



Federal Ministry of
Economy, Family and Youth

**Progress report 2013
on the 2010 National Renewable
Energy Action Plan for Austria
(NREAP-AT)**

in accordance with Directive 2009/28/EC of
the European Parliament and of the Council

National Renewable Energy Action Plan

Austrian Progress Report 2013 (Directive 2009/28/EC)



Federal Ministry of
Economy, Family and Youth

Federal Ministry of Economy, Family and Youth (BMWFJ)



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Federal Ministry of Agriculture, Forestry, Environment and Water (BMLFUW)

National Renewable Energy Action Plan (NREAP)

Austrian Progress Report 2013 (Directive 2009/28/EC)

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Abbreviations

[Do not apply to English translation]

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

Table 1: The sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources¹

| | 2009 | 2010 | 2011 | 2012 |
|--|------|------|------|------|
| RES-H&C ² (%) | 40.2 | 44.2 | 45.5 | 45.0 |
| RES-E ³ (%) | 67.2 | 64.7 | 64.5 | 65.3 |
| RES-T ⁴ (%) | 8.1 | 7.7 | 6.7 | 7.0 |
| Overall RES share ⁵ (%) | 30.4 | 30.8 | 30.7 | 32.2 |
| Of which from cooperation mechanism ⁶ (%) | 0 | 0 | 0 | 0 |
| Surplus for cooperation mechanism ⁷ (%) | 0 | 0 | 0 | 0 |

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

| | 2009 | 2010 | 2011 | 2012 |
|--|--------|--------|-------|-------|
| (A) Gross final consumption of RES for heating and cooling | 3 636 | 4 259 | 4 072 | 4 301 |
| (B) Gross final consumption of electricity from RES | 3 878* | 3 910* | 3 908 | 4 016 |
| (C) Gross final consumption of energy from RES in transport | 690** | 677** | 571 | 586 |
| (D) Gross total RES consumption ⁹ | 8 203 | 8 847 | 8 551 | 8 902 |
| (E) Transfer of RES to other Member States | 0 | 0 | 0 | 0 |
| (F) Transfer of RES from other Member States and 3rd countries | 0 | 0 | 0 | 0 |
| (G) RES consumption adjusted for target (D)-(E)+(F) | 8 203 | 8 847 | 8 551 | 8 902 |

*includes liquid biofuels without proof of compliance with sustainability criteria (2009: 951 toe; 2010: 726 ktoe)

** biofuels without proof of compliance with sustainability criteria (2009: 117 ktoe; 2010: 80 ktoe)

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 (cf. 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 point of overall RES share.

⁷ In percentage point of overall RES share.

⁸ Facilitates comparison with Table 4a of the NREAPs

⁹ According to Art. 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 1b: Total actual contribution (installed RES) to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity¹⁰

| | 2009 | | 2010 | | 2011 | | 2012 | |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| | MW | GWh | MW | GWh | MW | GWh | MW | GWh |
| Hydro ¹¹ : | 12 446 | 38 736 | 12 706 | 38 875 | 12 980 | 38 659 | 13 076 | 39 311 |
| non pumped | 7 827 | 34 652 | 7 913 | 34 934 | 7 947 | 35 043 | 7 968 | 35 462 |
| <1MW | 352 | 1 436 | 357 | 1 479 | 368 | 1 544 | 391 | 1 556 |
| 1MW–10 MW | 740 | 2 884 | 762 | 3 038 | 795 | 3 307 | 793 | 3 096 |
| >10MW | 6 735 | 30 332 | 6 794 | 30 416 | 6 784 | 30 192 | 6 784 | 30 810 |
| pumped | 4 619* | 4 085 | 4 793* | 3 941 | 5 0338 | 3 616 | 5 108* | 3 849 |
| mixed ¹² | 12 446 | 38 736 | 12 706 | 38 875 | 12 980 | 38 659 | 13 076 | 39 311 |
| Geothermal | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| Solar: | 71 | 49 | 154 | 89 | 317 | 174 | 363 | 337 |
| photovoltaic | 71 | 49 | 154 | 89 | 317 | 174 | 363 | 337 |
| concentrated solar power | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tide, wave, ocean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wind: | 994 | 2 023 | 981 | 2 038 | 1 080 | 2 089 | 1 316 | 2 412 |
| onshore | 994 | 2 023 | 981 | 2 038 | 1 080 | 2 089 | 1 316 | 2 412 |
| offshore | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Biomass ¹³ : | 1 935 | 4 286 | 1 934 | 4 475 | 2 015 | 4 523 | 2 062 | 4 642 |
| solid biomass | 1 554 | 3 635 | 1 589 | 3 795 | 1 628 | 3 898 | 1 672 | 4 003 |
| biogas | 335 | 611 | 330 | 649 | 372 | 625 | 377 | 639 |
| bioliquids | 46 | 40 | 15 | 30 | 15 | 0 | 13 | 0 |
| TOTAL | 15 447 | 45 096 | 15 776 | 45 477 | 16 393 | 45 446 | 16 818 | 46 703 |
| of which in CHP | 1 190 | 2 143 | 1 189 | 2 509 | 1 254 | 2 719 | 1 259 | 2 533 |

Total capacity of pump storage works, output reduced to actual pumps is as follows (in MW):

| | | | |
|-------|-------|-------|-------|
| 2009 | 2010 | 2011 | 2012 |
| 1 839 | 1 773 | 1 668 | 1 743 |

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, cf. Article 5(1) of Directive 2009/28/EC last subparagraph.

Table 1c: Total actual contribution (final energy consumption¹⁴) 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)¹⁵

| | 2009 | 2010 | 2011 | 2012 |
|--|---------|---------|-------|-------|
| Geothermal (excluding low temperature geothermal heat in heat pump applications) | 20 | 22 | 20 | 22 |
| Solar | 124 | 159 | 167 | 173 |
| Biomass ¹⁶ : | 3 531 | 4 116 | 3 888 | 4 094 |
| solid biomass | 3 502 | 4 089 | 3 856 | 4 048 |
| biogas | 23 | 23 | 32 | 46 |
| bioliquids | 6* | 4* | 0 | 0 |
| Renewable energy from heat pumps: | 115 | 119 | 133 | 145 |
| - of which aerothermal | | | | |
| - of which geothermal | | | | |
| - of which hydrothermal | | | | |
| TOTAL | 3 790** | 4 415** | 4 208 | 4 434 |
| Of which DH ¹⁷ | 664** | 895** | 875 | 890 |
| Of which biomass in households ¹⁸ | 1 509 | 1 687 | 1 515 | 1 686 |

* No proof of compliance with sustainability criteria available

** Including generation from liquid biofuels not certified as sustainable

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, cf. 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 Austria to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport sector (ktoe)^{19, 20}

| | 2009 | 2010 | 2011 | 2012 |
|---|--------------|--------------|------------|------------|
| Bioethanol/ bio-ETBE | 63 | 68 | 66 | 67 |
| Of which Biofuels ²¹ Article 21.2 | 0 | 0 | 0 | 0 |
| Of which imported ²² | 34 | 39 | 38 | 39 |
| Biodiesel | 319 | 339 | 333 | 348 |
| Of which Biofuels ²³ Article 21.2 | 0 | 0 | 0 | 0 |
| Of which imported ²⁴ | 278 | 237 | 252 | 249 |
| Hydrogen from renewables | 0 | 0 | 0 | 0 |
| Renewable electricity | 193 | 193 | 175 | 173 |
| Of which road transport | 0 | 0 | 0 | 0 |
| Of which non-road transport | 193 | 193 | 175 | 173 |
| Others (as biogas, vegetable oils, etc.) – please specify | 114* | 77* | 0 | 0 |
| Of which Biofuels ²⁵ Article 21.2 | 0 | 0 | 0 | 0 |
| TOTAL | 689** | 677** | 660 | 651 |

* No proof of compliance with sustainability criteria available

** Including generation from liquid biofuels not certified as sustainable

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

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.

