

# Energy-efficient business programme klimaaktiv supports Austrian industrial SMEs

Petra Lackner  
Austrian Energy Agency  
Mariahilfer Straße 136  
1150 Vienna  
Austria  
petra.lackner@energyagency.at

Konstantin Kulterer  
Austrian Energy Agency  
Mariahilfer Straße 136  
1150 Vienna  
Austria  
konstantin.kulterer@energyagency.at

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energy management, energy audit, system optimisation, training, audit guidelines, cross-sectoral technologies, employee engagement

## Abstract

klimaaktiv is the Austrian climate protection initiative launched by the Federal Ministry of Agriculture, Forestry, Environment and Water Management (renamed Federal Ministry of Sustainability and Tourism since January 2018). klimaaktiv is embedded in the Austrian federal climate strategy. The primary objective of klimaaktiv is to introduce and promote climate-friendly technologies and services, thereby changing both Austria's economy and the everyday life of Austrian people.

The klimaaktiv energy-efficient business programme, managed by the Austrian Energy Agency (AEA), provides comprehensive professional support to companies, ranging from initial analysis to implementation of the efficiency measures. Many companies continue to cooperate successfully with klimaaktiv afterwards as can be seen from numerous award-winning projects across Austria. These companies commit to implement economic energy efficiency measures which entitle them to use the klimaaktiv project partner logo. So far, more than 300 best practice examples of implemented energy efficiency measures have been collected and published. With these measures energy savings of 890 GWh and CO<sub>2</sub> savings of 284,000 tonnes could be achieved.

An important part of the programme is to offer guidelines and trainings to optimise technologies which are frequently used in operations, especially, cross-sectoral technologies like

compressed air systems, pump systems, steam systems, etc. More than 2,000 energy managers and consultants have participated in the klimaaktiv trainings since 2008.

## Introduction

In 2004, the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (renamed Federal Ministry of Sustainability and Tourism since January 2018) launched the climate protection initiative "klimaaktiv" [1].

klimaaktiv is an integral part of Austria's climate strategy and is a voluntary programme. Its primary objective is to launch and promote high-quality climate-friendly technologies and services. In doing so, klimaaktiv focuses on high standards of quality so as to make the market operate at a more efficient and sustainable level. klimaaktiv takes a systemic and comprehensive approach to tackling the issue of reducing greenhouse gas emissions by applying a broad variety of system interventions in cooperation with relevant stakeholders. This makes klimaaktiv unique within the European Union.

As a result, best practice examples and successful projects are constantly being completed. klimaaktiv brings together players from politics, government, finance, and society, disseminates and connects ideas and projects which get applied across Austria. klimaaktiv's expertise and experience, such as the klimaaktiv building standards, eco-driving training courses, quality management for wood-fired heating plants, or concepts for increasing energy efficiency in manufacturing operations, are already being exported successfully.

### KLIMAAKTIV WORKS ON FIVE LEVELS

klimaaktiv has developed a fine-tuned activity cycle. The five spheres of influence in the transition cycle initiate a positive feedback process and support all players in tackling the energy transition.

klimaaktiv improves green skills, provides information, advice and support, and cooperates with grant funding schemes and business partners in all the energy-relevant areas “buildings”, “energy efficiency”, “renewables” and “mobility”.

This paper focusses on the klimaaktiv energy-efficient business programme which supports Austrian industrial SMEs. The activity cycle for this programme is based on:

- **Information:** the programme informs companies about their possibilities to improve energy efficiency and about the supportive tools of klimaaktiv. Information is provided on several levels, like newsletters, workshops, excursions to companies, press releases, award ceremonies, the programme website, and scribble videos.
- **Network of partners:** the energy efficiency business programme has three kinds of partners: first, the “technology partners” who are companies offering energy efficiency appliances and/or services; second, the “project partners”, i.e. companies which have signed the klimaaktiv energy efficiency agreement and which are committed to work on improving their efficiency continuously. And the third partner form is the “competence partners” which are energy auditors who conducted the klimaaktiv trainings and audited companies according to the klimaaktiv audit standards. Furthermore, the programme works closely with the Austrian Chamber of Commerce, with the regional programmes for environmental protection, and with the national subsidy scheme.
- **Quality standards:** the programme team is developing energy audit guidelines for chosen technologies on an annual basis. The guidelines explain the klimaaktiv process of auditing the whole company (with the klimaaktiv “ProTool”) and of conducting detailed technology audits. The recommended klimaaktiv audit processes are in line with the European audit standard EN 16247.

