Austria

For Austria the following financial instruments and funding programmes were reported:

Austria	Instrument	Source	Sector	Technology	Impact
Eco-Electricity Act	Feed In Tariff	Electricity Consumer	All	Production of Electricity from Renewable Energy (Biomass, Biogas, Geothermal, PV)	In 2012 the supporting volume was 363 Mio. Euro, 55.748 GWh of national subsidised eco electricity were produced.
KMU-Scheck	Subsidy	Public/ National	All, SMEs	Energy Audits	High 4000 checks issued (3 years)
Regional programmes	Subsidy	Public		Energy Audits, EMS	Over 10 years, about 3,500 companies have benefited from 4,700 subsidised consultant visits
Energy Contracting	Financing Instrument	Diverse		Energy Efficiency, Renewables	100 Mio. Euro invested, 750 EPC and ESC projects in the period 2005-2011
Energy Contracting OÖ	Subsidy	Public		Energy Efficiency, Renewables	Over 150 projects, total investment 40 Mio. Euro, Subsidy: 2.6 Mio.
Bank loans	Loan Soft Loan	Bank funds Others for Soft Loans	All	All	N/A
UFI Energy Supply	Subsidy (Grant)	Public/ National	All	Renewables, Gas CHP	In 2012 1,125 cases 37.9 Mio. Euro subsidies, investments of 247.4 Mio. Euro and annual CO2 reductions of 0.3 Mio. t p.a. and 5.7 Mio. t CO2 over life time.
UFI Energy Saving	Subsidy (Grant)	Public/ National	All	Energy Efficiency	2012: for sub-programme EE in companies: 596.457 t CO2, 14 Mio. Euro subsidy (80 Mio. Investment), 457 cases, 23,5 Euro/t CO2 over lifetime
Solar Thermal Large Plants	Subsidy (Grant)	Public/ National	?	Solar Thermal	Small

Austria	Instrument	Source	Sector	Technology	Impact
ErP Loan, Guarantee	Soft Loan	ERB/AWS	Small, SMEs, big	RES, Energy Efficiency, CHPs	N.k.

Table 0-1 financial instruments and funding programmes in Austria

Eco-Electricity Act

The Austrian Ökostromverordnung 2012 (Eco-electricity ordinance, in short ÖSVO 2012) supports the electricity production from renewable energy sources with feed in tariffs for newly built plants. For PV, Geothermal and landfill and sewage gas plants those tariffs are granted for 13 years, for biomass, liquid biomass and biogas these tariffs are granted for 15 years. For existing wood-like biomass plants with high efficiency and enlarged capacity additional tariffs are available.

	Tariffs
PV (above 5 kWpeak to 20 kWpeak) on buildings; not fully installed on buildings	27.6 cent/kWh; 25 cent/kWh
PV (above 20 kWpeak) on buildings; not fully installed on buildings	23 cent/kWh; 19 cent/kWh
Wind	9.5 cent/kWh
Geothermal	7.5 cent/kWh
Biomass	
Up to 500 kW	14.98 cent/kWh
Above 500 kW to 1MW	13.54 cent/kWh
Above 1 MW to 1.5 MW	13.1 cent/kWh
Above 1.5 MW to 2 MW	12.97 cent/kWh
Above 2 MW to 5 MW	12.26 cent/kWh
Above 5 MW to 10 MW	12.06 cent/kWh
Above 10 MW	10 cent/kWh
Liquid Biomass	5.8 cent/kWh
Biogas up to 250 kW	18.5 cent/kWh
Biogas above 250 to 500 kW	16.5 cent/kWh
Biogas above 500 kW	13.0 cent/kWh
Sewage Gas	6 cent/kWh
Landfill gas	5 cent/kWh

For the period between 2010 and 2020 the Ökostromgesetz 2012 (Eco-Electricity Act) defined the following targets for plants to be installed:

- 1,000 MW (4 TWh) Hydropower (or was that on purpose not with a bullet point?)
- 2,000 MW (4 TWh) Windpower
- 1,200 MW (1,2 TWh) PV
- 200 MW (1,2 TWh) Biomass and Biogas

For each year 50 Mio. Euro/a are available in addition, from which:

- Min. 1.5 Mio. Euro for small hydropower (up to 2 MW)
- Min. 11.5 Mio. for windpower
- 8 Mio. Euro for PV
- 10 Mio. Euro for biomass and biogas, (3 Mio. Euro for biomass up to 500 kW)In 2012 19 Mio. Euro were available for wind, water- and PV ("as a residual pot")

In 2012 the supporting volume was 363 Mio. Euro, 55.748 GWh of nationally subsidised eco electricity were produced.

Contact

OeMAG Abwicklungsstelle für Ökostrom AG
Alserbachstrasse 14-16
A-1090 Wien
Tel.: +43 5 787 66-10
Fax: +43 5 787 66-99
E-Mail: kundenservice@oem-ag.at

Webpage

http://www.oem-ag.at/

"KMU-Scheck" (SME-Energy Cheque)

The aim of the SME Energy Cheque (introduced in 2009) is to mobilise SMEs of all sectors in Austria to reduce their greenhouse gas emissions. In order to achieve this, energy consumption data is collected, savings potentials are discovered and support given with implementing measures in subsidised energy consultant visits. This also raises awareness and increases the knowledge about these issues among SMEs.