2. Measures taken in the preceding 2 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/EC)

Table 2: Overview of all policies and measures

Measures at federal government level

| 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 |
|---|------------------|--|--|--------------------------------|--|
| Overriding measures | | | | | |
| Climate Protection Act | legislative | Establishment of binding climate objectives and responsibilities | Provinces and federal ministries concerned | in force | since end of 2011 |
| Ecological tax reform | legislative | Heavier taxation of resources and energy consumption | End users | in discussion | in discussion |
| Energy spatial planning | legislative | Inclusion of climate and energy targets in Austrian regional planning concept | Federal government, provinces, Austrian Conference on Spatial Planning | existing | since 2010 |
| Energy Efficiency Act | legislative | Statutory regulations to increase energy efficiency | End users, undertakings | planned | in preparation |
| klima:aktiv | 'soft' measure | Market launch and fast dissemination of climate-friendly technologies and services in the construction and renovation, energy savings, renewable energy sources and mobility sectors | Municipalities, factories, households/end users | exists, ongoing implementation | 2 nd phase of klima:aktiv started in 2013; gradual implementation by 2020 |
| Buildings | | | | | |
| Structural specifications in provincial building regulations | legislative | Preference for renewable energy systems in construction sector | Developers | existing, reform planned | ongoing updating |
| Further development of support criteria and instruments in building sector | financial | Stronger focus on support for thermal renovation of residential buildings and use of renewable energies for heating systems; support for sustainable planning (housing density) | Federal government, provinces, end users | existing, reform planned | End of 2014 |
| Mobility | | | | | |
| klima:aktiv mobil | financial | Conversion of fleets and motor pools to vehicles with alternative engines and electro-mobility | Federal government, provinces, municipalities, end users | existing | 2 nd phase of klima:aktiv mobil started in 2013; gradual implementation by 2020 |
| Energy supply | | | | | |
| Green Electricity Act | legislative | Support for green electricity | Producers | existing | amended several times (most recently in July 2011) |
| System Use Tariff Regulation (SNT-VO) | legislative | Regulation issued by the Energy Control Commission setting tariffs for system use | Producers, end users | existing | SNT-VO 2010, amended 2013 |

| | | | | | |
|---|-----------------------------------|--|---|-------------------|----------------------------|
| Gas System Use Tariff Regulation (GSNT-VO) | legislative | Regulation issued by the Energy Control Commission setting tariffs for system use in the gas economy | Producers, end users | existing | GSNT-VO 2008, amended 2013 |
| Environmental Support Act | financial | Support for investments in energy supply from renewable energy sources | Factories (with market-led activity), private individuals | existing | since 1996/2010 |
| Security of energy supply | | | | | |
| Development of Austrian transmission and distribution networks | strategic (Master Plan 2009-2020) | Medium- and long-term creation of demand-driven network infrastructure | Federal government, provinces, network operators | being implemented | continuously from 2010 |
| Development of district heating and district cooling | financial | Infrastructure development and improved security of supply | Energy suppliers | existing/planned | continuously from 2010 |

* 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, energetic use of animal manure, etc.)?

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

Measures in individual provinces

| 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 |
|--|------------------|--|--|-------------------------|------------------------------------|
| Lower Austria | | | | | |
| Support for alternative engines | financial | Retrofitting of vehicles to alternative fuels | Driving schools, taxi companies, private individuals | in force | since 2012 |
| Support for small hydroelectric plants | financial | Construction and revitalisation of small hydroelectric power plants (up to 1 MW) | Power plant operators | in force | |
| Support for small-scale CHP | financial | Erection of small biomass-fuelled CHP systems | private individuals etc. | in force | |
| Support for PV charging stations | financial | Erection of new PV charging stations | Municipalities | in force | |
| Support for energy savings | financial | Exchange of old devices etc. | Private individuals | in force | |
| Burgenland | | | | | |
| Amendment to Building Law | legislative | Administrative simplification (exception for PV systems) | Private individuals | in force | since beginning of 2013 |
| Amendment to provincial Electricity Act | legislative | Administrative simplification (approval for PV systems of 50 kW or more only, simplified procedure up to 500 kW) | Private individuals, undertakings | in force | since beginning of 2013 |
| Salzburg | | | | | |
| Provincial Electricity Act | legislative | Administrative simplification (fast-track procedure for wind, higher thresholds for PV) | Private individuals, undertakings | in force | since 2013 |
| Tyrol | | | | | |
| Residential Buildings Support Act | financial | Installation of biomass systems, district heating, solar systems, etc. including during renovation | Private individuals, undertakings | in force | since 2012 |
| Support/advice for small hydroelectric plants | financial | Revitalisation and modernisation; advice | Private individuals, undertakings | in force | |
| Vorarlberg | | | | | |

| | | | | | |
|---|---|--|-----------------------------------|--------------------|------------------------------|
| Vorarlberg energy autonomy | Resolution by government and <i>Landtag</i> , legislative | Quantities of renewable energy sources to be increased as follows by 2020 compared with 2005: Hydroelectric power +14 % Solar heat + 74 % Photovoltaic + 438 % Biogas + 37 % Wood + 12 % Geothermal + 50 % | Private individuals, undertakings | resolution passed | since end of 2011 until 2020 |
| Support programme for renewable energy sources for heating and hot water | financial | Residential buildings (new and renovated) | Private individuals, undertakings | in force | |
| Vienna | | | | | |
| Support programme for PV and solar heat | financial | | Private individuals, undertakings | in force | |
| Solar potential maps | informative | | General public | existing (website) | |

2.1 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 order to force the pace of development of renewable energies, support is available for green electricity generation systems. Approval of generation systems is based on statutory specifications which ensure that renewable energy-based systems are not disadvantaged. Support for an green electricity system can be divided into three stages (E-Control, 2011).

1. Approval under electricity law

In principle, power generation systems must be approved as such under electricity law (basically the Electricity Economy and Organisation Act (EIWOG), Federal Law Gazette I No 143/1998, as amended in Federal Law Gazette I No 112/2011) and individual provincial implementing acts). Various approvals may need to be submitted in individual cases (approval under electricity law, operational plant permission, planning permission, permission under water law, permission under forestry law, permission under waste law, environmental impact study/notice).

2. Recognition as a green electricity system

A green electricity system must be recognised as such by the governor of the province in which it is to be erected (recognition of systems in accordance with Section 7 of the Green Electricity Act 2012).

3. Application for support filed with the OeMAG (Green Electricity Clearing Agency)

Support for green electricity systems can be claimed both for raw material-dependent and raw material-independent technologies from

the OeMAG, money permitting, via feed-in tariffs. This does not apply to photovoltaic systems under 5 kWp or to small and medium hydroelectric plants.

Support can only be provided for energy delivered to the public network under a network access contract with the local network operator. The OeMAG is only obliged to grant the application if the total electricity delivered to the public network from a green electricity system will be delivered to the Green Electricity Clearing Agency over a period of at least 12 calendar months and the system operator belongs to the Ecobalance Group. Own consumption must be deducted.