- **Training:** offering technology-specific trainings for energy auditors and energy managers or technical staff is an important part of the programme. The technology partners and experts of the AEA are the trainers for klimaaktiv trainings.
- **Advice and support:** the programme team from the AEA, together with the competence and technology partners, supports companies in improving their energy efficiency.

### Energy efficiency in businesses

Almost 30 percent of the final energy consumption in Austria is attributable to manufacturing. klimaaktiv has therefore developed a comprehensive package of measures for businesses – a significant contribution to reaching the EU target of improving efficiency by 27 percent by 2030.

Such extensive savings targets can only be achieved with a diverse set of measures. In this regard, klimaaktiv focusses on information, consulting, and further education and training. Energy efficiency measures that are implemented professionally not only reduce costs but also make a valuable contribution to climate and environmental protection.

The considerable potential for savings can be exploited by inexpensive measures which are easy to implement. klimaaktiv’s energy-efficient business programme supports industrial manufacturing businesses as well as commercial businesses in the planning and implementation of energy efficiency measures [2]. To support the Austrian SMEs and even large companies, the programme provides:

- a simple energy efficiency benchmarking tool
- analysis tools, sector concepts, and technology guides
- staff and energy consultants trainings
- a network of klimaaktiv consultants and technology partners in cooperation with the federal states for implementing energy efficiency measures
- awards for best practice examples

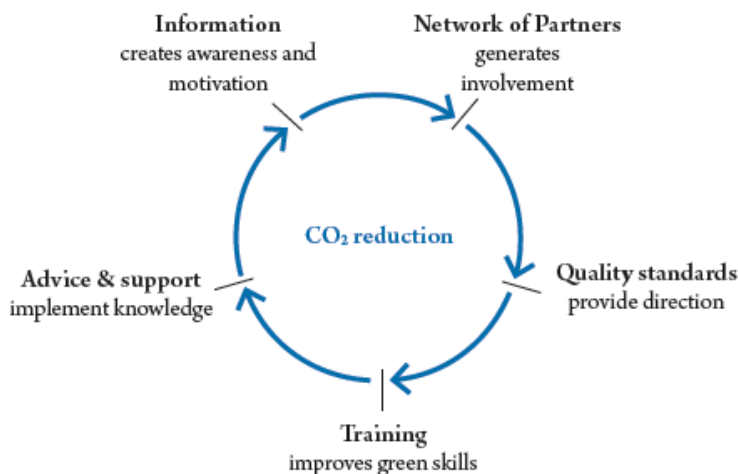


Figure 1. The klimaaktiv transition cycle.

- implementation of the basic principles of an energy management system according ISO 50001
- a standardised procedure for energy audits based on training courses, audit guides, and report templates

The overall goal of the programme is to initiate energy savings of 50 GWh/a and CO<sub>2</sub> savings of 20,000 tonnes/a in Austrian companies. An important part of the programme is also to support companies in working continuously on their improvement of energy efficiency by implementing an energy management system and by encouraging their staff in an active involvement in their energy efficiency efforts.

#### CONTINUOUS IMPROVEMENT BY ESTABLISHING ENERGY MANAGEMENT SYSTEMS

In order to reach energy efficiency goals, it is very crucial that companies do not only implement one single measure but comprehensive processes in their organisations and that they work continuously on the improvement of energy efficiency.

The klimaaktiv basic training course, therefore, explains the basic principles of the energy management system (EnMS) according ISO 50001 to consultants, engineers, and energy managers. In addition, there is also an e-learning system on the website at [www.energymanagement.at](http://www.energymanagement.at) with step-by-step instructions for implementing an energy management system according ISO 50001. These services are supplemented with an extensive collection of supporting documents, templates, and checklists. Also, the collection of best practice examples contains the category “energy management systems”.

Another important aim of the programme is to convince the management of companies to implement an energy management system and to invest in energy efficiency measures. For this purpose, several tools were developed, such as the “simple benchmarking scheme”, the collection of implemented energy efficiency measures, life cycle cost tools, and trainings.