This programme subsidises the cost of an initial energy audit („Erstberatung") carried out by an energy consultant as well as consulting on the implementation of energy efficiency measures („Umsetzungsberatung"). The maximum amount of funding is 2x 675 Euro. (90% of the cost (max. allowable cost 750 Euro) of one initial audit and one implementing support). Once issued, the cheques are valid for 6 months, i.e. the consultant visit has to be concluded and the report handed in by then.

The Austrian Climate and Energy Fund (KLIEN), which runs this programme, is financed by the Ministry of the Environment and the Ministry of Transport, Innovation and

Technology, the funds for this specific programme come from the Ministry of Environment.

From 2009 to 2012, more than 4,000 cheques were issued in total. The annual budget was between 350,000 Euro to 1 Mio. Euro, the total budget for the programme from 2008 – 2013 was 5.5 Mio. Euro[5] (including programme support and studies in the starting phase)

The consultant used must be one of more than 200 listed in the consultant pool. They fulfil certain minimum criteria (education, experience,...) and have followed an introductory workshop.

While the consultant is free in the methods he chooses, and in the way he summarizes his findings in a report, he needs to at least collect a minimum amount of energy use data specified in a standardised form, and also needs to report the savings potentials detected in this form, so as to allow for an overall data collection for the whole programme.

Positive aspects of the initiative include:

- "Low threshold" offer.
- Application and administration is relatively easy and fast, 75% of the consultant cost is paid by the subsidy.
- Companies get an overview over their energy situation and most important improvement measures
- Same conditions apply for all Austrian SMEs, no matter which Province they are located in.

Negative aspects to be mentioned:

- Very little time available, i.e. for bigger companies or such with more complex processes, the consultant cannot go in much detail
- The "Umsetzungsberatung" could be used to create a feasibility study, but due to the limited subsidy this would have to be a very simple measure or a very rough level of detail.
- "Stop and go"-policy. Over the last few years, it has happened several times, that suddenly no more applications were accepted, because the budget for the upcoming period had not yet been decided. This is an uncomfortable situation for the companies as well as for the consultants.

Contact

Klima- und Energiefonds

Contact for strategic questions: Stefan Reininger (KLIEN)
Tel. (+43 1) 585 03 90-30

Applications are handled by Kommunalkredit Public Consulting:
Serviceteam Energieeffizienzscheck
Tel. (+43 1) 31631-714

[5] Source: KLIEN, E-Mail, December 2013.

Webspage

www.kmu-scheck.at

Annual reports 2008 - 2012 are available here:*http://klimafonds.gv.at/service/publikationen-2/geschaeftsberichte/*

Guideline for funding „Richtlinie Energieeffizienzscheck für KMU“ current version dated from 1.7.2012http://www.klimafonds.gv.at/assets/Uploads/Downloads-Frderungen/KMU-Energieeffizienzscheck/20120701Energieeffizienzscheck-RichtlinienFinal.pdf

Regional programmes supporting energy consultancy for businesses

In Austria so called “regional programmes” support energy consultancy for businesses. Most programmes also support consultancy on environmental topics (e.g. waste management), or the implementation of an energy or environmental management system, incl. CSR and support with obtaining the environmental label for tourism businesses. Those programmes enable businesses to detect energy savings potentials and potentials for the use of RES and decide on appropriate implementation measures.

In most cases 50-75% of the costs are being financed, and usually the maximum daily rate of the consultant is fixed (e.g. in Burgenland 650 Euro net for most modules, for some modules such as CSR, ÖKOPROFIT and environmental management, the maximum daily rate is 800 Euro).

In Lower Austria, "Energy consultancy Short" offered by the Province is four days, and "Energy management" eight to ten days, and the rate is about 50%, but each programme has an additional half "check day", that is fully subsidised.

In Lower Austria, the chamber of commerce also offers short (max. 8 hours, subsidy 100%) and intensive (max. 20 hours, subsidy 75%) consultancy visits.

Also in Tirol, there are 2 types of modules for energy consulting: a short check, that is free, and a more intensive consulting, up to 24 hours, 50% of which is financed by the Province and the Chamber of Commerce. SMEs can use this intensive consulting module also for support with the implementation of an environmental or energy management scheme.

In Vorarlberg, there are initial checks, and a range of detailed support modules (general in-depth check (up to 40 hours), building envelope, implementation support), as well as support for subsidy applications. But the rate of subsidy is generally lower (depending on module and company size between 25 and 45%.) In addition, there is a "learning network on energy efficiency", which is organised in the framework of the Interreg-Project "EIVRIG", and where participation of the companies in this network is also subsidised.

Also Vienna has a full range of different modules, from an initial check to support for the implementation of an energy management system. There are also modules for environmental topics (from basic up to EMAS-implementation) as well as specialised modules on topics such as Green IT or leasing of chemicals. For companies that have installed an environment or energy management system a subsidy of 75% for 8 hours/year of consultancy work in the 2 years after the first implementation of the management system is available. Consultant visits can be combined with training and networking workshops. Every year, successful participating companies are awarded in a gala event.