In addition to support in the form of remuneration for green electricity delivered via feed-in tariffs, investment subsidies and special provincial grants and occasional special federal support programmes are available, especially within the framework of the Climate and Energy Fund (KLiEN).

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

Transmission and distribution of electricity produced from renewable energy sources

It is the network operator's task and responsibility to connect power generation systems to the network in accordance with the EIWOG and the System Use Tariff Regulation (E-Control, SNT-VO), taking account of the technical and organisational rules applicable to network operators and users (TOR), as defined by the regulatory authority for gas and electricity (E-Control). The EIWOG also stipulates that the network operator's duties include guaranteeing the supply to customers. Transmission and network operators must take appropriate precautions and integrate them into their regular network planning. The principle of non-discrimination in connection with electricity networks is fully provided for by law.

Extract from the Green Electricity Act (ÖSG) 2012, Federal Law Gazette I No 75/2011:

Section 6 System/network connection

(1) Every system has a right to be connected to the network belonging to the network operator within whose concession area the system is located.

(2) E-Control shall ensure during the course of competition monitoring that network operators treat all applicants seeking connection equally and transparently. It may therefore ask the network operator to notify

the procedure applicable to enquiries and applications (such as deadlines for responding to enquiries and applications, criteria applied to competing network access applications and measures taken to ensure equal treatment of applicants). If the notified or actual procedure appears inappropriate for the purpose of safeguarding fair competition, E-Control may take measures in accordance with Section 24(2) of the Energy Control Act (Federal Law Gazette I No 110/2010, as amended in Federal Law Gazette I No 75/2011).

Costs related to grid connections and grid reinforcements

No distinction is made between conventional systems and green electricity systems (E-Control, 2011).

The relevant rules governing costs related to grid connections are set out in the System Use Tariff Regulation (SNT-VO 2012). Please refer to grid access and grid supply fees.

At present, grid feeders and grid customers must pay a network access fee, which must directly reflect the cost of providing the connection. Customers must also pay a grid supply fee.

Section 2 SNT-VO stipulates that the one-off grid access fee paid by grid customers reimburses the grid operator for all reasonable expenditure at market prices incurred in order to provide an initial grid connection or to alter an existing connection following an increase in the rated power of a grid user's connection.

Section 3 SNT-VO states that the grid supply fee payable by grid customers is an output-based grid user fee charged in order to offset indirect costs in the upstream grid. Thanks to these investments in the grid customers can use it at commensurately low prices.

Extract from System Use Tariff Regulation (SNT-VO) 2012:

Section 2 Grid access fee

The one-off grid access fee reimburses the grid operator for all direct expenditure incurred in order to provide an initial grid connection or to alter an existing connection following an increase in the rated power of a grid user's connection between the grid connection within the meaning of Section 7 No 25 EIWOG and the customer's system. No grid access fee need be paid if the cost of the alteration is borne by the grid user.

Expenditure incurred in order to provide an initial grid connection or to alter an existing connection means expenditure actually paid for which invoices can be presented (new value of system and time of connection). The connection system (physical connection between the grid user's system and the grid system) may comprise up to two network levels in exceptional circumstances, for example where undeveloped land is opened up for individual customers.

Section 3 Grid supply fee

(1) The grid supply fee is payable as a flat-rate amount for pre-financed development of the grid levels described in Section 25(5) Nos 3 to 7 EIWOG and actually used to the agreed extent for grid usage which the grid operator has already completed in order to allow for connection.

(2) The grid supply fee must be based on the principles of 'the user pays' and simple administration. Minimum rated output may be agreed by contract.

(3) Assessment shall be based on the average costs of developing new or upgrading existing transmission and distribution networks. The revenue collected after deduction of the grid supply fee shall not exceed 30 % of the average annual network investments needed over the previous five years.

(4) The reference parameter used when setting the grid supply fee shall be the agreed extent of grid use in kW.

3. Please describe the support schemes and other measures currently in place that are applied to promote energy from renewable sources and report on any developments in the measures used with respect to those set out in your National Renewable Energy Action Plan (Article 22(1)(b) of Directive 2009/28/EC)

Support schemes for energy from renewable sources

The most important instruments used to support energy from renewable sources are described below.

I. Support under the Green Electricity Act 2012

| | |
|--------------|---|
| Title | Support for investment under the Green Electricity Act |
| Target group | Legal entities and private individuals |
| Description | Small hydroelectric plants up to 10 MW, combined heat and power plants and medium hydroelectric power plants are supported under Sections 24, 25, 26 and 27 of the Green Electricity Act via investment subsidies |

| | |
|--------------|---|
| Title | Tariff subsidies under the Green Electricity Act |
| Target group | Private individuals, undertakings, territorial units |
| Description | Renewable energy systems are supported in accordance with the Green Electricity Act. They must be recognised as green electricity systems in a notice issued by the local governor. Support is provided via fixed acceptance tariffs for the green electricity generated. |

The Act amending the Green Electricity Act passed by the *Nationalrat* on 7 July 2011 was promulgated on 29 July 2011 (Federal Law Gazette I No 75/2011). Provisions to cut waiting lists (photovoltaics and wind power) entered into force immediately; all other provisions entered into force on 1 July 2012.

Support available under the ÖSG 2012 is summarised below:

Reduction in waiting lists

The increase in green electricity tariffs under the ÖSG Amending Act 2009 and the Green Electricity Regulation 2010 resulted in rapid technological developments, especially in the wind power and photovoltaic sectors. As previous support resources could not fully cover the 'contracting contracts' submitted, long waiting lists formed at the OeMAG. The current ÖSG Amending Act provides for a one-off sum of EUR 80 million for wind power systems and a sum of EUR 28 million for photovoltaic systems. Wind power systems which, according to the waiting list, would have obtained a contract in 2012 or 2013, will obtain a contract immediately at a tariff of 9.7 cents/kWh and a tariff of 9.4 cents/kWh is provided for contracts that would otherwise be executed in 2014 or later. A similar rule applies to photovoltaic systems, with discounts (depending on date of contract and tariff applied for) of between 2.5 % and 22.5 %.

Increase in support quotas

Aside from measures to reduce current waiting lists by introducing one-off increases, annual support quotas have also been increased. The annual support available for newly contracting green electricity systems is EUR 50 million, as follows:

- EUR 8 million for photovoltaics
- EUR 10 million for solid and liquid biomass and biogas
- EUR 11.5 million for wind power
- EUR 1.5 million for small hydroelectric plants and
- EUR 19 million in the kitty

This new subdivision is designed to prevent some technologies from being developed more than others, as has happened in the past. Until such time as the above quotas have been exhausted, contracting shall be mandatory for contracting applications based on the ÖSG 2012.

Reduction in feed-in tariffs

Feed-in tariffs are basically set in annual regulations and may be set for several years. There is a special annual reduction in the feed-in tariff (8 %) for photovoltaic systems. Unless new tariffs are set, the feed-in tariff is reduced by 1 % per annum for all other technologies.

Increase in green electricity flat rate

The European Commission has qualified the limits on additional green electricity costs for energy-intensive companies ('industry cap') which were to be introduced under the 2009 amending act as unlawful aid. The current law (ÖSG 2012) makes provision to reduce green electricity costs over the long term by gradually reducing feed-in tariffs. At the same time, the green electricity flat rate has been increased. All users of grid levels 1–3 (extra high voltage 380/220 kV to high voltage 110 kV) must pay an annual green electricity flat rate of EUR 35 000 (previously EUR 15 000).

The ÖSG 2012 therefore provides easier and faster access to support for new systems and faster processing of applications already filed; however, there is less support due to lower feed-in prices.

