diversity (CBD), Austria entered into a legally binding international commitment aimed at conserving and managing all elements of biodiversity in a sustainable, socially responsible way - that is to say genes, species, populations and ecosystems - in order to stop or invert the trend of biodiversity loss by 2010. The Habitats Directive and the Birds Directive oblige Austria to designate certain surfaces as protected areas and to maintain a favourable conservation status for protected natural resources. With the Alpine Convention Austria committed to the protection of animal and plant species in the Alpine region. The conservation and the promotion of biodiversity in forest ecosystems is a central pillar of the Ministerial Conference on the Protection of Forests in Europe (MCPFE). Within the framework of rural development support programmes, efforts to reconcile agricultural and forestry production with the conservation of a multi-faceted, multifunctional cultural landscape and the promotion of biodiversity in agricultural landscape have been going on for a number of years, in partnership with open-minded farm managers (Hirschberger, 2006).

Based on applicable laws and regulations (Cross-Compliance, ÖPUL, GLÖZ) and the requirements of Articles 17 and 18 of Directive 2009/28/EG, no effects linked to the production of biofuels and bioliquids could be ascertained on biodiversity, water resources and water and soil quality. A wider spectrum of cultivated species can have positive effects for the diversity of cultivated plants.

**10 Indicate the estimated value of greenhouse gas emission saving due to the use of energy from renewable sources (net values) (Article 22 (1k) of Directive 2009/28/EG).**

Table 6: Estimated greenhouse gas emission saving due to the use of energy from renewable sources (million tonne CO<sub>2</sub>-equivalent)

<b>Environmental aspects</b>	<b>2009</b>	<b>2010</b>
<b>Total estimated greenhouse gas emission saving due to the use of energy from renewable sources (net value)<sup>27</sup></b>	28.8	<b>29.9</b>
- estimated greenhouse gas emission saving through electricity from RES	17.9	18.2
- estimated greenhouse gas emission saving through heating and cooling from RES	10.9	11.7
- estimated greenhouse gas emission saving through the use of RES in the transport sector		

To reach the target of a 34 % share of renewables in gross final energy consumption, no statistical transfers between Member States and participants in joint projects with other Member States and Third countries are planned at present.

---

<sup>27</sup> Specify the contribution of electricity, hydrogen and gas from renewable energy sources depending on the final intended use (electricity, heating and cooling, transport); each amount can only be considered once for to calculate the total amount of estimated net greenhouse gas emission saving.

**11 Specify, for the previous two years, the excess production/deficit of energy from renewable energy sources compared to the indicative trajectory which could be transferred to other Member States and/or Third countries and indicate estimated values for future years up to 2020. Furthermore, indicate the estimated potential for joint projects, until 2020. (Article 22(1) and m) of Directive 2009/28/EG).**

Table 7: Actual and estimated excess production/deficit (-) of energy from renewable energy sources compared to the indicative trajectory which could be transferred to other Member States and/or Third countries for Austria (ktoe)<sup>28, 29</sup>

The remarks made in the previous section apply.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Actual/estimated excess/deficit of energy from renewable energy sources (split by different types of renewable energy and origin/destination of imports/exports)	0	0	0	0	0	0	0	0	0	0	0	0

**11.1 Provide information about statistical transfers, joint projects and decision rules for joint financial support schemes.**

**Statistical transfers, joint projects and decision rules for joint financial support schemes**

To reach the target of a 34 % share of renewables in gross final energy consumption, no statistical transfers between Member States and participants in joint projects with other Member States and Third countries are planned at present.

<sup>28</sup> For excess production, state actual values for the two years prior to the submission of the report and estimated values for the years until 2020. Member States have the possibility of correcting in each report data stated in previous reports.

<sup>29</sup> When completing the table, indicate production deficits with negative numbers (e. g. -x ktoe).

**12 Provide information on how the share of biodegradable waste in waste used for producing energy has been estimated and what steps have been taken to improve and verify such estimates (Article 22(1n) of Directive 2009/28/EG).**

**Share of biodegradable waste in waste used for producing energy** of The share of biodegradable waste in waste used for producing energy is determined based on information supplied by the E-Control, which in turn uses spot tests as a basis, whose geographical coverage needs to be extended.