#### HOW TO REACH THE STAFF MEMBERS?

As soon as the management decides to invest human and financial resources in energy efficiency, it is time to inform and involve the staff also. The technical staffs which deal with the most energy consuming appliances and processes will be the first staff members to be involved and trained. In many companies, the first initiative for implementing energy efficiency measures comes from the technical staff and they have to convince the management. In both cases, the klimaaktiv programme can support the company. On the one hand, the management can start a klimaaktiv employee engagement programme and can send the relevant staff members to klimaaktiv workshops and trainings. On the other hand, staff members can inform their management about efficiency measures which were implemented by other companies of their sector, or they can show the result of the benchmarking system to the management.

Also, the klimaaktiv audit tools can be used to convince the management on the economic advantages of energy efficiency measures. For informing staff and management, several public relations tools have been established like two short “scribble videos”, one showing the support possibilities of klimaaktiv and the second showing the main energy saving areas of manufacturing companies. Furthermore, posters showing the main

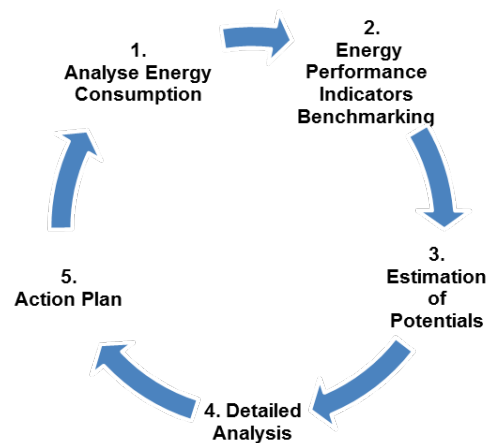


Figure 2. The klimaaktiv cycle of continuous improvement.

energy saving areas can be downloaded and printed and put right next to the process, e.g. the poster about improving the compressed air system can be put next to the compressors.

The approach of the klimaaktiv programme is to support companies from the initial analysis of their energy consumption to the concrete implementation of energy efficiency measures. Figure 2 shows the five steps of the klimaaktiv energy-efficient business programme for supporting Austrian SMEs.

#### STEP 1: ANALYSE ENERGY CONSUMPTION

One of the key information needed for the evaluation of energy savings and recommendation for further activities are the energy demand of different machines and/or technologies within the company, the condition of these technologies, and expected energy saving potentials. Usually, this information is not available in companies, especially, if they just start dealing with energy efficiency improvements.

To assist consultants and technical staff of the companies in exploring the major possibilities for energy savings and to define the area for further detailed energy audits, klimaaktiv developed an excel tool, the so-called “ProTool”, and an “Energy Check Simple” tool, which is a checklist containing the main energy-saving possibilities of a company in different technologies.

To optimise the analysis of energy consumption in Austrian SMEs, klimaaktiv is developing the audit tools and setting up the trainings for energy auditors and energy managers for these tools.

#### klimaaktiv ProTool – an audit tool for analysing the energy consumption

The basic energy audit tool of the programme is the klimaaktiv ProTool. This tool provides the companies with an overview of their main electrical and thermal energy consumers without any sub-metering of processes. The energy consumption of e.g. the pumps or compressors in the companies is derived as an expert judgement by filling in the required information in the ProTool, like operation hours, installed capacity, etc. Figure 3 shows a result of a SME applying the ProTool.

The ProTool is optimized continuously via feedback workshops and feedback forms by the AEA and comprises all major areas of energy consumption in industrial companies. As an example, motor driven systems are dealt in the tool in the fol-

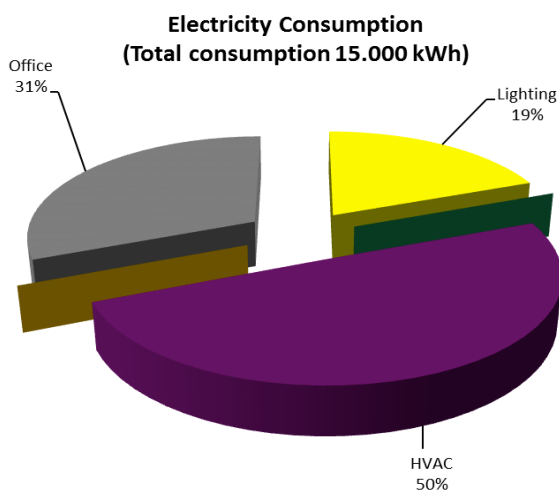


Figure 3. Overview of electricity consumption of a company – result of klimaaktiv ProTool.