Feed-in tariffs Energy fed into the grid in Austria from supported green electricity systems is remunerated by the OeMAG at feed-in tariffs once all statutory requirements have been satisfied. No use is made of any other instruments, such as quotas or certificates.

Green electricity Feed-in Tariff Regulation

Feed-in tariffs for first-time new applications for contracting in 2011 were published on 28 January 2011 in the Green Electricity Feed-in Tariff Regulation 2011. New feed-in tariffs were set for 2012 in the regulation adopted on 30 December 2011 (Federal Law Gazette II No 471/2011). For 2013, new feed-in tariffs were set in the regulation published in Federal Law Gazette II No 307/2012 for the period from 1 July 2012 to the end of 2013.

Figure 2 summarises the feed-in tariffs set in the Green Electricity Regulation 2012 for electricity from wind, biomass, biogas, landfill gas and sewage gas, geothermal energy and photovoltaics:

| FEED-IN TARIFFS FOR NEW GREEN ELECTRICITY SYSTEMS 2012/2013 | | Tariff in cent/kWh (Federal Law Gazette II No 307/2012) |
|--|--|---|
| Raw material-independent technologies | | Term: 13 years |
| Wind power | | 9.50/9.45 |
| Photovoltaics | integrated in building | |
| | 5 k Wp to 500 k Wp | 19.70/18.12 |
| | on undeveloped land | |
| | 5 k Wp to 500 k Wp | 18.43/16.59 |
| Landfill and sewage gas | Sewage gas | 6.00/5.94 |
| | Landfill gas | 5.00/4.95 |
| Geothermal energy | | 7.50/7.43 |
| Raw material-dependent technologies | | Term: 15 years |
| Solid biomass (such as woodchips, straw) | high-efficiency up to 500 kW | 20.00/19.90 |
| | up to 500 kW | 18.00/17.91 |
| | 500 kW to 1 MW | 15.80/15.72 |
| | 1 MW to 1.5 MW | 15.50/15.42 |
| | 1.5 MW to 2 MW | 15.00/14.92 |
| | 2 MW to 5 MW | 14.37/14.30 |
| | 5 MW to 10 MW | 13.88/13.81 |
| | over 10 MW | 11.00/10.94 |
| Waste with high biogenic content | SN 17, Table 2 | minus 25 % |
| | SN 17, Table 1 | minus 40 % |
| | Other 5-digit SN in Table 2 and 2 Green Electricity Act | 5.00/4.95 |
| Co-firing | | Pro rata |
| Co-firing in calorific power plants | Solid biomass | 6.12/6.06 |
| | SN 17, Table 2 | minus 20 % |
| | Other 5-digit SN in Table 2 and 2 Green Electricity Act | minus 30 % |
| Co-firing | | Pro rata |
| Liquid biomass | Liquid biomass | 5.80/5.74 |
| | Premium for production in efficient CHPP | 2.00 |
| Biogas from agricultural products (such as maize, slurry) | up to 250 kW | 19.60/19.50 |
| | 250 kW to 500 kW | 17.02/16.93 |
| | 500 kW to 750 kW | 13.41/13.34 |
| | over 750 kW | 13.00/12.93 |
| | Biogas with co-fermentation of waste | minus 20 % |
| | Premium for production in efficient CHPP | 2.00 |
| | Premium for processing to natural gas quality | 2.00 |

| | | |
|---|--------------------------------------|-------------|
| Co-firing | | Pro rata |
| Feed-in tariffs for raw material-dependent green electricity systems following expiry of mandatory contracting | | |
| Solid biomass (such as wood chips, straw) | up to 2 MW | 12.09/12.03 |
| | 2 MW to 10 MW | 10.40/10.35 |
| | over 10 MW | 10.00/9.95 |
| Biogas from agricultural products (such as maize, slurry) | up to 250 kW | 11.50/11.44 |
| | over 250 kW | 10.00/9.95 |
| | Biogas with co-fermentation of waste | minus 20 % |

Figure 2: Feed-in tariffs in accordance with the Green Electricity Feed-in Tariff Regulation 2012 (ÖSET 2012)

Source: Federal Law Gazette II No 307/2012

For NEW contracting green electricity systems, an annual sum of EUR 50 million is available for support, as follows (ÖSG 2012):

- EUR 8 million for photovoltaics
- EUR 10 million for solid and liquid biomass and biogas
- EUR 11.5 million for wind power
- EUR 1.5 million for small hydroelectric plants and
- EUR 19 million in the kitty

For 2011, there was a one-off sum of EUR 80 million for wind power systems (waiting list reduction) and a sum of EUR 28 million for photovoltaic systems. This applied for immediate contracting for applications filed under the ÖST 2002.

II Current support within the framework of environmental support in Austria (UFI):

| | |
|------------------|---|
| Target group | Support can be claimed by Austrian undertakings and non-profit associations, confessional families and territorial units (provided they have a business with a market-driven activity). |
| Description | Support is available for measures to apply renewable energy sources and to increase energy efficiency, mobility measures and measures to prevent and reduce air pollution, noise or hazardous waste. |
| Level of support | Support takes the form of investment subsidies equal to between 15 % and 30 % of the environment-related costs, depending on the focal point of the support. Currently EUR 90.2 million per annum is available to applicants from federal resources within the framework of environmental support in Austria. In addition, resources from the European Fund for Regional Development (EFRD) and the European Agricultural Fund for Rural Development (EAFRD) are also awarded in Austria via environmental support. |

Within the UFI, a special programme to support thermal renovation measures has also been started, with the objective of energy savings and simultaneous use of renewable energy sources in buildings.

| | |
|------------------|--|
| Target group | Support is directed at private households and undertakings |
| Description | Measures are supported to increase energy efficiency and use renewable energy sources in buildings. |
| Level of support | Support takes the form of investment subsidies equal to between 15 % and 30 % of the environment-related costs, depending on the focal point of the support. Currently EUR 100 million per annum is available to applicants from federal resources within the framework of the renovation offensive. |

| Support sector | Purpose of project | Rate of support |
|---|---|--|
| Energy supply | | |
| Wood-fired heating for undertakings for own supply | Small boilers (< 400 kW) | EUR 120/kW up to 50 kW |
| | Boiler in micro-network | 25 % |
| | Large boiler \geq 400 kW) | 20 % |
| District heating supply based on renewable energy sources | District heating network | 25 % |
| | Boiler replacement | 15 % |
| | Combined heat and power | 10 % |
| | Geothermal energy | 30 % |
| | Heat distribution | 25 % |
| District heating for undertakings | Small system (< 400 kW) | EUR 28 or 56/kW up to 100 kW (fossil or biofuel network) EUR 16 or 32/kW for each additional kW |
| | Large system (\geq 400 kW) | 20 % |
| Heat pumps for undertakings | Small heat pump (< 400 kW) | EUR 85/kW up to 80 kW EUR 45/kW for each additional kW (water/water) EUR 70/kW up to 80 kW EUR 35/kW for each additional kW (air/water) |
| | Large heat pump (\geq 400 kW _{th}) | 15 % |
| Thermal solar systems for undertakings | Small system (< 100 m ²) | EUR 100/m ² for standard collectors EUR 150/m ² for vacuum collectors |
| | Large system (\geq 100 m ²) | 20 % |
| Power generation in island position based on renewable energy sources | Sun, wind, water | 30 % |
| Manufacture of biofuels and motor fuels | Production systems for biodiesel, bioethanol, vegetable oils, biogas, etc. | 25 % |
| Energy recovery from bio-raw materials and biowaste | Treatment and substitution | 25 % |
| Natural gas combined heat and power for undertakings | Combined power and heat generation | 25 % |
| Energy savings | | |
| Thermal renovation of buildings for undertakings | Thermal insulation for buildings over 20 years old | 15-35 % |
| New low-energy buildings for undertakings | | Reduction in heating requirements: EUR 0.20/kWh Reduction in cooling requirements: EUR 0.60/kWh |
| Energy savings in undertakings | Building equipment and appliances, energy recovery from production processes, heat recovery | 30 % |
| LED systems in undertakings | Conversion to LED lights | EUR 300–400/kW |
| | Conversion to LED lighting systems | EUR 600–700/kW |
| Energy-efficient drive systems in undertakings | Conversion to energy-efficient drive systems | EUR 15kW up to 7.5 kW motor EUR 10/kW over 7.5 kW motor |
| | Retrofitting of speed regulation | EUR 20/kW motor output |
| Air-conditioning and cooling for undertakings | Energy from waste heat/renewable energy sources | 30 % |
| Transport and mobility | | |
| Transport measures in undertakings | Reduction in CO ₂ emissions | 30 % |
| Other support schemes | | |
| Raw material management in undertakings | Efficiency improvements and innovative service concepts | 20–30 % |

