

# “klima:aktiv energieeffiziente betriebe” (climate:active energy efficient companies) – the Austrian climate change program for industry

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## Abstract

“klima:aktiv” is the climate change program of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management. The aim of “klima:aktiv” is to reduce CO<sub>2</sub> emissions as well as reinforce renewable energy in Austria. To achieve these goals more than 20 programs for renewable energies and energy efficiency were created – “energy efficient companies” being one of them.

“klima:aktiv” was created in order to identify and furthermore realise energy saving and CO<sub>2</sub> reducing measures. To build an active and effective network, regional programs, local consultants and companies on the energy-market are encouraged to become partners of the program to be multipliers.

One focus of the program is the support of consultants which are acting as mediators to the companies. A step by step model was developed for companies to help them realise the goals of the program. To ensure the highest service efficiency from the first contact with companies, consultants were furthermore provided with special “k:a eeb Pro-Tools”, which include a wide variety of tools from analysis and development to financing advise.

The program started in October 2005. Its mission statement for the first year was to reduce CO<sub>2</sub> emission at 45.000 t or 60 GWh of primarily electrical energy. To reach this goal, single regional agencies were committed to individual objectives.

After one year, a detailed evaluation of the program was carried out with the aim to show the areas of success but also to highlight areas that will need adjustments for optimal results.

## Introduction

Despite extensive funding for the diffusion of energy efficient strategies in the Austrian industry over the last 10 years and specific programs to advance energy efficiency and renewable energy resources in regional industry only limited results were achieved up to now.

Each state is responsible for the organisation and realisation of those programs and there are quite big differences. In some states only a few consultancies are available to handle all the programs. In contrast, other states have a few hundred consultancies working on those topics.

In parallel to the states there is a financial support scheme from the Federal Ministry of Environment. The bank of the Ministry – the “local authority loan Public Consulting” gives subsidies up to 30 % for investments in energy-efficient technology. Unfortunately, companies use this opportunity only sparingly. Many applications which were prepared with the financial partners often do not meet the technical criteria, so the application has to be rejected on the basis of formal motivations.

In light of these crucial problems, the federal states decided to strengthen these two flagging pillars to reach the goals set out in the Austrian climate targets.

## Basic concept of the programme klima:aktiv

In 2004 the Ministry of Agriculture, Forestry, Environment and Water Management launched the klima:aktiv program for active climate protection. The program combines various market-based measures in line with the Austrian Climate Strategy and implements target-oriented actions. In addition to research and development, investment promotion as well as environmental governance, klima:aktiv introduces issue-specific and target-group oriented programs in the areas of construction and living, mobility, company policies, energy saving and renewable energy sources.

### GOALS OF KLIMA:AKTIV

- To reduce energy demand and to force the CO<sub>2</sub>-neutral energy
- To improve and raise the selling of climate friendly products and services
- To strengthen the economy of Austria: sustainable and innovative
- Activation and networking of the most important actors

### METHODS

The klima:aktiv program is a collection of concerted actions with the target to increase marketability of climate friendly products and services. The program focuses on an area, not just on a single action and thus it is expected to be more effective and open for new resources. The participants will have the possibility to act on varying needs and to seize new opportunities. The systematic and long term approach opens up the possibility for collaborations with other partners in industry and thus leads to the desired broad impact.

Typical elements of these programs are information and motivation seminars, and consultations designed for specific target groups. Only in combination with other program elements such as the development of a proposal of high quality, the protection of high standards, training of multipliers, recruitment of cooperation partners, constant evaluation and manipulation of the general conditions the full potential of these programs can be realised. Following this approach a lot can be done to further the goals of the Austrian climate targets while keeping the costs relatively low.

klima:aktiv introduces topic-specific and target-group oriented programs in the areas of construction and living, mobility, company policies, energy saving and renewable energy sources. The first programs already started in 2005, others will follow soon during the year 2007. The initiative will be running until 2012. The program will be realised by financial resources of the Ministry of Agriculture, Forestry, Environment and Water Management from more than 3 million EURO per year. The Austrian Energy Agency was entrusted with the management and coordination of the various klima:aktiv programs.

### OVERVIEW OF THE KLIMA:AKTIV PROGRAMS

All the programs of "klima:aktiv" have the same targets: to reduce CO<sub>2</sub>-emissions and to reinforce the use of renewable energy

The following programs deal with the topic of "**Renewable Energy**":

- "biogas" – biogas for more energy, fuel and heat
- "energieholz" – supports the opening of not used resources of timber in our woods
- "holzwärme" – should motivate owners of a house to buy a biomass heating system
- "solarwärme" – focuses the utilisation of the energy from the sun for buildings
- "qmheizwerke" – for more efficient wood heating stations
- "wärmepumpe" – focuses on the best applications for heating pumps

In the section 'Energy-efficiency' multiple programs deal with **building- and energy efficiency**:

- "bundesgebäudecontracting" – support of the modernisation of federal buildings
- "ecofacility" – supports the renovation of private service centres
- "energieeffiziente betriebe" – is designed to help companies to optimise their energy consumption
- "energieeffiziente geräte" – supports to buy energy-efficient machines and tools
- "klima:aktiv haus" – the program supports ecological and energy-efficient new buildings
- "klima:aktiv leben" – is the program for energy saving in households
- "www.topprodukte.at" – an internet side for energy efficient equipment
- "wohnmodern" – supports modernisation of large living complexes

There are also special programs for **communities**:

- "e5" – qualifying and awards for communities
- "klima:aktiv vor ort" – is a program for regional implementation

The section "**Mobility**" runs the following programs.