The budget comes from each region and a part is co-financed by the ministry of the environment. This co-operation has existed for about 10 years now. In some provinces, also other players contribute, e.g. the regional chamber of commerce or the regional energy utility. The budget differs from region to region, for the bigger ones (Salzburg, Styria) it is around 2.5 Mio. Euro over the past 10 years. Some Regional Chambers of Commerce offer also subsidised consultancy visits for their members for different topics, incl. energy.

Criteria for most programmes are:

- Usually all sectors are accepted.
- Usually no restrictions regarding size. Sometimes there are small differences in the rate of subsidy for smaller/bigger companies.
- Usually, these are "de minimis" subsidies, i.e. the beneficiary must not have received more than 200,000 Euro in subsidies within the last 3 years.

During the past 10 years, about 3500 companies have benefited from 4,700 subsidised consultant visits[6]

All measures discovered in those programmes that are under the cooperation between Provinces and Environment Ministry must be entered into the "joint database for all Austrian regional programmes", which has been created in 2005.

In Upper Austria, evaluations show that about 70% of the measures recommended by the consultants are really implemented.

Each regional programme covers the territory of that region.

Usually, there are minimum criteria for the consultants. For example (Burgenland):

- Proof of registration of company
- Registration with Chamber of Commerce or Architects and Consulting Engineers
- Proof of permission to carry out this type of business
- Description of 3 reference projects for which they were responsible (time period, project goals, contents and results achieved)
- In some regions consultants must attend meetings or trainings once or twice a year to ensure continuing education. (Styria)

6 Brochure "Förderungen für Umwelt-und Energieberatungen" published by the Ministry for Agriculture, Forestry, Environment and Water resources and Kommunalkredit Public consulting, Vienna, 2013

Personal opinion:

- Overall, it is very positive that consultancy is subsidised. This a "low threshold" offer, which raises awareness among companies about the options they have, and may induce them to implement some of the detected useful measures.
- The usually modular structure gives those companies that want to take more action the chance to be supported in more detail.
- Fully-funded "check day" (like in Lower Austria) may be a good idea, so the funding body really receives info about the results.
- Differences between regions make the system more complex, and companies may find it somewhat unfair that their region doesn't offer something that the neighbouring region has, or that the rate of subsidy is different.
- Criteria that consultants must fulfil in order to be allowed in the consultant pool are not transparent in each programme.

Webpages

This page provides the links to all the regional programmes, listing the website and contact data:

http://portal.wko.at/wk/format_detail.wk?AngID=1&StID=364334&DstID=6963

http://www.klimaaktiv.at/energiesparen/betriebe_prozesse/beratung_foerderung/beratungsleist_bdld.html

Brochure "**Förderungen für Umwelt-und Energieberatungen** Erfolgsbeispiele aus den gemeinsamen Beratungsprogrammen von Bund und Ländern", published by the Ministry for Agriculture, Forestry, Environment and Water Resources and Kommunalkredit Public consulting, Vienna, 2013
http://www.publicconsulting.at/uploads/regionalprogramme_digitaleversion_060313.pdf

Evaluation Reports

The Styrian Programme WIN, the annual report of which is on a prominent position on the website and includes evaluation results, and a separate evaluation report about "10 years WIN" was published in 2012.
Evaluation 10 Jahre Wirtschaftsinitiative Nachhaltigkeit, Martinuzzi, A. et al, 2012, http://www.win.steiermark.at/cms/dokumente/11701000_10343237/3c58e6a7/Evaluation%2010%20Jahre%20WIN.pdf

The Viennese "Ökobusinessplan" has published the summary of the evaluation report about the year 2010
Wuppertal Institut, "Evaluation des Ökobusinessplan Wien, Programmjahr 2010" http://www.wien.gv.at/umweltschutz/oekobusiness/pdf/evaluation.pdf, Mai 2011

"Frisch & Frost" (Lower Austria)

Firsch & Frost is a producer of potato products (e.g. French fries, potato salad, potato dumplings, frozen sweet dishes…), the company has about 250 employees and uses about 97,000 Tonnes of potatoes per year.

With the help of the ökomanagement niederösterreich Programme, this company has trained 6 employees that are mainly responsible for waste management and environment issues. One employee was responsible to co-ordinate the implementation of an environmental management system (according to ISO 14001, certification was achieved in 2006) – also this was supported by the programme.

The company is already now using part of its organic waste as feedstock for a biogas plant, which produces electricity that amounts to approximately a third of the company's consumption. The waste heat is integrated in the production.

It is planned to enlarge the biogas plant in order to use 100% of the organic waste in it. This will reduce the consumption of originally about 4 mio. m^3 natural gas by approximately 15%.

Another plan foresees the addition of a denitrification basin to the wastewater treatment plant, in order to complete all steps of the water treatment in the company.

Alpenmilch Salzburg GmbH

Alpenmilch Salzburg GmbH is a dairy with 160 employees, using about 156 Mio. litres of milk per year. In 2009 the dairy company did an "energy check for production companies" subsidised by UmweltServiceSalzburg.

Before that, the energy consumption for water heating was 1.015 MWh/year. As a result of the consultant visit, the temperature of the storage tank was lowered, and the waste heat from the cooling units was integrated. In winter, even more heat is integrated, namely via the ventilation/air conditioning system. These measures achieve total energy savings of 780,000 kWh/a, corresponding to 155 t CO2 and 28,000 Euro energy cost.

