

# Report on financial incentives

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**IMPAWATT**

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## Introduction

Within IMPAWATT, all partner countries collected information about existing financial incentives for energy audits and investments in energy efficiency. This report summarizes the financial incentives in the six partner countries: Austria, France, Germany, Italy, Finland and Switzerland.

This document is intended for energy managers and members of the top management of companies from the industrial and service sector.

The purpose of this document is to summarize existing financial incentives for energy audits and investments in energy efficiency and renewable energy to inform stakeholders about the possibilities for financial support in the corresponding countries.

In addition, on the IMPAWATT platform, an Excel-database and separate PowerPoint presentations are available for each country in the national language.

These documents are available on the national IMPAWATT platforms:

EU central platform: <https://eu.impawatt.com/>

Austria: <https://at.impawatt.com/>

Germany: <https://de.impawatt.com/>

Finland: <https://fi.impawatt.com/>

France: <https://fr.impawatt.com/>

Italy: <https://it.impawatt.com/>

Switzerland: <https://fr.impawatt.com/>

# 1 Main incentives Programme in Austria

This chapter summarizes selected financing programmes in Austria for the support of energy efficiency measures, for the support of projects for renewable energy and for mobility measures in production and service companies.

## 1.1 Domestic Environmental Support

The Austrian Environmental Support Act (Umweltförderungsgesetz, UFG), 1993, provides the basis for environmental assistance granted in Austria (Umweltförderung Inland – UFI). UFI is the central support instrument, which supports Austrian companies and public institutions with investment measures for increasing energy efficiency and, in particular, for thermal renovation of buildings, adoption of renewable energy sources, e-mobility and carrying out demonstration projects. In the framework of the support program, the Austrian government provides grants up to 35% of environmental relevant investment costs of large companies and SMEs.<sup>1</sup>

**Examples for funding in the industrial sector:**

- 1. Energetic utilization of biogenous raw materials and residues:** Measures for thermal treatment and fermentation of biogenic waste as well as measures for substitution of fossil fuels via secondary fuels with biogenetic portion are funded
- 2. Raw materials management:** Fund will be granted for raw materials management made available for companies and other organizations conducting business activities
- 3. Solar thermal energy and large solar arrays:** Construction of demonstration plants with a minimum size of 100 m<sup>2</sup>
- 4. Solar Photovoltaic in agriculture and forestry:** Newly installed, mains parallel operation of solar photovoltaic plants, which are larger than 5 kW<sub>peak</sub> up until the included funding limit of 50 kW<sub>peak</sub>.
- 5. Supply of thermal heat and/or hot water  $\geq 100$  kW<sub>th</sub>:** electrical heat pumps from 100 kW nominal heat output with environmental heat as a heat source, which will be used for the primarily production of thermal heat, hot water or process heat or supply of heating networks
- 6. Energy efficiency in industry:** Funding will be provided to enterprises, which implement energy saving measures that contribute to the efficient use of energy during production processes in buildings, heat recovery and lighting optimization.

More information: [www.kommunalkredit.at](http://www.kommunalkredit.at)

## 1.2 AWS – Financial incentive for energy management systems

The Federal Ministry for Sustainability and Tourism (BMNT) encourages SMEs to implement energy management systems within a support programme donated with 5 million Euros.

In a framework of which, the following expenditures will be funded:

- External consulting services to prepare energy management systems and certification services (50%)
- In additionally provable external training costs (50%)
- Investment costs (for example: metering equipment) (30%)

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<sup>1</sup> Draft Integrated National Energy and Climate Plan for Austria (2019)  
[https://ec.europa.eu/energy/sites/ener/files/documents/ec\\_courtesy\\_translation\\_at\\_necp.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/ec_courtesy_translation_at_necp.pdf)

Duration: From 11.06.18 to 31.12.2023 or until the budget lasts

More information: <https://www.aws.at/foerderungen/enms-foerderung-fuer-energiemanagementsysteme-in-kmu/>

## 1.3 Regional programmes

### Regional consulting programmes

The regional consulting programmes provide funded on-site consultancy for environmental and energy efficiency issues, which ideally complements the steps to raise awareness successfully. 50% of the consulting costs are paid by the company and the other 50% can be obtained by the advisor from the regional consulting programme co-financed by the Domestic Environmental Support scheme. Funded regional consulting programmes are:

- Burgenland - Energie und Umweltberatung [www.eabgld.at](http://www.eabgld.at)
- Kärnten - ökofit Kärnten [www.oekofit.at](http://www.oekofit.at)
- Niederösterreich - Ökomanagement NÖ [www.oekomanagement.at](http://www.oekomanagement.at)
- Oberösterreich - Energiesparverband OÖ [www.energiesparverband.at](http://www.energiesparverband.at)
- Salzburg - umwelt service salzburg - [www.umweltservicesalzburg.at](http://www.umweltservicesalzburg.at)
- Steiermark - Wirtschaftsinitiative Nachhaltigkeit (WIN) - [www.win.steiermark.at](http://www.win.steiermark.at)
- Tirol - WK Tirol Abteilung Innovation und Technologie / ecotiro1 - [www.ecotiro1.at](http://www.ecotiro1.at)
- Vorarlberg Energieinstitut Vorarlberg - [www.energieinstitut.at](http://www.energieinstitut.at)
- Wien ÖkoBusiness Wien – [www.unternehmen.oekobusiness.wien.at](http://www.unternehmen.oekobusiness.wien.at)

### Energy contracting in Upper Austria

In the framework of energy contracting energy efficiency measures are financed in the federal state of Upper Austria. The submitted projects must contain the financing of:

- Refurbishment of multiple objects that implemented energy efficiency measures via contracting and/or
- Application of energy technologies, which deploy renewable energy sources
- The planning and construction of street lighting under the act „Österreichischer Leitfaden Außenbeleuchtung“ in municipalities in the framework of an energy saving contracting project

Payment will be made in a form of grant, which is subject to an assessment basis. The funded costs have to reach at least 50.000 EUR and limited up to 250.000 EUR.

The website is available via this link: <https://www.land-oberoesterreich.gv.at/22833.htm>

## 1.4 klimaaktiv mobil

Through standards, awareness-raising, information, consultation and further education, klimaaktiv provides incentives and market stimulus to use renewable energy sources for energy efficiency measures in the field of construction, renovation and mobility. klimaaktiv provides guidance and serves as a quality assurance system for public funding, helping to ensure more efficient use of funding, in particular the Domestic Environmental Support scheme. As well as providing consultation, training and certification in conjunction with the Domestic Environmental Support scheme for Austria's businesses, cities, municipalities, regions and the tourism sector, klimaaktiv mobil offers its own funding programme providing financial support for the implementation of measures for clean, low-CO<sub>2</sub> mobility.

Website: <https://www.umweltfoerderung.at/rechtliche-grundlagen-klimaaktiv-mobil.html>

### **E-Mobility offensive 2019+2020**

In the framework of the Austrian Climate and Energy Strategy (#mission2030) it is a significant measure for implementation in the value of 93 million EUR for 2019 and 2020, which consists of three pillars:

1. E-mobility for road vehicles and infrastructure
2. E-mobility in rail traffic
3. E- mobility management, e-fleets and e-logistic

Website:

[https://www.umweltfoerderung.at/fileadmin/user\\_upload/media/umweltfoerderung/Dokumente\\_Betriebe/Fahrzeuge\\_Mobilitaet\\_Verkehr/KA\\_MOBIL\\_Leitfaden\\_Multimodales\\_Verkehrssystem.pdf](https://www.umweltfoerderung.at/fileadmin/user_upload/media/umweltfoerderung/Dokumente_Betriebe/Fahrzeuge_Mobilitaet_Verkehr/KA_MOBIL_Leitfaden_Multimodales_Verkehrssystem.pdf)

### **Mobility management in the framework of the Program for rural development (LE 14-20)**

Mobility management, e-mobility, alternative propulsion methods using renewable energy, cycling and innovative, flexible mobility services and measures for environmental friendly mobility management on the regional, communal, industrial as well as touristic level will be funded that contribute to the transformation of transport system and the deployment of alternative fuels.

## **1.5 Feed in tariff**

In 2012 the Ökostromgesetz set out the feed-in tariff which is the main support system for electricity from renewable sources. The operators of renewable energy plants are entitled against the government purchasing agency, to the conclusion of a contract on the purchase of the electricity they produce ("obligation to enter into a contract") unless the promotional volume for the FiT is exhausted.<sup>2</sup> The regulation was amended in 2017 by the `kleine Ökostromnovelle` in 2017, which proves 45 million EUR additional financial support for wind energy.

Current feed in tariff regulation: <https://www.e-control.at/recht/bundesrecht/oekostrom-energieeffizienz/verordnungen>

## **1.6 Conclusion**

Corresponding to the Federal Government's Climate and Energy Strategy (#mission2030), there are several financial incentives designed specifically for the federal states as well as on the state level which are made available for enterprises to improve energy efficiency. These incentives can be combined with each other. With the help of governmental funding core measures, such as the switch to e-mobility and increased renovation rates energy efficiency is increased with no loss of prosperity.