lowing way: As a first step on the supply side, the electricity supply (consumption) to the company is typed in, based on the invoices of the supplier. The second step is that the electricity consumers are modelled based on a list of all major consumers, like lighting, pumps, fans, compressors, drive systems, electric heating, etc. For all consumers, the yearly energy consumption is calculated by the electric power, running hours, and load factor. If this information is not available for pumps and fans, a load factor of 75 % is recommended.

In addition, each group of equipment is evaluated by several questions. For example, for compressed air questions, like pressure drop, number of full load hours compared to part load hours, number of leakage detection inspections per year, etc., have to be answered. The answers to those questions are weighted according to their importance and matched to marks (1–5). Each mark is equivalent to a saving potential. A “1” refers to zero saving potential, a “5” refers to a saving potential of 25–35 %, dependent on the technology. Those values are based on experience and literature values, not on statistical information.

In a summary table, the energy consumption of all installed equipment is compared to the energy consumed according to the invoice. Those two values should not differ by more than 10 %. Otherwise the information should be re-evaluated. In addition, in this table savings are presented.

#### Training keeps energy consultants and energy managers at the cutting edge of technology

The training of energy consultants and energy managers and engineers of the companies is another important component of the programme. The trainings consist of the “basic training” with the central ProTool and basics on energy management systems and of targeted trainings in the various technologies outlined below. Each of the trainings is offered as a one-day course. Over 650 energy consultants have – sometimes repeatedly – made use of this offering; they are supporting businesses throughout Austria in their analysis of energy consumption, the execution of measures, and the implementation of energy management. These consultations are being subsidised by the Austrian federal states.

Overview of klimaaktiv training courses available up to now:

- Basic klimaaktiv training in energy management systems according ISO 50001 and the ProTool
- Optimising compressed air systems
- Optimising pump systems
- Optimising fans and ventilation systems
- Optimising lighting systems
- Optimising cooling systems
- Waste heat recovery
- Optimising steam systems
- Measuring and verification of energy-saving measures
- Optimising insulation of industrial appliances
- Life cycle cost analysis

Figure 4 shows the number of trainings conducted in the various topics since 2006. There are also trainings of European projects like “EINSTEIN” and “ENGINE” included in the figure as they were co-financed by klimaaktiv. The figure shows that e.g. since 2008 the klimaaktiv basic training (Grundschulung) has been organised 23 times. The number of energy auditors and energy managers that conducted the klimaaktiv basic training is 483.

#### STEP 2: ENERGY PERFORMANCE INDICATORS AND BENCHMARKING

The second step is that companies establish energy performance indicators on company level and implement processes to prove and to report the improvement of energy performance to different stakeholders. Internal stakeholders are the management and staff members, external stakeholders could be monitoring bodies or subsidy schemes. Here, the experts of the AEA bring the latest developments of proving energy performance improvements into the klimaaktiv project, like the approach of the ISO 50006, ISO 50015 and the International Performance Measurement and Verification Protocol (IPMVP).

A second part of this step is to compare the efficiency of the company with the sector efficiency. Therefore, the klimaaktiv provides a “benchmarking simple tool” for several sectors.

#### Regression analysis for energy performance indicators

The specific energy consumption (SEC) is in many cases not a reliable indicator for a company to determine if the energy performance has changed and whether it is meeting its targets, e.g. within EnMS. The regression analysis on company level is a good approach for doing this. Therefore, in 2014 the international standard ISO 50006 was established. The ISO 50006 “Energy management systems – Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPI) – General principles and guidance” explains and recommends the regression analysis approach. The regression analysis on company level is a recommended methodology to measure and verify the improvement of energy performance on company level. The experts of the AEA distribute this approach in the klimaaktiv network by giving presentations about it in klimaaktiv workshops and conferences and spread AEAs experience with the approach among the network.