Energy supply contracting & energy performance contracting

Energy Supply Contracting (ESC) means that efficient supply of useful energy such as heat, steam or compressed air is contracted and measured in Megawatt hours (MWh) delivered.

Under an Energy Performance Contracting (EPC) arrangement an external organisation (ESCO) implements a project to deliver energy efficiency, or a renewable energy project, and uses the stream of income from the cost savings, or the renewable energy produced, to repay the costs of the project, including the costs of the investment.

In Austria, the members of DECA (Dienstleistung Energieeffizienz und Contracting Austria, an association of ESCOs that are active in Austria, which had 20 members in Oct. 2013) have invested around 100 Mio. Euro in the period from 2005-11 only in Energy

Performance Contracting.[7] DECA Members have realized approximately 750 EPC and ESC projects in the period 2005-2011.[8]

In manufacturing and industry, Energy performance contracting is usually used for the optimisation of heating and lighting in:

- Office buildings
- Manufacturing halls
- Storage rooms
- Garages

EPC can also be used within the manufacturing processes, such as optimisation of compressed air system and the use of efficient motors, ventilators etc. but this type of projects is less frequent.[9]

Energy supply contracting is being used relatively frequently for the supply of heat and electricity (e.g.. via combined heat and power).

In Austria depending on the financing model chosen, usually there are three actors involved: a production company & an ESCO & bank (see link in footnote[10] for examples).

For companies that do not have a significant energy consumption, transaction costs (setting up the contract, monitoring results etc.) will usually be too high to be attractive for an ESCO. A rule of thumb says that this is usually the case for annual energy costs lower than 20,000 Euro, but this may vary depending on the company, the ESCO and the amount of work to be done. In some cases, the bundling of different buildings or facilities into one project ("pooling"), in order to reach a good size, may be an option.

A feasibility study is usually carried out by the contracting company before drawing up a contract.

IPMVP is already being used by the bigger companies in Austria

The following factors should be taken into consideration when deciding about contracting out an energy service:

- Company secrets: some companies wish to avoid giving too much insight into production processes to outsiders.
- Difficulty to define the borders of process steps/areas with energy relevance
- Reluctance to allow changes in the production process
- Long contracts: In times of rapidly changing economic conditions, companies are sometimes reluctant to commit themselves for more than 3-5 years.
- Accounting considerations: In the case of energy services, the capital invested by the ESCO sometimes is being treated in the balance sheet like a loan taken out by

[7] DECA press release, June 2013: http://www.deca.at/up_files/75.pdf
[8] Telephone conversation with Mrs. Auer, DECA, 4.10.2013
[9] http://www.contracting-portal.at/show.php?nid=3&mid=7

[10] http://www.contracting-portal.at/_downs/129.pdf

the company, so that contracting doesn't offer an advantage as regards the structure of the balance sheet.

- Creditworthiness: The company needs to be in a relatively good situation in order for the ESCO to be able to commit to the investments.

Advantages of contracting (for barriers, disadvantages see above)

- Investment possible without "burden" on the budget of the client. The measures are being pre-financed by the contractor and available capital can be used elsewhere.
- Long-term reduction of energy cost
- Improved liquidity
- Savings (or maximum amount of energy cost) contractually guaranteed
- Risk transfer to contractor – the ESCO takes on the risk for technical and economical reliability of the facilities.
- Extensive specialised knowledge: professional planning and realisation so that all technical potentials are being considered
- One contact person and contract partner for the whole project, i.e. less co-ordination effort for the client in the implementation phase.
- Fewer organisational tasks

Pro Pet Austria Heimtiernahrung GmbH
This company producing animal food extended their production and storage facilities in 2007 and 2012. The contractor guaranteed the following services: Year-round heat supply for process heat, space heating and hot water; performance guarantee and supply guarantee by technical and organisational rules; agreement on penalties, rules about succession in law;

Energy sources: 99% Biomass (Woodchips) 1% Oil
Base load: 1,500 + 1,500 kW Biomass plant
30 m³ buffer storage
Peak load: 2,000 kW Oil-fired boiler
Flue gas cleaning: electric filter
Heating facilities are underground
CO2-reduction: 2,800 t/a

Contractor: Ing. Aigner Energiecontracting GmbH

Contact

DECA
Mrs. Monika AUER,
Tel: +43 1 315 63 93 -17,
office@deca.at

Webpages

The website of the Website of DECA (Dienstleistung Energieeffizienz und Contracting Austria): www.deca.at
The Austrian "contracting portal" http://www.contracting-portal.at/show.php

Brochure for companies on contracting "Leitfaden für Innovative Energiedienstleistungen" http://portal.wko.at/wk/dok_detail_file.wk?angid=1&docid=670470&conid=257122

Energie Contracting Programm Oberösterreich

This programme supports energy performance and energy supply contracting projects in businesses and municipalities by partially covering the client's payments to the ESCO for projects located in Upper Austria via a public grant. Contracting has been supported in Upper Austria since 2002. It is quite likely that the programme will be continued after 2013, but this is up to political budget decision.

The goal of the programme is to give an additional impulse for the contracting market and foster the offer of new qualified services. This is also a preparatory measure for the implementation of the energy efficiency regulation in the service and buildings sectors.