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<sup>2</sup> RES –Legal (2019): <http://www.res-legal.eu/en/search-by-country/austria/tools-list/c/austria/s/res-e/t/promotion/sum/91/lpid/94/>

## 2 Report on financial incentives in Finland

The Finnish Government pays the financial incentives for companies mainly through Business Finland, where the incentives have been centralized in the last few years. Business Finland has launched The Smart Energy Finland program for companies developing and adopting smart energy solutions. Hundred million euros will be granted by the Program in 2017–2021. SMEs and growth-oriented companies are prioritized in Finland. In maximum 40% of costs for large companies and 50% for SMEs will be covered. There is funding available for both individual companies and business ecosystems.

The programme introduces new business concepts in the areas of energy efficiency, renewable energy, energy storage systems, smart networks and integration of steering as well as consumer-oriented business.

In addition, the Business Finland grants are 30% of the investments for innovative solutions replacing energy systems of large companies and 40 to 60% of SMEs at maximum. It can be both, an investment to technology as well as an investigation, e. g. an energy audit. For example, large companies can get 20% grant for their solar electricity or heat projects. Business Finland grants also low-interests loans for companies. Finnish government pays 40%-60% of the costs for SMEs of their energy audits. Large companies have statutory obligation to do energy-audit every four years.

Electricity Feed-in Tariff started in 2011 and will continue until 2030. In Feed-in Tariff the government will pay the difference between the target price defined by the law and the market price for the producer. In 2018 Finnish government paid 255,8 million euros for Feed-in Tariffs. Feed-in Tariffs has been criticized for being too generous and inefficient.

White Certificates and On Bill Financing system which are used in other EU countries and elsewhere are less widely used since Finland had already developed its own certificates and incentives systems before the appearance of the other systems. Finland might be also a market too small for White Certificates.

## 3 Main incentives Programme in France

### 3.1 Energy saving Certificates (ESC)

National scheme requiring energy sellers to contribute financially to energy saving investments made in Industry, Tertiary, Housing, etc.

Eligible investments are described in standardized operation sheets. Each sheet includes:

- The technical criteria to be met in order to benefit from the aid
- A formula to estimate the amount of assistance available

NB: in addition to standardized operations, in certain specific cases, so-called 'specific' operations may also be financed.

Examples of eligible operations in Industry:

- Speed variation on a motor
- Heat recovery on compressors, cooling units
- Installation of destratifiers
- ...

Examples of eligible operations in the Tertiary sector:

- Insulation of walls, roofs
- High-performance boiler
- ...

All information is on: <https://www.ecologique-solidaire.gouv.fr/dispositif-des-certificats-deconomies-denergie>

### 3.2 PRO-SMEn (ESC program)

PRO-SMEn encourages and financially supports the implementation of an Energy Management System in accordance with ISO 50001, in companies and local authorities, through the payment of a bonus.

The bonus, capped at €40,000, is equal to 20% of the annual energy expenses of the certified sites.

All information is on: <https://pro-smen.org/>

### 3.3 PRO-REFEI (ESC program)

PRO-REFEI is a training program developed by ADEME and aimed at training Industrial Energy Managers.

It consists of a multimodal training, including:

- A Mooc (distance learning)
- A two-day collective classroom course
- Individual and personalised on-site support for two and a half days.

The programme is 100% funded by ESCs for companies with less than 300 employees, and 50% for companies with more than 300 employees, which is up to three people per company.

All information is on: <https://www.prorefei.org/>

### **3.4 Decision support by ADEME**

Financial assistance for feasibility studies dealing with energy saving, fatal heat recovery or renewable energies. 50% of the aid is for SMEs and 30% for large enterprises.

The study must be carried out by an independent expert and comply with precise technical specifications.

### **3.5 Investment support by ADEME**

Financial support for investment projects in energy performance, which have to be :

- Innovative
- Overachievers
- Reproducible

The aid is based on a Call for Proposals called "AURAENERGY", which has two deadlines per year.

The amount of aid is calculated on a case-by-case basis.

### **3.6 INNOV'R**

Financial support from the Auvergne-Rhône-Alpes Region for the development of eco-innovative products or services in SMEs.

The amount of aid is calculated on a case-by-case basis.

All information is on : <http://eco-innover.rhonealpes.fr/InnovR>

### **3.7 INDUSTRY OF THE FUTURE**

Financial support from the Auvergne-Rhône-Alpes Region for production investments in industry.

The aid amounts to 10 to 20% of the investment and is capped at €490,000 per company.

All information is on : <https://ambitioneco.auvergnerhonealpes.fr/aideEco/14/319-solution-investissements-industrie-du-futur.htm>

### **3.8 REDUCED RATES OF “CSPE”**

Tax relief on electricity for "electro-intensive" industrial companies.

The company must prove that its annual CSPE amount exceeds 0.5% of its Added Value.

The amount of the reduction is at least 15€/MWh and therefore represents more than 10% of the company's total electricity costs.