| | | |
|---|---|--|
| Air pollution control | Dust-reducing measures, secondary and primary air pollution control | 15–30 % |
| | Retrofitting of vehicles with particle filters | EUR 2 500/vehicle |
| Hazardous waste in undertakings | Prevention, recovery and treatment | 10–30 % |
| Other environmental protection measures in undertakings | Innovative plant, noise reduction/prevention, etc. | 10–40 % |
| Renovation offensive | | |
| Renovation offensive for undertakings | Thermal insulation for buildings over 20 years old | 15–35 % |
| Renovation check for private individuals | Thermal insulation for buildings over 20 years old Conversion of heating systems to renewable energy systems | up to 20 % max. EUR 5 000 for thermal renovation max. EUR 2 000 for heating system |

Figure 1: UFI support

III Current support under klima:aktiv mobil support programme (as at September 2013):

| | |
|-------------------|---|
| Title | klima:aktiv mobil |
| Target group | Applications for support can be filed by Austrian undertakings, territorial units, associations, federations, confessional families, etc. |
| Description | Retrofitting fleets and motor pools with alternative engines and electro-mobility are important objectives of klima:aktiv mobil designed to increase the proportion of renewable energy sources in transport. Support is processed under the klima:aktiv mobil support programmes 'Vehicles with alternative engines and electro-mobility', 'Mobility management for undertakings, developers and fleet operators', 'Mobility management for towns, municipalities and regions' and 'Mobility management for leisure and tourism'. |
| Extent of support | Support takes the form of investment subsidies. Support is capped at 30 % (for undertakings) or 50 % (for territorial units) of eligible costs. Support for vehicles with alternative engines is mainly processed via flat-rate subsidies. Currently approximately EUR 8 million per annum is available to applicants within the framework of klima:aktiv mobil from Climate and Energy Fund resources and from departmental resources of the Ministry of Life for all klima:aktiv mobil support programmes (fleet retrofitting, measures to increase cycling and climate-friendly mobility management) |

| Support programme | | Standard support rate |
|---|---|--|
| Vehicles with alternative engines and electro-mobility (up to 10 vehicles or up to 50 electric bicycles) | Flat-rate support for vehicles ≤ 3.5 t maximum permissible gross weight | [EUR per vehicle] |
| | Electric bicycles | EUR 200 or EUR 400 where 100 % of electricity used is from renewable energy sources |
| | Single-track electric vehicles | EUR 250 or EUR 500 where 100 % of electricity used is from renewable energy sources |
| | Light electric vehicles (Section 2 Vehicles Act) or three-wheeled electric vehicles | EUR 500 or EUR 1 000 where 100 % of electricity used is from renewable energy sources |
| | Multi-track light electric vehicles | EUR 1 000 or EUR 2 000 where 100 % of electricity used is from renewable energy sources |
| | Multi-track electric vehicles | EUR 2 000 or |

| | | |
|---|---|--|
| | | EUR 4 000 where 100 % of electricity used is from renewable energy sources |
| | Multi-track electric vehicles with extended range (REEV, REX, PHEV) | >70 g CO ₂ /km EUR 500 or EUR 1 000 where 100 % of electricity used is from renewable energy sources 36–70 g CO ₂ /km EUR 1 000 or EUR 2 000 where 100 % of electricity used is from renewable energy sources ≤35 g CO ₂ /km EUR 1 500 or EUR 3 000 where 100 % of electricity used is from renewable energy sources + premium of EUR 200 per vehicle if at least 50 % of annual fuel is biofuel |
| | Fully hybrid vehicles (HEV) | EUR 400 or EUR 800 if 50 % of fuel is biofuel |
| | Vehicles which use at least 50 % vegetable oil | EUR 500 |
| | Vehicles which use at least 50 % biodiesel | EUR 200 |
| | FlexiFuel vehicles (FFV) which use superethanol | EUR 200 if at least 50 % of annual fuel is E85 |
| | Gas vehicles (CNG) and biogas vehicles | EUR 500 or EUR 1 000 if at least 50 % of annual fuel is biogas |
| Mobility management for undertakings, developers and fleet operators Mobility management for towns, municipalities and regions Mobility management for leisure and tourism | Investment subsidy | Standard support rate of 20 % (for undertakings) or 40 % (for territorial units) of eligible costs + max. premium of 10 % |
| | Flat-rate support rates for vehicles > 3.5 t maximum permissible gross weight | [EUR per vehicle] |
| | Vehicles which use at least 50 % vegetable oil | EUR 1 500 |
| | Vehicles which use at least 50 % biodiesel | EUR 200 |
| | Gas vehicles (CNG) and biogas vehicles | Retrofitting: EUR 2 000 or EUR 4 000 if at least 50 % of annual fuel is biogas |
| | Hybrid vehicles | EUR 2 500 or EUR 5 000 if at least 50 % of annual fuel is biofuel |
| | E-buses, O-buses | No more than 39 passengers allowed: EUR 20 000 or EUR 40 000 if at least 50 % of electricity used is from renewable energy sources Over 40 passengers allowed: EUR 30 000 or EUR 60 000 if at least 50 % of electricity used is from renewable energy sources |

IV Support under Model Regions E-Mobility with Renewable Energy within the framework of the Climate and Energy Fund programme (2011–2012):

| | |
|-------------------|---|
| Title | Model Regions E-Mobility with Renewable Energy |
| Target group | 8 Model Regions Electro-mobility |
| Description | Support for electro-mobility using renewable energy is an important objective within the framework of the Climate and Energy Fund designed to increase the proportion of renewable energy sources in transport. The Model Regions are Vorarlberg/Rhine Valley, Greater Salzburg, Graz Centre, Vienna City, Eisenstadt & Surroundings, Klagenfurt, e-Commuters/Lower Austria and e-Mobility Post in Vienna Centre & Surroundings |
| Extent of support | Support for the 8 Model Regions in 2012 totalled EUR 17.8 million in investment subsidies for e-vehicles and charging infrastructure and for renewable energy supply. Support is capped at 30 % (for undertakings) or 50 % (for territorial units) of eligible costs. |