So far more than 150 projects, with investments of about 40 Mio. Euro (which were financed by contracting) have been supported with approx. 2.6 Mio. Euro.

The programme supports the following investments if contracting is used to finance the investment:

- Construction of energy installations using mainly renewable sources (energy supply contracting)
- buildings refurbishment with energy efficiency improvements in a wide definition of the term, i.e. for example improvements in lighting, compressed air, heat recovery or similar should be eligible) (energy performance contracting)
- A rough feasibility study for the project.

The amount of investment must be between 50,000 and 500,000 Euro.

The percentage of the subsidised investment depends on the duration of the contract (column 1 in the table below) and the type of contracting (energy performance contracting (column 2) or energy supply contracting (column 3)) A maximum of 10 years duration of the contract is subsidised. For projects that combine both forms of contracting the subsidy rate will be calculated proportional to the share of the both forms in the eligible costs.

Contracting-Laufzeit (in Jahren)	Einspar-Contracting max. in %	Anlagen-Contracting max. in %
2	8	5,5
3	9,5	6,5
4	11	7,5
5	12,5	8,5
6	14	9,5
7	15,5	10,5
8	17	11,5
9	18,5	12,5
10	20	13,5

(Source: Regulation for the subsidy programme: http://www.esv.or.at/fileadmin/redakteure/ESV/Foerderungen/ECP-RL_2009_neu.pdf)

In general businesses and municipalities (not private housing) are supported, there are no restrictions on size.

- The subsidy is subject to "de minimis" rules, i.e. beneficiaries must not receive more than 200,000 Euro in 3 years (total of all subsidies)
- The implementation must not start before the subsidy application has been submitted.
- The subsidy is paid out as a grant covering part of the eligible cost. 50% of a so called "rough analysis" (Grobanalyse) for the preparation of the project can be financed for ESCOs already carried out a project in the framework of this subsidy programme!

The following can be counted as eligible cost: Cost for investment into energy-related refurbishment of buildings and/or investment into installations for the use of renewable energy sources. In addition, the costs for consulting and planning the investment as well as for the contingent liability and costs for necessary measures to improve the security of supply.

At the end of the duration of the contract, a proof of its fulfilment has to be submitted.

Stift Kremsmünster

The Kremsmünster Monastery includes the monastery, grammar school, pupils residence, administrative building, restaurant, wine cellar, brewery, and outdoor swimming pool. Energy contracting project consisted of the heat supply of by a 1 MW biomass plant, the refurbishment of old energy appliances, and the replacement of old heating system.

The CO2-reduction amounts to 720 t/year.

Contact

ESCO

Ing. Aigner GmbH.

Contact

OÖ Energiesparverband (regional energy agency), Ms. Öhlinger

http://www.esv.or.at/?id=503

Webpages

OÖ Energiesparverband

http://www.esv.or.at/foerderungen/unternehmen/contracting/

Brochure "Energie Contracting – Energieinvestitionen innovativ finanzieren", Oö Energiesparverband, 2009; Available at: http://www.esv.or.at/fileadmin/redakteure/ESV/Info_und_Service/Contracting_Folder_fin.pdf

Bank loans

A loan is given either directly to the end-user or to the ESCO; it is the agreement to lend a principal sum for a fixed period of time to be repaid by a certain date with an interest calculated as percentage of the principal sum per year and other transaction costs. This enables the company to cover the up-front cost of the investment, if the company doesn't have large enough cash reserves.

Usually the loan is financed of the funds of the bank. In case of soft loans, re-financing of the bank may be from EIB (European Investment Bank) or a similar institution or a combination with guarantees e.g. AWS, ERP-Funds or Agencies active in only one Province (such as Wiener Kreditbürgschafts-und Beteiligungsbank AG for Vienna).

The main criterion for the decision of the bank is whether the client is expected to be able to repay the loan. The exact conditions of the loan depend on the general and financial standing (credit rating) of the company, and whether securities are available.

An investment in energy efficiency may be considered less risky than e.g. an investment in a new market or similar, thus a loan for that may have slightly better conditions.

Also, a confirmation of approval for public funding (e.g. an UFI-grant) is an asset, as this means the project has been evaluated and considered viable by another competent expert. But in general, it is not the evaluation of the investment in itself, but the whole company, that is decisive.

Umweltförderung im Inland / Energy supply (Energieversorgung)

The target of this national subsidy programme is to lead to CO2 savings giving non-repayable funds to companies or organisations for energy supply technologies. Responsible is the Ministry of Environment, the subsidies are based on the Umweltfördergesetz and the Förderungsrichtlinien für Umweltförderung im Inland (2009). The subsidy is executed by the Kommunal Kredit Public Consulting.

In 2012 1,125 cases were subsidised with 37.9 Mio. Euro, leading to investments of 247.4 Mio. Euro and annual CO2 reductions of 0.3 Mio. t p.a. and 5.7 Mio. t CO2.

For **wood boiler heating systems** fired with wood-chips, pellets or bricks (if no connection to local district heating plants is possible) are subsidised, if they comply with certain maximum permissible values. For boilers below 400 kW the subsidy is 120 Euro/kW (for boilers up to 50 kW), and 60 Euro / kw for boilers from 51 to 400 kW. The maximum subsidy is 30% of eligible costs. Above 400 kW for a minimum investment of 10,000 Euro and a minimum CO2 savings of 4 t a maximum a subsidy of 20% of eligible costs is available. This subsidy can be higher under some circumstances (“sustainability award”, micro-net).