A request for a refund of the overpaid CSPE can be made up to two years after the payment.

### **3.9 REDUCED RATES OF “TICGN”**

Tax relief on natural gas open to industrial companies according to activity criteria (exhaustive list of NAF codes) and energy intensity (weight of energy taxes in relation to the company's added value).

A request for refund of the overpaid TICGN can be made up to two years after the payment.

### **3.10 Aide à l'investissement de l'ADEME**

Financial support for renewable energies (geothermal, mechanisation, solar thermal, etc.)

The grants are based on various calls for projects with specific regulations and application deadlines depending on the type of renewable energy (geothermal, wood, mechanisation, etc.)

### **3.11 Conclusion**

In France, there are different types of public and private financial support for companies' energy performance projects. The above list is not exhaustive.

Be careful, the aids are constantly evolving. Companies must check with their CCI BEFORE signing any order.

## 4 Main incentives programmes in Germany

The main national incentive programmes in Germany are listed below.

The first program on energy advising for KMU is very popular among KMU as it is often a precondition to apply for a funding programme of the German national bank KfW (Kreditanstalt für Wiederaufbau).

Additionally, there are funding programmes in some regions (Bundesländer), like e.g. the Bavarian programme for renewable energy and energy efficiency in enterprises. Most of the programmes offer attractive loans, some of them combined with subsidies depending on the kind of measure that is funded.

Most of them have a guaranteed funding period of 10 years. The interest rate is negotiated by the local bank where the loan has to be applied for and depends on the financial situation of the company. One critical point for the KfW programmes could be that the application procedure is regarded as bureaucratic and companies are quite dependent on the readiness for collaboration of the local bank.

### 4.1 Federal Ministry of Finance (Bafa Consulting: Energy consulting for small and medium-sized enterprises)

- Energy consulting for SMEs
- Grant 80 % of eligible consultancy costs
- Only by certified BAFA energy consultants
- Leaflet with further information:  
[https://www.bafa.de/DE/Energie/Energieberatung/Energieberatung\\_Mittelstand/energieberatung\\_mittelstand\\_node.html](https://www.bafa.de/DE/Energie/Energieberatung/Energieberatung_Mittelstand/energieberatung_mittelstand_node.html)

### 4.2 Federal funding for energy efficiency in the economy

- Low-interest loan with up to 55 % repayment subsidy
- Up to 25 million euros per project
- Open to companies of all industries and sizes
- Everything for more energy efficiency: from highly efficient standard components to complex system solutions
- Leaflet with further information:  
[https://www.kfw.de/PDF/Download-Center/F%C3%B6rderprogramme-%C3%B6rderprogramme-\(Inlandsf%C3%B6rderung\)/PDF-Dokumente/6000004389\\_M\\_295\\_EE\\_Prozessw%C3%A4rme.pdf](https://www.kfw.de/PDF/Download-Center/F%C3%B6rderprogramme-%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/6000004389_M_295_EE_Prozessw%C3%A4rme.pdf)

### **4.3 Federal funding for energy efficiency in industry: Module 1: Cross-sectoral technologies**

- The net investment volume for individual measures, including associated costs, must amount to at least 2,000 euros
- The maximum funding amounts to 200,000 euros with a funding quota of up to 40 % of the eligible investment costs
- Electric motors and drives
- Pumps for industrial and commercial applications
- Ventilators
- Compressed air systems and their superordinate control system
- Plants for waste heat utilisation or heat recovery from waste waters
- Insulation of industrial plants or plant components
- Frequency converters
- Leaflet with further information:  
[https://www.bafa.de/DE/Energie/Energieeffizienz/Energieeffizienz\\_und\\_Prozesswaerme/Modul1\\_Querschnittstechnologien/modul1\\_querschnittstechnologien\\_node.html](https://www.bafa.de/DE/Energie/Energieeffizienz/Energieeffizienz_und_Prozesswaerme/Modul1_Querschnittstechnologien/modul1_querschnittstechnologien_node.html)

### **4.4 Federal funding for energy efficiency in industry: Module 2: Process heat from renewable energies**

- Maximum funding of 10 million euros per investment project
- Funding rate up to 55 % of eligible investment costs
- Heat from solar collector systems, heat pumps or biomass systems, more than 50 % of whose heat is used for processes, i.e. for the manufacture, further processing or refinement of products or for the provision of services.
- Leaflet with further information:  
[https://www.bafa.de/DE/Energie/Energieeffizienz/Energieeffizienz\\_und\\_Prozesswaerme/Modul2\\_Prozesswaerme/modul2\\_prozesswaerme\\_node.html](https://www.bafa.de/DE/Energie/Energieeffizienz/Energieeffizienz_und_Prozesswaerme/Modul2_Prozesswaerme/modul2_prozesswaerme_node.html)