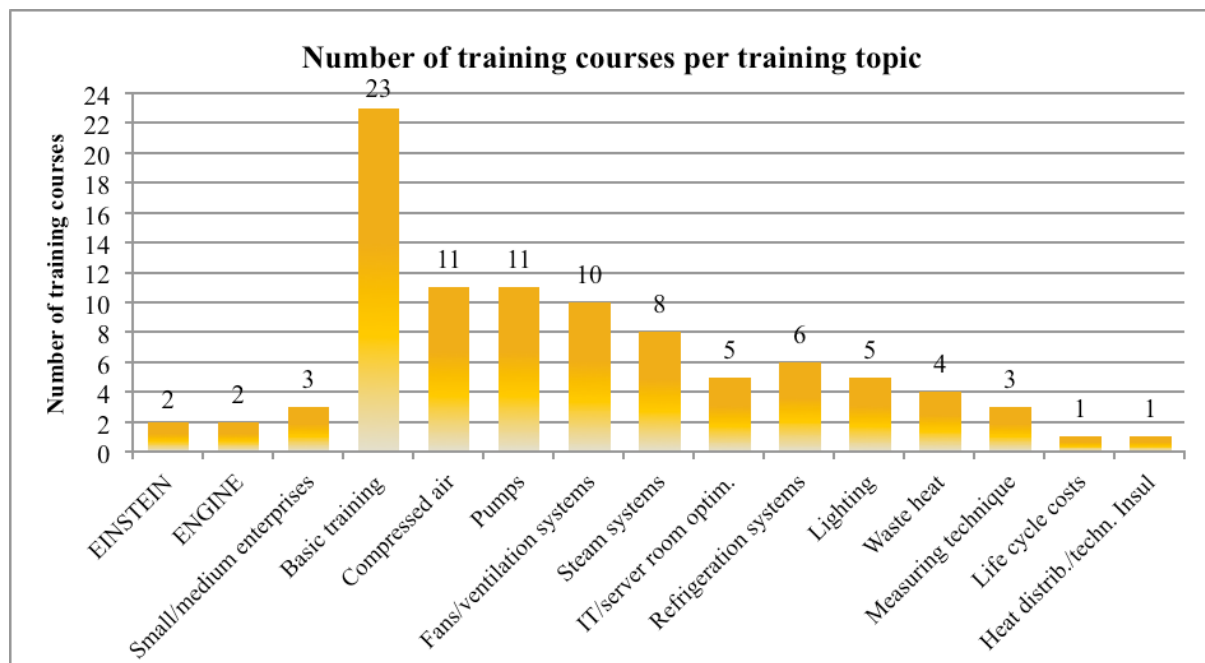


Figure 4. Number of trainings per training topic from 2006–2017.

The klimaaktiv training on “measuring technology and verification of energy saving” deals with the approaches of the IP-MVP and the ISO 50015.

#### Awareness raising with the “benchmarking simple tool”

Companies will also find the benchmarking simple tool at [www.energymanagement.at](http://www.energymanagement.at).

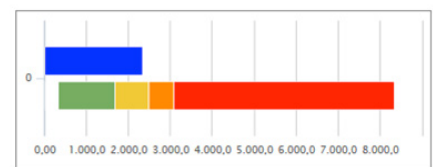
Under the framework of klimaaktiv, a simple benchmarking tool was developed in 2008. The main target of this action is to raise awareness among SMEs on the use of energy in their companies and implementing energy efficiency measures. For the time being, eleven branches with diverse subcategories can use this tool:

- Offices
- Printing companies
- Hair salons
- Retail/wholesale
- Wood industry
- Hotel industry and gastronomy
- Car repair shops and garages
- Plastics industry
- Metal processing
- Food and food industry
- Textile cleaners

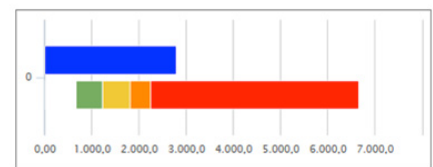
As a result of the benchmarking system, companies get a first idea about their energy efficiency level. If they are not in the “green field”, they will be interested in improving their energy efficiency and will find various information and recommendations on the programme website [www.klimaaktiv.at/effizienz](http://www.klimaaktiv.at/effizienz). Figure 5 shows a result for a bakery. The blue bar is the spe-