V Support from Climate and Energy Fund:

| | |
|-------------------|--|
| Title | Support actions: Wood-fired heating 2011 and Wood-fired heating and thermal solar systems 2012 |
| Target group | Private households |
| Description | Support action for installation of pellet- and wood chip-fired central heating and pellet-fired stoves and installation of thermal solar systems |
| Extent of support | Support to replace fossil-fuel heating systems with renewable energies. Systems must be fired either with wood chips or pellets. Firewood boilers are not supported. Support of EUR 500 in 2011 and EUR 1 000 in 2012 was paid for each boiler applied for. Proof of disposal must be supplied for old central heating boilers replaced. A total of EUR 3 million in 2011 and EUR 10 million in 2012 (EUR 5 million for wood-fired heating and EUR 5 million for thermal solar systems) was available for the support action. In 2012, EUR 400 was paid for new thermal solar systems. |

| | |
|-------------------|---|
| Title | Model renovation (2011 and 2012) |
| Target group | Undertakings, such as accommodation businesses, contractors, public-sector facilities and territorial units, confessional families and associations |
| Description | Comprehensive renovation projects of business and government buildings can be supported. Comprehensive renovation measures include manufacturing measures to improve thermal insulation and measures to apply renewable energy sources and increase energy efficiency |
| Extent of support | Measures for thermal/energy renovation of buildings (insulation, window replacement) and renewable energy applications and energy efficiency (individual biomass systems, CHP, photovoltaics, etc.) are supported. |

| | |
|-------------------|--|
| Title | Support for photovoltaic systems up to 5 kW (2011 and 2012) |
| Target group | Private individuals |
| Description | The Climate and Energy Fund supports photovoltaic systems no bigger than 5 kWp in order to provide an incentive for private households in Austria to opt for an environmentally- and climate-friendly energy supply. The aim of the programme is to provide investment subsidies to support individual private photovoltaic systems. |
| Extent of support | Support is market-based. 2011: EUR 1 100 per kWpeak; 2012: EUR 800 per kWpeak. |

| | |
|-------------------|---|
| Title | Solar heating – Large solar systems (2011 and 2012) |
| Target group | All private individuals and legal entities engaged in commercial activity (but not limited to Trade Regulations), especially production plants, commercial and services undertakings, district heating network operators, energy supply undertakings, tourism undertakings, public-sector facilities in the form of an undertaking with a market-driven activity. |
| Description | The Climate and Energy Fund supports innovative large solar thermal systems with a collector surface of between 100 and 2 000 m ² under this programme. |
| Extent of support | The support rate is capped at 40 % of environment-related additional investment costs plus any premium. Consultation with desk-top research experts is mandatory during the application procedure. |

3.1. Please provide the information on how supported electricity is allocated to final customers for purposes of Article 3(6) of Directive 2003/54/EC (Article 22(1)(b) of Directive 2009/28/EC)

Allocation of supported electricity to final customers

Most electricity generated from renewable energy sources (with the exception of hydroelectric plants with a bottleneck capacity of over 10 MW) is fed into the eco-balance groups of each control area based on accounting rules. The eco-balance group managers safeguard a nationwide balance by allocating green electricity to all traders in proportion to the quantity of electricity sold to final customers.

A comparatively small proportion of green electricity is fed into conventional balance groups by producers. On the one hand, this applies to the balance group of green electricity suppliers. On the other hand, the remuneration structure for electricity from small hydroelectric plants gives operators an incentive to temporarily switch out of the eco-balance group into free competition, in which case suppliers do not receive a feed-in payment under the Green Electricity Act and, at the same time, the potential support claim period is curtailed (OeMAG, 2011).

Processing via the OeMAG

Operators of supported green electricity plants ‘sell’ their electricity to the OeMAG and receive the regulated feed-in tariff in return. The OeMAG allocates this electricity to individual electricity traders, who pay the settlement price (up to the end of June 2012) or the market price (from 1 July 2012) in accordance with Sections 13 and 41 of the Green Electricity Act. In addition to the settlement price, green electricity is financed by final customers via the flat-rate meter point charge (up to the end of June 2012) or the green electricity support contribution and flat-rate green electricity charge (from 1 July 2012). Where the settlement price is passed on by the electricity trader, this gave rise to an additional expenditure item for final customers; this has not applied since 1 July 2012, as

settlement is now via the market price.

Which electricity trader is allocated how much green electricity depends on how much electricity it supplies to final customers. For example, an electricity trader with a market share of 5 % is allocated 5 % of the total quantity of green electricity accepted by the OeMAG. This percentage is set by the OeMAG once a month.

Information on the origin of supported electricity from renewable energy sources is provided in the Electricity Economy and Organisation Act (EIWOG). Under Sections 78 to 79a EIWOG, labelling is based on the electricity supplied to the final customer (kWh) and takes the form of a breakdown by % of primary energy sources (solid or liquid biomass, biogas, landfill and sewage gas, geothermal energy, wind and solar energy, hydroelectric power, natural gas, oil and its derivatives, coal, nuclear energy and miscellaneous) (E-Control, 2011).

Extract from the Electricity Economy and Organisation Act (EIWOG), Federal Law Gazette I No 174/2013:

Section 79 Labelling

(1) Labelling in accordance with Section 78 shall be based on the electricity supplied to the final customer (kWh) and shall take the form of a breakdown by % of primary energy sources (solid or liquid biomass, biogas, landfill and sewage gas, geothermal energy, wind and solar energy, hydroelectric power, natural gas, oil and its derivatives, coal, nuclear energy and miscellaneous).

(2) Labelling of primary energy sources on electricity bills shall be based on the total quantities delivered to the final customer in the previous calendar or financial year.

(3) The percentage of various primary energy sources in accordance with paragraph 1 shall be reported as a standard supply mix which takes account of all electricity supplied to final customers by the electricity trader. If primary energy sources cannot be clearly established, for example, where electricity is purchased from electricity exchanges, quantities must be allocated mathematically based on current total EU-wide supplies based on ENTSO-E, less quantities supplied on the basis of renewable energy sources.

(4) Labelling must be clearly legible. Other comments and notes on electricity bills must not give rise to confusion with labelling.

(5) Electricity traders must document the basis for labelling. Documentation must clearly present the quantities supplied by them to final customers, broken down by primary energy sources.

(6) Electricity traders which exceed a total supply to final customers of 100 GWh must have their documentation audited by a generally chartered and certified electrical engineer. The outcome must be published in a clear format and confirmed by the auditor in an annex to the electricity trader's annual report.

(7) As of 1 January 2015, proof of electricity produced in that calendar year must be allocated to the quantities delivered to final customers in a calendar year. Only proof issued in accordance with Section 10 of the Green Electricity Act 2012, Section 71 or Section 72 or recognised in accordance with Section 11 of the Green Electricity Act 2012 or Section 73 may be used for proof for documentation in accordance with paragraph 6.

(8) The outcome of documentation which must be prepared within no more than four months of the end of the calendar or financial year or actual delivery period must be kept available for inspection by final customers for a period of three years at the electricity trader's registered (head) office or, if it is located abroad, at the registered office of its agent in Austria.

(9) On request by the regulatory authority, electricity traders must present the proof referred to in paragraphs 5 to 7 and all documents needed to verify the information within a reasonable period of time.

(10) Electricity traders or other suppliers required to publish their annual accounts in accordance with Section 8(1) must state the supplier mix in accordance with paragraph 3 and the quantities of electricity sold or delivered in those annual accounts.

(11) The regulatory authority shall issue detailed regulations governing electricity labelling, especially the scope of the obligations referred to in Section 78(1) and (2) and specifications governing the format of proof of the various primary energy sources and electricity labelling in accordance herewith.