### **4.5 Federal funding for energy efficiency in business: Module 3: MSR, sensor technology and energy management software**

- Software and hardware related to the establishment or application of an energy or environmental management system
- maximum funding of 10 million euros per investment project
- Up to 40 % of eligible investment costs
- Identical funding conditions for the KfW loan programme of the same name

- Eligible: licence for energy management software, associated sensors, analog-to-digital converters, actuators for efficient control of energy flows, data loggers / gateways for transmission of sensor data, software training, cloud costs for external use
- Leaflet with further information:  
[https://www.bafa.de/DE/Energie/Energieeffizienz/Energieeffizienz\\_und\\_Prozesswaerme/Modul3\\_Energiemanagementsysteme](https://www.bafa.de/DE/Energie/Energieeffizienz/Energieeffizienz_und_Prozesswaerme/Modul3_Energiemanagementsysteme)

#### **4.6 Federal funding for energy efficiency in industry: Module 4: Energy-related optimisation of plants and processes**

- Maximum funding of 10 million euros per investment project
- Up to 40 % of eligible investment costs
- The maximum support is limited to an amount of EUR 500 (EUR 700 for small and medium-sized enterprises) per ton of CO<sub>2</sub> saved per year (support efficiency).
- Identical conditions of support for the KfW loan programme of the same name
- Eligible: process and process conversions to efficient technologies and energetic optimisation, measures for waste heat recovery, measures for heat supply, cooling and ventilation systems, measures for the energy-efficient provision of process heat or cooling, measures to prevent energy losses in the production process, energy-saving concept (to be submitted with application) and support by energy consultant
- Leaflet with further information:  
[https://www.bafa.de/DE/Energie/Energieeffizienz/Energieeffizienz\\_und\\_Prozesswaerme/Modul4\\_Energiebezogene\\_Optimierung/modul4\\_energiebezogene\\_optimierung\\_node.html](https://www.bafa.de/DE/Energie/Energieeffizienz/Energieeffizienz_und_Prozesswaerme/Modul4_Energiebezogene_Optimierung/modul4_energiebezogene_optimierung_node.html)

#### **4.7 KfW Credit Institute for Reconstruction (Kreditanstalt für Wiederaufbau)**

KfW's incentives are available as loans with favourable interest rates, with or without repayment subsidies, or as grants that do not have to be repaid.

- Energy Efficiency Program - Production Plants/Processes
- From 1.03 % annual percentage rate of charge
- For privately owned companies of all sizes and freelancers
- For new investments and modernisation in Germany and abroad
- Loan up to 25 million Euros per project, up to 100 % of eligible investment costs
- All investment measures that achieve energy savings of at least 10 % (entry standard) or at least 30 % (premium standard) are eligible for funding,
- Information sheet on the funding programme: [https://www.kfw.de/PDF/Download-Center/F%C3%B6rderprogramme-\(Inlandsf%C3%B6rderung\)/PDF-Dokumente/6000003416\\_M\\_292\\_293\\_EEP\\_Produktion.pdf](https://www.kfw.de/PDF/Download-Center/F%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/6000003416_M_292_293_EEP_Produktion.pdf)

## **KfW Energy Efficiency Program - Energy-efficient construction and renovation**

- From 1.00 % annual percentage rate of charge
- For companies of all sizes and freelancers, majority privately owned
- For new construction and renovation of your commercial buildings
- Loan with up to 17.5 % repayment subsidy
- Information sheet on the funding programme:
- [https://www.kfw.de/PDF/Download-Center/F%C3%B6rderprogramme-\(Inlandsf%C3%B6rderung\)/PDF-Dokumente/6000003412\\_M\\_276\\_277\\_278\\_EEP\\_EBS.pdf](https://www.kfw.de/PDF/Download-Center/F%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/6000003412_M_276_277_278_EEP_EBS.pdf)

## **Renewable energies – standard**

- From 1.03 % annual effective interest rate
- For individuals and businesses of all sizes
- Up to 100 % of eligible net investment costs
- Max 50 million euros
- Leaflet with further information: [https://www.kfw.de/Download-Center/F%C3%B6rderprogramme-%C3%B6rderprogramme-\(Inlandsf%C3%B6rderung\)/PDF-Dokumente/600000178-Merkblatt-270-274.pdf](https://www.kfw.de/Download-Center/F%C3%B6rderprogramme-%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/600000178-Merkblatt-270-274.pdf)