In 2012 538 biomass plants were subsidised with 5.5 Mio. Euro, leading to environmental relevant investments of 21.5 Mio. Euro and annual CO2 reductions of 26,899 t p.a. and t 537,970 t of CO2 over lifetime.

Eligible for this programme are the following forms of **local heating plants on basis of renewable energy:**

- New local heating plant
- Biomass CHPs
- Replacement of existing biomass boiler
- Geothermal local heating plant

The minimum investments are 10,000 Euro (35,000 Euro for geothermal plants) and have to lead to the reduction of at least 4 t of CO2 emission. The maximum subsidy is 675-1,350 Euro/t CO2, but there is no such limit for biomass boiler replacement. The amount of the subsidy ranges from 15% for boiler replacement to 25% for new heating plants, 10% for biomass CHPs and 30% for geothermal plants.

In 2012 234 local and micro local heating plants were subsidised with 17.6 Mio. Euro leading to environmental relevant investments of 134 Mio. Euro and annual CO2 reductions of 78,946 t p.a. and 1.6 Mio. t over lifetime.

In 2012 three biomass CHPs were subsidises with 3.8 Mio. Euro, leading to investments of 17.3 Mio. Euro and annual CO2 reductions of 101,201 t p.a. and t 1,5 Mio. t of CO2 over lifetime.

For all **heat pumps above 400 kWth** with a min COP from 3.5 (air/water) to 4 (water/water), a minimum investment of 10,000 Euro and a minimum CO2 savings of 4 t a maximum a subsidy of 675 Euro/t CO2 savings with 15% of eligible costs is available.

For all **heat pumps below 400 kWth** a maximum subsidy of 35-85 Euro/kW with 30% of eligible costs is available.

For heat pumps a feasibility study is financed for 8 hours corresponding to 300 Euro.

In 2012 129 heat pumps were subsidised with 707,891 Euro, leading to environmental relevant investments of 6.9 Mio. Euro and annual CO2 reductions of 4,424 t p.a. and t 52,825 t of CO2 over lifetime.

The use of **biogenic waste for heat production, CHPs and fermentation** plants are subsidised with a maximum subsidy of 675 Euro/t CO2, the minimum investment must be 10,000 Euro and lead to the minimum of 4 t CO2 savings. The amount of the subsidy is 20% of eligible costs; for fermentation plants it is 25%. (if the use of waste heat is above 50%) Additional subsidies are available (e.g. for EMAS, for resources available at a distance below 50 km) but the maximum amount is 30% within and without de minimis.

In 2012 2 plants in this category were subsidised with 854,598 Euro, leading to environmental relevant investments of 3.2 Mio. Euro and annual CO2 reductions of 2,606 t p.a. and 39,087 t of CO2 over lifetime.

Natural Gas-CHPs with a min. investment of 10,000 Euro are subsidised with a max.subsidy of 675 Euro/kWel, and 25% of eligible costs.

In 2012 13 gas CHPs were subsidised with 764,800 Euro, leading to environmental relevant investments of 5.5 Mio. Euro and annual CO2 reductions of 2,920 t p.a. and 43,801 t of CO2 over lifetime.

Solar thermal plants for companies for hotwater, space heating, processheat and for cooling systems are subsidised. Not subsidised are heating distribution within buildings. For plants with collectors below 100 m² the subsidy is 100 Euro/m² for standard collectors, 150 Euro/m² for vacuum tube collectors. The maximum amount is 30% of eligible (environmental relevant) costs. There is the possibility got get another 15 Euro/m² if the plant complies with the Austrian Ecolabel. For those smaller plants subsidies are available only within de minimis.

For collectors above 100 m² are subsidised with a maximum subsidy of 900 Euro/t and 20% of eligible costs are available, with the possibility to get another 5% for Ecolabel. The minimum investment must be 10,000 Euro and lead to the minimum of 4 t CO2 savings. Subsidies are available within and outside of de minimis.

In 2012 238 plants were subsidised with 748,520 Mio. Euro, leading to investments of 4.9 Mio. Euro and annual CO2 reductions of 1540 t p.a. and 23,093t CO2 over lifetime.

Contact

Kommunalkredit Public Consulting
Türkenstraße 9
1092 Wien
Tel: +43/1/31631
E-Mail: kpc@kommunalkredit.at
Webpages

Förderungsrichtlinien für Umweltförderung im Inland (2009)
http://www.umweltfoerderung.at/kpc/de/home/umweltfrderung/
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Umweltförderung im Inland / Energy saving (Energiesparen)

Under the programme Umweltförderung im Inland / Energiesparen the following energy saving measures are subsidised:

- Insulation of buildings (for companies)
- Air conditioning and Cooling Systems (ad- an absorption cooling driven by renewables or industrial waste heat up to 750 kW), free cooling, process cooling with alternative refrigerant (NH3 or CO2)
- Energy saving measures in companies (heat recovery, heat pumps, energy efficient production processes, efficient lighting systems, optimisation of heating systems in existing buildings), induction ovens
- LED Systems

General a minimum investment of 10,000 Euro is subsidised, the pay-back of the measures must be from three to five years, de minimis rules must be considered (200,000 Euro per company within three years), general the subsidy is between 30-35% of eligible costs.