Your value:  
2.300 kWh/t

Total energy  
consumption/  
input flour (t)



Total energy  
consumption/  
output bread  
and pastries (t)



Total energy  
consumption/  
baking area (m²)

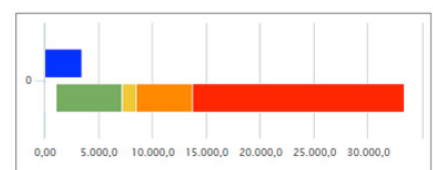


Figure 5. Screenshot of benchmarking result for bakeries ([www.energymanagement.at](http://www.energymanagement.at)).

cific energy consumption of the bakery which takes a look at the benchmarking system. The coloured bar shows the energy performance values of the branch from green/left (efficient) to red/right (inefficient).

#### STEP 3: ESTIMATION OF SAVING POTENTIALS

As a third step, the companies get an estimation of their saving potentials from the ProTool. This is also the basis for step 4, where a detailed analysis of the technology or process with the highest energy-saving potential is recommended. Figure 6 illustrates how the saving potentials are reported in the ProTool. The size of the bubble corresponds to the saving potential for



each technology in kWh. The position on the x-axis shows the organisational and financial effort for implementing the energy-saving measures as estimated by the energy auditor in cooperation with the energy manager or the technical responsible person of the company. The position on the y-axis displays the potential for improvement corresponding to the marks arising from answering the technology-specific questions described above.

To support the companies in finding more information on concrete energy-saving measures, the klimaaktiv programme also offers “sector studies” and a “collection of implemented energy efficiency measures”.

#### klimaaktiv sector studies

klimaaktiv also focusses on specific sectors and branches. In cooperation with its partners and energy consultants, several selected sectors were analysed in relation to their energy efficiency potential. The results of the “sector studies” were summarised in sector guidelines. These guidelines contain structural and economic information of the individual sector as well as the main energy consumers and the most important energy efficiency measures of the sector. For the following sectors, klimaaktiv studies exist so far:

- Plastic processing industry
- Metalworking industry
- Industrial laundries
- Hulling mills
- Saw mills

#### Collection of implemented energy efficiency measures

In the framework of the klimaaktiv programme, the AEA invites companies to report on their successfully implemented energy efficiency projects on an annual basis. The best examples are selected and are awarded by the Minister of Environment (Minister of Sustainability and Tourism as of January 2018). In conjunction with this ceremony, the Austrian En-

ergy Agency organises an annual conference for energy efficiency in production companies. From 2008–2017, more than 250 companies reported best cases amounting to total energy savings of 890 GWh/a electricity and heat, corresponding to 284,000 tonnes of CO<sub>2</sub>. The contact and cooperation between the programme and the companies were intensified by this procedure. All projects are summarised in a fact sheet and published online as a “best practice collection”. Up to now, more than 320 best practice examples are online for download. Companies can read which measures were implemented by other companies and with what effect: [www.klimaaktiv.at/vorzeigetriebe](http://www.klimaaktiv.at/vorzeigetriebe).

#### One best practice example – Brolli Textilservice

The family-owned business was founded in 1922. Based on its core values professionalism, years of experience and excellent customer satisfaction, Brolli offers full textile services to businesses in tourism, industry, commerce, and health care industries. The company processes around 100 tonnes of laundry and 30,000 clothing items daily at three locations in Graz. Two important values for the firm are the extra value added as well as a sustainable economy within the region. The latter is also underlined by the fact that Brolli was the first Styrian firm to be certified by the ISO 14001 and EN 16001 standards in 2011, alongside the existing ISO 9001 and ISO 13485 certificates.

#### Initial situation

In 2008 and 2009, an attempt was made to improve the machines by implementing optimisation measures and modifications. However, the expected values for the energy performance indicators were not reached. For this reason, the “original state” was restored and the system newly built. A key focus was set on the acquisition and handling of data so that the technical lead would be able to recognise trends early enough and take preventive action. By the exchange and additional installation of control valves and a water management system for the in-house well, electricity consumption was reduced while output simultaneously increased at one site. Furthermore, pressure losses were minimised and a software-assisted pump management