## **Renewable energies – premium**

- From 1.00 % annual effective interest rate
- For all who want to use heat from renewable energies
- Loan of up to EUR 25 million per project with attractive repayment subsidy
- 20 % higher repayment subsidy for the replacement of particularly inefficient heating systems
- Up to 100 % of eligible net investment costs
- Maximum of 25 million euros
- Leaflet with further information:
- [https://www.kfw.de/Download-Center/F%C3%B6rderprogramme-\(Inlandsf%C3%B6rderung\)/PDF-Dokumente/6000002410-Merkblatt-271-281-272-282.pdf](https://www.kfw.de/Download-Center/F%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/6000002410-Merkblatt-271-281-272-282.pdf)

## **Renewable Energies - Premium - Profound Geothermal Energy**

- From 1.00 % annual effective interest rate
- For all, especially companies and municipalities

- For deep geothermal plants as well as for production and injection wells
- Loan of up to EUR 25 million per project with attractive repayment subsidy
- Up to 100 % of eligible net investment costs
- Leaflet with further information:
- [https://www.kfw.de/Download-Center/F%C3%B6rderprogramme-%C3%B6rderprogramme-\(Inlandsf%C3%B6rderung\)/PDF-Dokumente/6000002410-Merkblattt-271-281-272-282.pdf](https://www.kfw.de/Download-Center/F%C3%B6rderprogramme-%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/6000002410-Merkblattt-271-281-272-282.pdf)

### **KfW - Environmental Programme**

- From 1.00 % annual effective interest rate
- For companies of all sizes and freelancers
- Loan of up to EUR 10 million per project at domestic and international level
- Long-term fixed interest rates
- Funded: Saving materials and resources, reducing or avoiding air pollution, smelling emissions, noise and vibrations, avoiding, treating and recycling waste, cleaning, reducing or avoiding waste water, protecting soil and groundwater, remediating contaminated sites, purchasing electric, hybrid and fuel cell vehicles as well as environmentally friendly rail and water vehicles, setting up charging stations for electric vehicles or filling stations for hydrogen.
- Leaflet with further information:  
[https://www.kfw.de/Download-Center/F%C3%B6rderprogramme-%C3%B6rderprogramme-\(Inlandsf%C3%B6rderung\)/PDF-Dokumente/6000002220-Merkblatt-240-241.pdf](https://www.kfw.de/Download-Center/F%C3%B6rderprogramme-%C3%B6rderprogramme-(Inlandsf%C3%B6rderung)/PDF-Dokumente/6000002220-Merkblatt-240-241.pdf)

## **4.8 Conclusion**

In Germany, there are incentives for a great variety of measures – for both standard and innovative. Companies can choose between different loan conditions (e.g. payback time). Interest rates are starting low (1 %) but are depending on the financial status of the company.

One small barrier: The application process is not handled by the federal institutions providing the incentives but by normal credit institutions. Thus, it is strongly depending on the personal in charge of advising companies on financial incentives.

## 5 Main incentives Programme in Italy

### 5.1 Conto termico 2.0

The Conto Termico 2.0 tool provides incentives for measures to increase energy efficiency and the production of thermal energy from renewable sources for small plants. The beneficiaries are mainly public administrations, but also companies and individuals, which will have access to funds for 900 million euros per year, of which 200 million euros will be allocated to the Public Authorities.

Thanks to the Conto Termico 2.0, it is possible to upgrade buildings and improve their energy performance, thus reducing consumption costs and quickly recovering part of the expenditure incurred.

Incentives range from 40% to 65% of the expenditure incurred. Specifically:

- Up to 65% for the demolition and reconstruction of nearly zero-energy buildings (nZEB);
- Up to 40% for the insulation of walls and roofs, for the replacement of window closures with more efficient ones, for the installation of sun screens, for the replacement of lighting fixtures, for the installation of building automation technologies and for the replacement of traditional boilers with condensation boilers;
- Up to 50% for thermal insulation in E/F climate zones and up to 55% in the case of thermal insulation and replacement of window closures, if combined with other systems (condensing boiler, heat pumps, solar thermal);
- U
- p to 65% for the replacement of traditional systems with heat pump systems, biomass boilers and appliances, hybrid heat pump systems and solar thermal systems.

### 5.2 Energy efficiency certificates (white labelled certificates)

White Certificates, or Energy Efficiency Certificates (EEE) are negotiable titles that certify the energy savings achieved in the final use of energy, by realizing interventions to increase energy efficiency. The White Certificates system is an incentive mechanism based on an obligatory primary energy saving regime for electricity and natural gas distributors with more than 50,000 end customers. For each year of obligation, from 2017 to 2020, savings targets have been set that distributors must achieve through the implementation of energy efficiency measures.

Obligated parties can fulfil the compulsory savings quota in two ways:

- By carrying out, directly or through their subsidiaries or parent companies, the energy efficiency projects admitted to the mechanism
- By purchasing securities from other parties admitted to the mechanism, i.e. other certified distributors, ESCOs or public or private end users who have appointed a certified EGE.