Thermal insulation of buildings for companies covers the following topics: Thermal insulation of buildings older than 20 years, incl. the insulation of walls, ceilings, replacement of windows; the installation of heat recovery in ventilation systems; the

shading systems for reduction of cooling demand. A maximum subsidy of 0.88 Euro per reduced kWh heating demand is paid out, the subsidy ranges from 20-35% (depending on heat demand) for complete restoration, and from 10-15% for part-restoration. In addition there are other technical requirements. Within this programme (which is the smaller one of two relevant programmes in this field!) 54 projects were subsidised in 2012 with 7 Mio. Euro, leading to environmental relevant investments of 43 Mio. Euro and annual CO2 reductions of 5707 t, 171,196 over lifetime.

Within the so called **"Sanierungsoffensive"** in 2012 446 projects were subsidised with 18.4 Mio. Euro leading to investments of 113 Mio. Euro, subsidised are improvements of buildings of companies older than 20 years. CO2 reductions achieved per anno were 22,358 t and over lifetime 670,739 t.

Under the topic **Air conditioning and Cooling Systems** Ad- and absorption cooling systems driven by renewables or industrial waste heat from 4,5 up to 750 kW, free cooling, process cooling (with alternative refrigerant (NH3 or CO2) are subsidzed: The min. investment. is 10,000 Euro, the max. subsidy is 450 Euro/kW cooling power (ad- and absorption) and 450 Euro per saved tonne CO2 for free cooling and process cooling. The subsidy is up to 30-35%, within or not within de minimis is possible.

In 2012 22 systems were subsidised with 750,928 Euro, leading to environmental relevant investments of 4 Mio. Euro and annual CO2 reductions of 1,307 t p.a. and 13,067 t of CO2 over lifetime.

The topic **Energy saving measures in companies** covers heat recovery, heat pumps, energy efficient production processes, efficient lighting systems, optimisation of heating systems in existing buildings and induction ovens: The minimum investment is 10,000 Euro, for heat recovery it is 5,000 Euro; for HR in cooling and ventilation systems there are no limits (only within deminimis). The maximum subsidy is 450 Euro/t CO2, the subsidy is 30% for energy saving measures within or not within de minimis is possible. For HR in Cooling- and Ventilationsystems the subsidy is between 80-160 Euro/kW (0-30 kW/31-99 kW).

For the programme energy saving measures in companies (which has the highest impact of the programmes for energy efficiency in companies) 460 cases were subsidised with 14 Mio. Euro leading to investments of 80.5 Mio. Euro for 2012. 59,646 t of CO2 emissions were reduced per anno, 596.457 t CO2 over life time. (23 Euro/t CO2).

For **LED Systems** the replacement of conventional lighting and the installation of light control are subsidised with a flat rate subsidy of 300 Euro//kW; 600 Euro/kW, depending on what is replaced (lamp or illuminant), only within de minimis.

In 2012 102 systems were subsidised with 3,533,824 Euro, leading to environmental relevant investments of 3.4 Mio. Euro and annual CO2 reductions of 2,425 t p.a. and 24,247 t of CO2 over lifetime.

External Consultants for heat recovery in cooling and ventilation systems and LED Systems are co-financed with 300 Euro.

Comments from the authors to this programme:

For some UFI-subsidies, it is possible to submit the application after the investment has been carried out, but the application for the corresponding top-up-funding from some Provinces has to be submitted before the works are started. This can be quite confusing for the potential beneficiaries.

- The programme is heavily used in Austria
- Disadvantes are the minimum of 10,000 Euro per year and the pay-back above 3 years
- Bank Guarantee necessary (for 5,000 Euro support, costs around 3,000 Euro)
- There is no support for energy efficiency measures in connex with fossil boilers

Umweltförderung im In- und Ausland 2012					
	Anzahl	Umweltrelevantes Investitions-volumen in EUR	Förderungs-barwert in EUR	CO_2-Reduktion in Tonnen pro Jahr	CO_2-Reduktion in Tonnen bezogen auf die Nutzungsdauer
Erneuerbare Energieträger					
Biomasse-Einzelanlagen	538	21.541.951	4.465.647	26.899	537.970
Biomasse-Mikronetze	105	16.655.097	3.652.556	8.986	179.720
Biomasse-Nahwärme	129	117.482.737	13.943.211	69.960	1.399.205
Biomasse-KWK	3	17.283.050	3.757.228	101.201	1.518.016
Kesseltausch	2	1.052.714	59.422	53	1.065
Wärmeverteilung	79	46.223.898	7.285.913	44.806	1.344.177
Solaranlagen	238	4.941.257	748.520	1.540	23.093
Geothermienutzung	2	1.715.000	308.694	1.390	41.693
Herstellung biogener Brenn- und Treibstoffe	2	15.341.000	2.166.245	38.459	576.891
Stromproduzierende Anlagen	25	1.976.179	618.626	219	3.282
Energiegewinnung aus biogenen Abfällen	2	3.170.815	854.598	2.606	39.087
Effiziente Energienutzung					
Erdgas-KWK	13	5.479.704	764.800	2.920	43.801
Anschluss an Fernwärme	242	6.209.045	953.156	13.508	202.615
Wärmepumpen	129	6.944.071	707.891	4.424	52.825
Betriebliche Energiesparmaßnahmen	457	80.405.954	14.561.877	59.646	596.457
Umstellung auf LED-Systeme	180	3.356.529	353.824	2.425	24.247
Energieeffiziente Antriebe	8	125.158	23.449	365	3.646
Thermische Gebäudesanierung	54	42.984.879	7.028.636	5.707	171.196
Neubau in Niedrigenergiebauweise	36	108.918.379	711.902	1.080	32.391
Klimatisierung und Kühlung	22	3.954.877	750.928	1.307	13.067