# References

Hirschberger P.: Potenziale der Biomassenutzung aus dem Österreichischen Wald unter Berücksichtigung der Biodiversität - Naturverträgliche Nutzung forstlicher Biomasse zur Wärme- und Stromgewinnung unter besonderer Berücksichtigung der Flächen der Österreichischen Bundesforste, WWF study in collaboration with the Austrian Federal Forestry Office, Vienna 2006.

Federal Environmental Agency. Biokraftstoffe im Verkehrssektor 2010 - Zusammenfassung der Daten der Republik Österreich gemäß Art. 4, Abs. 1 der Richtlinie 2003/30/EG für das Berichtsjahr 2009. Report issued upon request of the Federal Ministry of Agriculture, Forestry, Environment and Water Management, Department for Transport, Mobility, Land Management and Noise, Vienna 2010.

Federal Environmental Agency. Biokraftstoffe im Verkehrssektor 2011 - Zusammenfassung der Daten der Republik Österreich gemäß Art. 4, Abs. 1 der Richtlinie 2003/30/EG für das Berichtsjahr 2010. Report issued upon request of the Federal Ministry of Agriculture, Forestry, Environment and Water Management, Department for Transport, Mobility, Land Management and Noise, Vienna 2011.

## Legal sources

Bundesgesetz, mit dem Neuregelungen auf dem Gebiet der Elektrizitätserzeugung aus erneuerbaren Energieträgern und auf dem Gebiet der Kraft-Wärme-Kopplung erlassen werden (Ökostromgesetz - ÖSG) sowie das Elektrizitätswirtschafts- und -organisationsgesetz (EIWOG) und das Energieförderungsgesetz 1979 (EnFG) geändert werden. StF: BGBl. I Nr. 149/2002, idF. BGBl. I Nr 75/2011.

Bundesgesetz, mit dem die Organisation auf dem Gebiet der Elektrizitätswirtschaft neu geregelt wird (Elektrizitätswirtschafts- und -organisationsgesetz - EIWOG), das Bundesverfassungsgesetz, mit dem die Eigentumsverhältnisse an den Unternehmen der österreichischen Elektrizitätswirtschaft geregelt werden, erlassen wird und das Kartellgesetz 1988 und das Preisgesetz 1992 geändert werden. StF: BGBl. I Nr. 143/1998, idF. BGBl. I Nr. 112/2008.

Verordnung des Bundesministers für Wirtschaft, Familie und Jugend, mit der Preise für die Abnahme elektrischer Energie aus Ökostromanlagen auf Grund von Verträgen festgesetzt werden, zu deren Abschluss die Ökostromabwicklungsstelle im Jahr 2011 verpflichtet ist (Ökostromverordnung 2011 - ÖSVO 2011).

E-Control, Ökostrombericht 2010. Bericht der Energie-Control Austria gemäß § 25 (1) Ökostromgesetz, Wien 2010.

E- Control, Technische und Organisatorische Regeln für Betreiber und Benutzer von Netzen (TOR)

E-Control Kommission, Systemnutzungstarife-Verordnung (SNT-VO) - aktuell: SNT-VO 2010

**Federal Agencies and stakeholder contacts, as well as further information sources**

Abwicklungsstelle für Ökostrom AG  
oem-ag.at

Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW)  
lebensministerium.at

Deloitte Tax Wirtschaftsprüfungs GmbH  
deloittetax.at

E- Control Austria  
[e-control.at](http://e-control.at)

Kommunalkredit Public Consulting (Environmental Support in Austria – UFI)  
publicconsulting.at

Statistik Austria  
[statistik.at](http://statistik.at)

Federal Ministry of Environment  
[umweltbundesamt.at](http://umweltbundesamt.at)

Austrian Biomass Association  
biomasseverband.at

Austrian Energy Agency (AEA)  
[energyagency.at](http://energyagency.at)

Discussions with Ms Bauer (E-Control)

Discussions with Dr Bittermann (Statistik Austria)

Discussions with Dr Jank (BMLFUW)

Discussions with Dr Proidl (E-Control)

Discussions with Dr Resch (TU Vienna)

Discussions with Mr Winter (Ministry of Environment)