For each TEP of savings achieved as a result of the implementation of the energy efficiency project, a certificate is issued for the entire duration of the project (from three to ten years). Volunteers and obligated parties exchange White Certificates on the market platform managed by the GME

(Electricity Market Managing authority) or through bilateral negotiations. All subjects admitted to the mechanism are entered in the Electronic Register of Energy Efficiency Certificates.

### 5.3 National fund for energy efficiency

The National Energy Efficiency Fund encourages the actions necessary to achieve national energy efficiency targets, promoting the involvement of financial institutions, national and EU, and private investors on the basis of adequate risk sharing.

The Fund supports energy efficiency interventions carried out by companies, including ESCOs, and by the Public Administration, on buildings, plants and production processes. Specifically, the actions supported must concern:

- Reduction of energy consumption in industrial processes,
- The construction and extension of district heating networks,
- The efficiency of public services and infrastructures, including public lighting
- Energy upgrading of buildings

The Fund has a rotary nature and is divided into two sections that operate for:

- The granting of guarantees on individual financing operations, to which 30% of the resources that annually flow into the Fund are allocated;
- The provision of low-interest loans to which 70% of the resources that annually flow into the Fund are allocated

### 5.4 Tax deductions for energy efficiency of existing buildings

This national regulation provides fiscal incentives for energy efficiency measures of buildings, ranging from 50 to 65% of total investment cost.

Type of investment	% of incentive
<ul style="list-style-type: none"> <li>• Interventions relating to the replacement of windows including windows</li> <li>• Sunscreen,</li> <li>• Biomass boilers,</li> <li>• Condensing boilers</li> </ul>	50%
<ul style="list-style-type: none"> <li>• Insulation of the opaque casing,</li> <li>• Heat pumps,</li> <li>• Building automation systems,</li> <li>• Solar collectors for hot water production,</li> <li>• Heat pump water heater,</li> <li>• Hybrid generators</li> </ul>	65%

Type of investment	% of incentive
<ul style="list-style-type: none"> <li>• Condensing air generators</li> </ul>	

## 5.5 Regional incentives for energy efficiency

Several regions promote energy efficiency of industrial and service sector through specific measures, partially funded through ERDF funds and/or national funds.

As an example, for region Piedmont - directly involved in IMPAWATT project – a call for proposals with a total budget of 50.000.000 EUR facilitates companies in their investments to improve energy efficiency, including in the use of energy from renewable sources. Following investments are eligible:

- 1) Energy efficiency measures (high-efficiency cogeneration plants, measures to increase the energy efficiency of production processes and buildings, timely replacement of low-efficiency systems and components with more efficient ones, installation of new high-efficiency production lines)
- 2) Installation of renewable energy systems where the energy produced is entirely intended for own consumption in the local unit.

## 5.6 Regional incentives for energy audits

Several regions promote energy efficiency of industrial and service sector through specific measures, partially funded through ERDF funds and/or national funds. As for energy efficiency investments, subsidies exist also for energy auditing and other preparatory actions.

As an example, for region Piedmont - directly involved in IMPAWATT project – a call for proposals provides for the granting of non-repayable grants up to a maximum of 50% of the investment, for the following interventions:

- 1) Carrying out energy audits aimed at assessing the energy consumption and energy savings achievable, according to the criteria expressed in Annex 2 to Legislative Decree no. 102 of 4 July 2014; compliance with the criteria set out in Annex 2 is verified by carrying out energy audits according to the technical standards UNI CEI 16247-1-2-3-4;
- 2) Implementation of the energy management system and issue of the certification of compliance with the ISO 50001 standard (accompanied by an energy audit).

## 5.7 Conclusion

The percentage of companies who have made investments in energy efficiency in 2017 is increased from 70 to 81% compared to the former year<sup>3</sup>. 56% of companies said they had invested more in the last year than in previous years. 70% of the companies that supported investments in energy efficiency during 2017 were carried out through the group's internal operations, and the 54% preferred to leverage their internal skills for the management of related incentives.

<sup>3</sup> Energy efficiency report 2018 (Energy and Strategy Group of Polytechnic of Milan)

Among the external actors there is a distinction between those who carry out energy efficiency measures and those who manage the incentives.

In the first case technology providers prevail that together with the sale of the solution itself they also propose other related services such as installation, operation and maintenance of the technology.

In the second case the most present external players, who reach 28% of the enterprises of the companies, are the ESCos (Energy Service Companies), which operate as specialized actors in the management of the incentives.