Amount of subsidies and relating CO2 reductions for the different programmes, Umweltförderungsbericht 2012, BMLFUW, 2013

For most of those programmes described additional co-financing is available via

The **European Regional Development Fund (ERDF)** co-financed projects mainly in the field energy saving measures in companies and renewable energycarriers (biomass plants, micro local heating, heating distribution). In 2012 20 projects with 1.9 Mio. Euro were financed.

The **European Agricultural Fund for Rural Development (EAFRD)** finances the rural development programmes of the Member States. The fund was created by Council Regulation (EC) No 1290/2005 of 21 June 2005 on the financing of the common agricultural policy which established a single legal framework for financing CAP spending.

In Austria this fund co-financed 116 projects in 2012 in the field of biomass local heating, biomass CHP, boiler replacement and heat distribution. In addition to 8.8 Mio. Euro national funds, 14.1 Mio. Euro came from the EU, 5.9 Mio. from the regions.

Contact

Kommunalkredit Public Consulting
Türkenstraße 9
1092 Wien
Tel: +43/1/31631
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Solar thermal – solar thermal large plants

The Kommunalkredit Public Consulting for the Klima+Energie Fonds (Federal Ministry for Transport, Innovation and Technology and Ministry of Life) subsidises the realisation of large solar thermal plants including measurements and evaluation for solar process heat, solar integration in heating grids, high solar yield in trade and service companies, solar air-conditioning and solar integration in new technologies and innovative approaches.

Year to year the call is open from May till end of September, the time for implementation is 18 months, the budget for 2013 is 5 Mio. Euro.

In the years 2010-2012 129 projects were approved and supported with a subsidy volume of:15.7 Mio. Euro. 45 projects were accompanied with a measurement campaign.

The funding is between 40 to 50% of total costs for solar thermal plants between 100 m² and 2,000 m² depending on innovation and accompanying measurement and monitoring. Partly small plants of 50 m² are funded in case very innovative approaches and new technologies. Consultants and planning costs can be included in overall costs.
Examples are: Meat production Berger in Lower Austria, Several food companies across Austria.
Results have been presented at several workshops and conferences but the data is not public.

Opinion:

- General high interest but decreasing number of interested projects
- Good initiative
- Uncertainties on availability in next year

Contact

Serviceteam Solare Großanlagen (KPC)
Kommunalkredit Public Consulting for the Klima+Energie Fonds (Federal Ministry for Transport, Innovation and Technology and Ministry of Life)
Webpages

http://www.klimafonds.gv.at/foerderungen/aktuelle-foerderungen/2013/solarthermie-solare-grossanlagen-4-as/
http://www.klimafonds.gv.at/assets/Uploads/Downloads-Frderungen/Solarthermie/Solarthermie2013.pdf

Erp Loan, Loan Guarantee for investments in Environmental protection

The Austrian Wirtschaftsservice as business development /subsidy bank of the federal government supports companies at financing of their projects with erp-loans, guarantees, subsidies and liabilities.

The money comes from the ERP Funds and underlies the European law on state aid.

In principle the use of Energy Efficient Technologies and Renewables can be supported for Medium-, Small sized Companies. Big Companies can be supported under specific circumstances.

The **financing guarantees** for bank loans for investments with the character of environmental protection is 80% (quota) with a maximum of 7.5 Mio. Euro guaranteed, the running time is 6-12 years, the costs are a handling fee 0.5% of the guaranteed loan, the guarantee costs/fee with a min. 0.6%.

- For SMEs for energy efficient production
- For big companies (within de minimis, within regional support/aid programmes or without subsidy)

Examples for investments are energy saving measures, measures for improving energy efficiency, use for renewable energy or high efficient CHPs.

The **Erp-SME Programme** supports SMEs with a loan with a financing volume from 100,000 Euro to 7.5 Mio. Euro, the running time is 6 years (one year payback grace period). The interest rate is 1% for amortization term but 0.5% for first year and an additional 0.9% one-time fee.

Erp small-loan supports small companies in the modernization and capital-widening investments with a financing volume of 10,000 Euro- 100,000 Euro. The running time: 6-10 years with a two year payback grace period. The interest is 1% for amortization term and 0.5% for the first two years. In addition there is a 0.9% one-time fee.

Contact

Austria **Wirtschaftsservice** GmbH
Dr. Wilhelm Hantsch Linhart
austria wirtschaftsservice
Ungargasse 37, 1030 Wien
tel.: +43 (1) 501 75 – 311

fax: +43 (1) 501 75 – 907
email: w.hantsch@awsg.at

Webpages

www.aws.at