4. Please provide information on how, where applicable, the support schemes have been structured to take into account RES applications that give additional benefits, but may also have higher costs, including biofuels made from wastes, residues, non-food cellulosic material, and ligno cellulosic material (*Article 22 (1)(c) of Directive 2009/28/EC*)

Structure of support schemes

Support schemes to promote renewable energies do not currently include any explicit support for applications that give additional benefits but may also have higher costs. As regards attaining targets for biofuels made from wastes, residues, etc., double allowances create an incentive to force the pace of the application of this technology. These points are regulated in the Fuel Regulation 2012. In the case of support schemes, ‘upgrading’ waste may cause market distortions and critical developments in that context. The overriding objective of waste avoidance must be safeguarded.

Extract from Directive 2009/28/EC 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 lingo cellulosic material shall be considered to be twice that made by other biofuels.

5. Please provide information on the functioning of the system of guarantees of origin for electricity and heating and cooling from RES, and the measures taken to ensure reliability and protection against fraud of the system. (Article 22(1)(d) of Directive 2009/28/EC)

Guarantee of origin for electricity and heating and cooling from renewable energy sources

A guarantee of origin is an information instrument which provides information on the way in which a kilowatt of electricity is fed into the public network. The law only allows operators of systems that use renewable energy sources (water, wind, biomass, etc.) to demand a guarantee of origin from their network operators. At present, it only covers systems recognized by the governor as a green electricity system (see Section 7 of the Green Electricity 2012). These systems can be subdivided into supported/unsupported systems. All systems supported under the Green Electricity Act which have a contract with the ecobalance group manager are classed as supported systems. Unsupported systems are systems that use renewable energy sources but are not supported under the Green Electricity and thus do not have a contract with the ecobalance group manager. Most of these systems are large hydroelectric systems or systems which fall outside the support system because the support period was exceeded.

The benefit to system operators is that they can clearly prove that renewable energy sources are used for electricity production. There are advantages for electricity traders, in that the presentation of guarantees of origin makes annual electricity labelling required by law much easier. End consumers also receive additional information on the electricity product bought (E-Control, 2011).

In Austria, guarantees of origin for electricity and heating and cooling are regulated under Sections 10 and 11 of the Green Electricity Act.

Network operators provide producers with guarantees of origin on the basis of the electricity fed into the network. Producers pass the guarantee of origin to traders/suppliers under an electricity supply contract. They then supply end consumers with electricity. Guarantees of origin therefore constitute proof for the purpose of electricity labelling.

Extract from the Green Electricity Act (ÖSG) 2012 (Federal Law Gazette I No 75/2011):

Section 10. Guarantee of origin for green electricity systems

(2) Network operators to whose networks recognized systems for electricity production based on renewable energy sources are connected, must issue a certificate for the quantities of electricity fed into their network from those systems on request. Certificates may be computer generated.

(6) Certificates in accordance with paragraph 1 must contain the following information:

- 1. the quantity of electricity produced;*
- 2. the type and bottleneck capacity of the production plant*
- 3. the time and place of production;*
- 4. the energy sources used.*

Section 11. Recognition of guarantees of origin for green electricity from other states

(1) Guarantees of origin for green electricity from systems located in other EU Member States, an EEA contracting state or a third country shall be tantamount to guarantees of origin within the meaning of this federal act, provided that they at least comply with the requirements of Article 15 of Directive 2009/28/EC.

In principle, the entire system of guarantees of origin constitutes an information transmission chain from producer to consumer on the origin and quality of certain electricity. A central guarantee of origin database (HKN database) allows all processes in this chain to be performed on a single platform. This is an electronic information management system.

Once the network operator has transmitted a feed-in value for the green electricity to the HKN database in the month following the electricity production, guarantees of origin are generated for the month in question and transferred to the green electricity system operator's guarantee of origin account. The system operator can then freely dispose of the guarantee of origin (e.g. transfer them on to electricity supplier or electricity trader accounts).

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

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) | |
|--|-------------------------------------|-----------|--|-----------|---|-----------|--|-----------|---|-----------|--|-----------|
| | Year 2011 | Year 2012 | Year 2011 | Year 2012 | Year 2011 | Year 2012 | Year 2011 | Year 2012 | Year 2011 | Year 2012 | Year 2011 | Year 2012 |
| Biomass supply for heating and electricity: | | | | | | | | | | | | |
| Direct supply of wood biomass from forests and other wooded land energy generation (fellings etc.)** | 8 200 000 | 9 200 000 | 1 620 | 1 820 | 1 200 000 | 1 200 000 | 220 | 240 | - | - | - | - |
| Indirect supply of wood biomass (residues and co-products from wood industry etc.)** | 9 300 000 | 9 000 000 | 1 580 | 1 530 | 5 100 000 | 5 700 000 | 860 | 970 | 300 000 | 300 000 | 50 | 50 |
| Energy crops (grasses etc.) and short rotation trees (please specify) | 31 800 | 34 000 | 13 | 14 | | | | | | | | |
| Agricultural by-products / processed residues and fishery by-products ** 1) | | | | | | | | | | | | |
| Biomass from waste (municipal, industrial etc.) ** | 551 109 | 568 213 | 129 | 128 | 0 | 0 | | | | | | |
| Others (please specify) | 1 544 000 | 1 544 000 | 335 | 335 | 0 | 0 | | | | | | |
| Biomass supply for transport: | | | | | | | | | | | | |
| Bioethanol 2) | 78 000 | 84 000 | 50 | 54 | 25 000 | 22 000 | 16 | 14 | | | | |
| Biodiesel | 27 000 | 27 000 | 24 | 24 | 480 000 | 472 000 | 424 | 417 | | | | |
| Energy crops (grasses, etc.) and short rotation trees for biofuels (please specify main types) | | | | | | | | | | | | |
| Others (please specify) 3) | | | | | | | | | | | | |

* Amount of raw material if possible in m3 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

1) Included in 'Others'

2) In 2011 an additional approx. 68 000 t bioethanol (= 44 ktoe) and in 2012 an additional approx. 65 000 ktoe from domestic production were exported

3) There are currently only research and development systems or demonstration systems in this area, which produce no quantities of note

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) and oilseeds (rapeseed) | 67 500* (95 000)** | 67 300* (94 800)** |
| 2. Land used for short rotation trees (80 % poplars, 20 % willow) | 1 300 | 1 500 |
| 3. Land used for other energy crops such as grasses (Miscanthus etc.) | 1 214 | 1 137 |

* Net area including area factoring for combined production of protein feed (DDGS, rape cake). During biofuel production, only part of the yield is used for ethanol production (starch) or vegetable oil production (oil); a large part of the raw material is retained as valuable protein feed for farm animals and can replace imports of protein feed (e.g. soya imports from soya farms in South America).

** Gross area excluding combined production of valuable protein feed (in brackets). The gross area is often used for misleading arguments about competition for land use; thus the net area is the most important.

7. Please provide information on any changes in commodity prices and land use within your Member State 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. (Article 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.

- Agricultural biomass
- Cultivation of energy plants is closely bound up with traditional agricultural production. In Austria (and the rest of the world) the same types of crops and cultivation systems are used for both food and feed. Positive effects arise primarily from increased yield on existing land and distinctive use for secondary products (protein feed). No change in land use was identified within the meaning of Article 22(1)(h) of Directive 2009/28/EC.
- The effects of increased energy use of biomass on agricultural commodity prices are currently seen as very minor in Austria. Please note that yield fluctuations due to weather, export restrictions and speculation trigger market-relevant supply fluctuations on both sides and are thus by far the most important factor which impacts on the pricing of agricultural commodities.