Considering the expected increase of distributed production of energy and the reduction of energy price as an associated consequence in the next period, the future incentive schemes will also have to consider the positive impacts of NEBs (Non Energy Benefits) to support the implementation of measures with higher payback time.

## 6 Main incentives Programme in Switzerland

### 6.1 Exemption

#### **Exemption on CO<sub>2</sub> tax on heating and process fuels**

Since 2008 a CO<sub>2</sub> tax is applied to all heating and process fuel. Depending on the CO<sub>2</sub> emission relative to the fixed goals, the taxes increased several times.

In 2019, the value of the tax was CHF 96.- per Ton CO<sub>2</sub> emission. The outcome of this tax is partially (~2/3) redistributed to the companies and households and partially used to directly finance the building programme (see 0). This levy was introduced to incentivise a more efficient use of fossil fuels and carbon-free energy sources.

Moreover, companies which emit more than 100 Ton CO<sub>2</sub> /year and which belong to defined sectors (trade exposed) can be exempted from this tax provided that they conclude an emission reduction and energy efficiency increase target agreement. A Target agreement establishes a linear path of emission reduction and energy efficiency increase between companies and institutions (ministry of environment/energy and/or cantons). The path is built with the effect of all economic<sup>4</sup> energy efficiency measures. Note that the agreement also includes a yearly follow up by an energy consultant. Depending on the fossil fuel price, the exemption allows to reduce the cost of fossil fuels by about 25 %.

#### **Exemption on electricity grid surcharge (KEV)**

The electricity grid surcharge is a tax on electricity consumption payed by every consumer. The outcome of this tax is used to incentive renewable electricity production and energy efficiency improvement (see 0 and 0). Similar to the CO<sub>2</sub> tax exemption, companies with a target agreement can be exempted from the grid surcharge. The exemption only applies to electricity intensives companies (where the electricity costs are higher than five % of the gross added value).

#### **Conclusion exemption**

The goal of this exemption is to push the companies to conclude a target agreement. Thanks to this target agreement, companies undergo an energy audits and engage to implement within ten years all energy efficiency measures with reasonable payback time. More information can be found in this publication<sup>5</sup>

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<sup>4</sup> Economic measure is defined as measures with payback time < 4 years for process related measures and < 8 years for utility related measures.

<sup>5</sup> Disentangling the Effects of Swiss Energy and Climate Policies, SML Working Paper, No. 5, R. Betz, T. Leu and R. Schleiniger, 2015

## 6.2 Financial incentives for measures implementation

### Building program

The building programme supports financially the improvements of building envelopes and various cantonal programmes prompting renewables energy and waste heat. This program is partially financed by the CO<sub>2</sub> tax and by the cantons.

### Pro-kilowatt

Annual competitive tenders by ProKilowatt supports programmes and project that lead to a reduction in the consumption of electricity in industry, services and households. Among other, to be eligible the energy efficiency measures should have a payback time higher than four years. The goal is to support measures that would not be implemented without incentives. There exists several specific programmes as for example Effizienz+ (measures in the scope of target agreement), for pumps (speed II) , light retrofit (EffeLEDplus, ), ventilators (OPTIVENT), etc..

### Renewables

The installation of photovoltaics, thermal solar, wind, biomass and hydro are also subsidized (through the income of the electricity grid surcharge tax). This in order to increase the economic feasibility of renewables. For photovoltaics, the cost-reflective feed-in tariff (KEV) is gradually stopped and now replaced by an unique contribution just after the installation.

### Others

Cantons and/or cities have sometimes their own incentive programmes. The site <https://www.energie-experten.ch/fr/energiefranken.html> summarises most of those programmes.

Moreover, the Swiss Climate Foundation also supports implementation of measures allowing reduction of CO<sub>2</sub> emissions and electricity consumption (<https://www.klimastiftung.ch/en/>).

### Financial incentives for energy audits

For SMEs, two banks support a part of the target agreement energy audit cost. Moreover, under certain conditions, the Swiss Climate Foundation also supports a part of the energy audit costs for SME's.

## 6.3 Financial incentives for specific in-depth analysis

### ProAnalySys

The Federal office of Energy (FoE), support 40 % of the cost for an in depth analysis of electric systems (pumps, compressed air, ventilators...) through the ProAnalySys program. An in-depth analysis consists generally of on-site measurement campaign of the key parameters of a system. The results allow evaluating the real efficiency of the system and the calculation of measures to optimise the system with payback time.

### Pinch analysis

The FoE also supports Pinch analysis.

## **Conclusion**

In Switzerland, there are incentives for almost every aspect of energy efficiency. The target agreement is a powerful and effective tool to help companies to increase their energy efficiency. However, especially for incentives regarding the support of measures with higher payback time (hence not mandatory in target agreements) are not used as often as wished because the energy prices are relatively low.