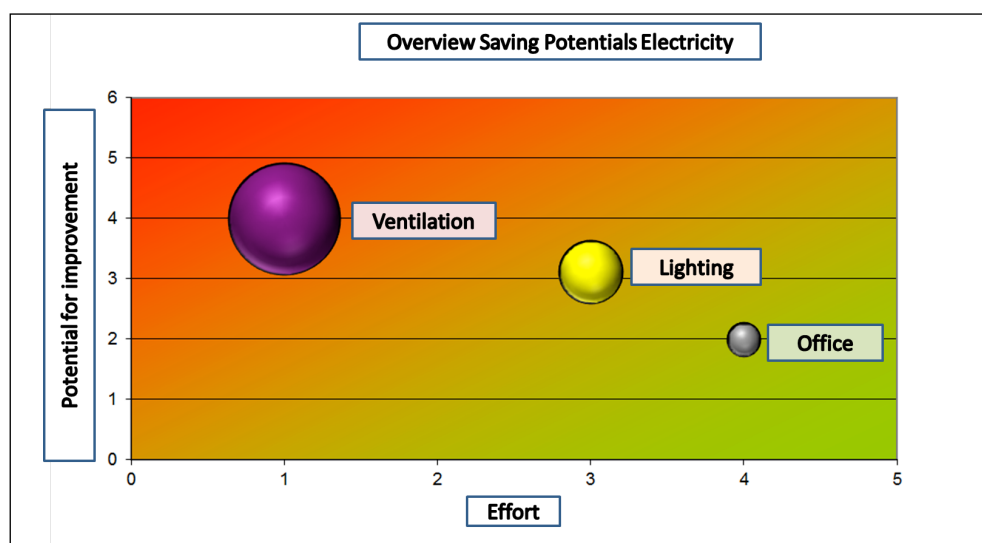


Figure 6. Saving potentials in electricity consumption as a result of the klimaaktiv ProTool.

system was installed in order to reduce water consumption and energy demand. Before introduction of the measures, total gas consumption stood at 23.7 GWh, while electricity demand totalled 2.36 GWh in 2010.

#### *Measures*

The steam systems were optimised by means of heat exchangers at both locations. The generated heat is used for hot water heating and pre-heating of the feed water tank, therefore, the improved pre-heated regulation scheme (steam) can be used optimally by the heat recovery system. The savings achieved by this measure total around 160 kW per hour.

In the area of water management, pressure losses were minimised and a regulation procedure was developed for pumps, optimising the water balance. This measure resulted in a 5 % reduction in water usage in one site and at another site even 25 %. As a result, this also means massive savings in electricity.

A compensation system for the main energy supply was installed, providing troubleshooting security and a longer life span of machines in the entire system. Through operating the machines with a predetermined set-value and this being held by the compensation system, total and additional energy consumption are minimised, which would otherwise be required at standstill or maintenance of the machines.

#### *Savings*

3,030,000 kWh/a; 12 % of total energy consumption.

#### **STEP 4: DETAILED ANALYSIS**

The “bubble diagram” of the ProTool indicates in which areas the highest energy savings may be achieved. For analysing concrete saving possibilities klimaaktiv recommends conducting detailed analysis of these areas and technologies. Therefore, annual technology initiatives were elaborated since 2006, which shape the “klimaaktiv technology standards”.

#### **Technology standards are the backbone of all activities**

Since 2006, each year a particular emphasis was placed on one area of technology. A technical guideline for each area provides assistance for energy audits and analyses specific measures for improving energy efficiency. A one-day technology-specific training trains energy auditors and energy managers in applying the audit guidelines and in optimising the whole system, e.g. compressed air system. For the trainings and also for elaborating the audit guidelines, technology partners are added to the klimaaktiv network. The technology standards which exist so far in the klimaaktiv programme are in line with the above-mentioned technology trainings under “step 1”.

The AEA tries to determine the main market leaders for each technology, for whom energy efficiency is a relevant topic considering it as their market advantage. Sometimes these are international companies who deliver their products on a European level (e.g. Bosch, Spirax Sarco, KSB, Grundfos, Danfoss, KAESER, Atlas Copco, Zumtobel, and many more). Sometimes they are more targeted on specific technical solutions (e.g. Unex Heat Exchanger, druckluft optimierung). Up to now, more than 30 technology partners joined the klimaaktiv network and support the klimaaktiv programme.