- Forestry biomass
- After decades of falling wood prices, there has been a moderate increase in recent years for all ranges (for both material and energy use). For example the ‘industry wood’ range has attained the nominal price level of the 1970s.
- There are several reasons for the moderate rise in wood prices. A relatively large increase in processing capacity in the Austrian wood-processing industry has resulted in increased demand (especially for timber ranges which, however, largely become energy wood ranges during the course of wood processing). Also, there is an increased demand for durable wood products (e.g. clear increase in the proportion of wood used in new constructions) and naturally the increased use of wood for energy production is also having an effect.
- The following factors will be instrumental to future developments in terms of the rise in energy wood and associated prices:
 - Growth of the sawmill industry: the sawmill industry is the driving force behind the rise in ‘indirectly’ available wood biomass. The log cut volume and further distribution of sawmill by-products are decisive factors.
 - Success of efforts to bring actual wood use up to sustainable growth. These efforts are financed from EU resources under the EU Rural Development Programme. Around three-quarters of growth in commercial forests is currently used in Austria. Reserves are mainly available in ‘small forests’ (= owner units with a forested area of less than 200 hectares).

- Basic conditions for wood use: although forest cultivation in Europe unquestionably complies with the highest global standards, DG Energy is working to introduce EU-wide sustainability criteria. This project would merely generate bureaucratic expenditure (and thus costs), without producing any positive effects on the environment. Efforts (financed from EU resources) to bring wood use up to sustainable growth would be undermined. A clear decline in wood use, especially in particularly sensitive small forests, would be feared.

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

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

In many biodiesel plants, old cooking oil is used for esterification. The share is estimated at around 93 000 t (2011) or 89 000 t (2012). In some biogas plants, energy plants and green waste is used as raw material and then partly used as fuel. However, the quantities are commercially irrelevant. Furthermore, there are currently no plants in Austria producing biofuels from cellulosic non-food material and lingo cellulosic material other than research facilities.

As noted in Section 4, in the case of support schemes, ‘upgrading’ waste may cause market distortions and critical developments in that context. The overriding objective of waste avoidance must be safeguarded.

Table 5: Production and consumption of Art.21(2) biofuels (Ktoe)

| Article 21(2) biofuels ²⁶ | 2011 | 2012 |
|--|------|------|
| Production – Fuel type X (Please specify) | 82.5 | 78.2 |
| Consumption – Fuel type X (Please specify) | 0 | 0 |
| Total production Art.21.2.biofuels | 82.5 | 78.2 |
| Total consumption Art.21.2. biofuels | 0 | 0 |
| % share of 21.2. fuels from total RES-T | 0 | 0 |

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

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 your country in the preceding 2 years.

Impacts of the production of biofuels on biodiversity etc.

Austria has undertaken to protect sustainable use and restoration of biodiversity and proper distribution of the advantages from the use of genetic resources [Convention on Biological Diversity (CBD, Federal Law Gazette 213/1995), EU Biodiversity Strategy 2020].

By 2020, the loss of biological diversity must be stopped or reversed. The Habitats Directive and the Birds Directive require Austria to class certain areas as protected sites and to maintain a favourable conservation status for the flora and fauna in question. In the Alpine Convention, Austria pledges to protect species and nature in the Alps. Conservation and promotion of biological diversity in forest ecosystems is a core concern of the Ministerial Conference on the Protection of Forests in Europe (MCPFE). Long-standing efforts have already been made under the support programme for rural development, in cooperation with open-minded agricultural and forestry farmers, in a bid to reconcile a varied, multipurpose agricultural landscape with support for biological diversity in agricultural landscapes (Hirschberger, 2006).

The Federal Ministry of Agriculture and Forestry, Environment and Water Management Regulation on agricultural raw materials for biofuels and liquid biomass fuels (Federal Law Gazette II No 250/2010) ensures that Austrian agricultural raw materials produced in accordance with cross compliance (CC) and conservation law can be declared sustainable.

The ultimate objective of Directive 2000/60/EC [Water Framework Directive (WFD)] is to ‘prevent further deterioration and protect and enhance the status of aquatic ecosystems and ... terrestrial ecosystems ... directly depending on [them]’. In order to attain the objectives and implement the principles of the WFD, the Federal Minister for Agriculture and Forestry, Environment and Water Management has compiled a National Water Management Plan 2009 (NGP 2009), in cooperation with the provincial water management planning departments, and published it on the Ministry website. (http://www.lebensministerium.at/wasser/wasser-oesterreich/wasserrecht_national/planung/NGP.html).

The interactions between biofuel cultivation and biodiversity are the subject of research projects, such as proVision, the Federal Ministry of Science and Research programme to implement the

Austrian 'Research for Sustainable Development (FORNE)' strategy.

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

Table 6: Estimated GHG emission savings from the use of renewable energy (t CO₂eq)

| Environmental aspects | 2011 | 2012 |
|---|----------------|----------------|
| Total estimated net GHG emission saving from using renewable energy²⁷ | | |
| - Estimated net GHG saving from the use of renewable electricity | 18.8 million t | 18.1 million t |
| - Estimated net GHG saving from the use of renewable energy in heating and cooling | 9.4 million t | 10.3 million t |
| - Estimated net GHG saving from the use of renewable energy in transport | 1.7 million t | 1.6 million t |

NB: The data for Table 6 are taken from the publication ‘Renewable Energy in Figures – Development of Renewable Energy in Austria in 2012’. It also describes the calculation assumptions and factors.
http://www.lebensministerium.at/umwelt/energie-erneuerbar/ERneuerbare_Zahlen.html

In order to attain the target of a share of 34 % renewables in gross end energy use, no statistical transfers between Member States or participation in joint projects with other Member States and third countries are currently planned. In 2012, the share of renewables in gross end energy consumption had already risen to 32.3 %.

²⁷ The contribution of gas, electricity and hydrogen from renewable energy sources should be reported depending on the final use (electricity, heating and cooling or transport) and only be counted once towards the total estimated net GHG savings.

11. Please report on (for the preceding 2 years) and estimate (for the following years up to 2020) the excess/deficit production of energy from renewable sources compared to the indicative trajectory which could be transferred to/imported from other Member States and/or third countries, as well as estimated potential for joint projects until 2020. (Article 22(1)(l) and (m) of Directive 2009/28/EC)

Table 7: Actual and estimated excess and/or deficit (-) production of renewable energy compared to the indicative trajectory which could be transferred to/from other Member States and/or third countries in [Member State] (ktoe)^{28, 29}

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
| Actual/estimated excess or deficit production (Please distinguish per type of renewable energy and per origin/destination of import/export) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

11.1. Please provide details of statistical transfers, joint projects and joint support scheme decision rules

Statistical transfers, joint projects and joint support scheme decision rules

In order to attain the target of a share of 34 % renewables in gross end energy use, no statistical transfers between Member States or participation in joint projects with other Member States and third countries are currently planned.

²⁸ Please use actual figures to report on the excess production in the two years preceding submission of the report, and estimates for the following years up to 2020. In each report Member State may correct the data of the previous reports.

²⁹ When filling in the table, for deficit production please mark the shortage of production using negative numbers (e.g. -x ktoe).

12. Please provide information on how the share for 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(1)(n) of Directive 2009/28/EC*)

**Share for
biodegradable waste
for producing energy**

The share for biodegradable waste in waste used for producing energy is determined based on information from E-Control.

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