#### **Why invest in energy efficiency?**

It is important that the companies also get the correct information on the economy of the planned energy efficiency measures. Therefore, the klimaaktiv programme also trains the energy consultants and the energy managers in taking life cycle cost analysis into account and in considering the non-energy benefits when implementing energy efficiency measures. The message to the companies is: “energy efficiency always pays off”. Investing in measures to improve energy efficiency also protects companies against fluctuating energy prices. But that is by no means all. Energy efficiency makes companies and economies more competitive, increases security of supply, and, thus, reduces dependence on imports and raw materials.

#### **STEP 5: ACTION PLAN**

And finally in step 5, the company schedules the concrete energy efficiency measures for the next three to five years. This “action plan”, together with one already successfully implemented energy efficiency measure, is the basis for the klimaaktiv “objective agreement”, where companies commit to implement economic energy efficiency measures which entitle them to use the klimaaktiv project partner logo. So far, 31 companies have signed this voluntary agreement with klimaaktiv.

#### **Results to date**

The experience shows that a long-running programme like klimaaktiv is a very useful possibility to activate the market players for energy efficiency in businesses. Technology providers are very interested in becoming a partner of klimaaktiv. The annual energy efficiency award with the klimaaktiv conference is a well-known event and more than 140 participants are visiting the conference every year. Following results have been achieved so far:

- Energy savings of 890 GWh and 284,000 tonnes of CO<sub>2</sub>.
- 324 best practice examples online.
- A set of standardised energy audit tools is available.
- Information and training on latest developments on proving the energy performance improvements.
- Scribble videos, posters, and benchmarking system for awareness-raising activities.
- Purchase requirements for selected technologies.
- From 2006–2017, the programme organised 95 trainings for energy consultants and energy managers. In total 2,002 participants were at these trainings as many persons participated in more than one training course. The total number of trained persons is 651.
- Active network of energy auditors, energy efficiency technology providers and companies.
- Cooperation with Chamber of Commerce and Austrian subsidy schemes.

## LESSONS LEARNED AND RESULTS OF EXTERNAL EVALUATIONS

The main success factors of the overall klimaaktiv programme are the multilevel governance and close cooperation with the national and regional support systems and governments.

For the energy-efficient business programme specifically, crucial success factors are “time”, “quality”, and “public image”. In order to establish high quality contents for the programme and to set up partner networks, a long-term duration is essential. Initially, the klimaaktiv programme was scheduled for the period 2004–2012. This first term was then prolonged for a further eight years (2013–2020) with a third extension already being planned for 2021–2030. A long-running programme offers sufficient resources to develop the contents and the partner networks continuously. The awareness of the brand “klimaaktiv” is already quite high in Austria as 36 % of Austrian citizens know klimaaktiv. Companies see an advantage in cooperating with the programme, and in using the klimaaktiv logo and their energy efficiency success stories for public relation activities.

The programme has been evaluated twice from external organisations until now. In 2018, a third evaluation is planned. The main findings of the evaluation for the efficient business programme were:

- klimaaktiv is an outstanding example of an integrative climate protection programme which highlights relevant and measurable effects like awareness raising, knowledge transfer, and CO<sub>2</sub> savings
- it is very well known throughout Austria
- it has an effective overall operational management

Relevant areas for improvement for the business programme were identified and implemented consequently:

- consolidated cooperation with financial support programmes
- strengthened cooperation with regions and other climate protection programmes

- up-scaling of existing cooperation with partners

## PLANNED ACTIVITIES FOR 2018

In 2018, the criteria for awarding companies for their successfully implemented energy efficiency measures will be revised. As the programme already has a very good collection of “standard measures”, the requirements for awarding will be more challenging, thereby, more sophisticated measures can be added to the best practice collection.

Furthermore, an active exchange of experiences from companies with certified energy and environmental systems will be organised by the project team. The new technology topic will be to analyse the status of “industry 4.0” in Austrian companies.

## List of abbreviations

|      |                                    |
|------|------------------------------------|
| AEA  | Austrian Energy Agency             |
| EnB  | Energy Baseline                    |
| EnMS | Energy Management System           |
| EnPi | Energy Performance Indicator       |
| SEC  | Specific Energy Consumption        |
| SME  | Small and Medium sized Enterprises |

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