- "mobilitätsmanagement (mm) betriebe" – for a climate friendly mobility in companies
- "mm kommunal-regional" – supports communities in all questions of mobility
- "mm raumplanung" – climate friendly mobility starts with the right decision on the location
- "mm schule" – supports climate friendly ways to school
- "mm freizeit-tourismus" – supports a climate friendly mobility in leisure- and tourismtransportation
- "mm verwaltung" – climate friendly mobility in administration

- “**sprintsparinitiative**” – supports a fuel-conserving way of driving.

#### **“KLIMA:AKTIV” ENERGY EFFICIENT COMPANIES – THE PROGRAM FOR THE INDUSTRY**

One of the several Austrian **klima:aktiv** programs is a national program to increase energy efficiency in companies, which started end of 2005 under the management of the Austrian Energy Agency. The program was based on the encouraging success of the European Motor Challenge Program for Austria. Its major target is to implement energy saving measures in the industry amounting at least 60 GWh p.a.

The Austrian Energy Efficient Company Program comprises three major activities to reach the final industrial energy consumer – the company:

##### **Target-group oriented marketing**

To attract as many companies interested in saving energy and energy related costs as possible, a wide range of marketing strategies is applied:

- Direct contact to the companies and visits in companies
- Newsletter for energy managers of industrial companies
- webpage with all relevant information and best case studies
- newspaper and internet articles
- organisation of seminars and events in cooperation with the Austrian Federal Economic Chamber, the different trade associations and the regional programs of the federal states.

To the general publicity on the family brand **klima:aktiv** through the Ministry and the Austrian Energy Agency is additionally a special marketing for the sub-program “energy efficient companies”. This is mainly by the participating federal states and their regional managers but also through the consultants in the particular states. The budget for the regional programmes is quite different, due to the size of the federal state. The budgets are in the range of 100.000 Euro although this includes other programmes and also a benefit of consultant costs.

##### **Direct market development, Working with suppliers**

The **klima:aktiv** management tries to find market-partners for specific technologies, to answer the need of companies for very detailed and professional support. Information on this advanced technologies are spread via newsletters and training. The **klima:aktiv** program brings together the supplier and user of the energy relevant systems, therefore specific marketing activities and projects are developed.

Market partners like “Oetiker” (repairing weak points in compressed air systems), “Alas Copco” (compressors) and many more companies could get partners because they are beneficial to **klima:aktiv** with their activities and ideas for a better efficiency in machines. As a official partner they have the possibility to act with the **k:a** logo and in countermove they make their success available for the marketing of the program (see MCP endorsers).

Also companies, which realised successful energy-efficient projects could get partners. They will be presented for moti-

vating other companies (see MCP-Partners and Best Practise Examples).

##### **Energy Audits and support tools for consultants**

For financing of energy audits the Austrian Energy Agency seeks cooperation with the environmental programs of the federal provinces of Austria. The **klima:aktiv** management organizes training workshops and supports consultants in these regions with detailed tools for energy audits and reports, covering all aspects and technologies of energy supply and demand in companies. Until September 2006, 60 consultants have been trained in using these tools.

Results of carried out energy audits together with saving potentials are reported to the program managers responsible for quality assurance of the reports. In addition consultants document the implemented and planned measures in a partly public database, including the name of the company, the name of the consultant and details on activities as well as energy- and cost savings. This tool is used for the evaluation of the saving measures.

The data base of measures includes a wide range of economical measures, about 15 % are measures concerning energy saving. The most intense use of the data base is through “Ökobusinessplan Wien”. They still entered 850 energy saving measures. All other federal states are at the beginning of using the data base. Unfortunately there is no evaluation up to now so we could not give a statement about the amount of saving. To speak from our own experience we could say that savings in an average of 5-10 % are done.

Furthermore consultants will be informed on financing instruments and financial public support programs.

This aspect of the program will be discussed in more detail in the following parts of the paper.

##### **The applied concept of *klima:aktiv* energy-efficient companies**

For the practical implementation of this concept, the Austrian Energy Agency was looking for a partner with adequate experience in industry, excellent references and furthermore also would have the necessary contacts to the regional federal organisations.

Sattler Energie Consulting GmbH was chosen because of their experience and former successful collaborations in the area of energy efficiency in industry. The project EBPI (“European Best Practise Initiative”) – breweries benchmarking” project and the current “European Motor Challenge Program” are examples for these collaborations. Consultants from Sattler Energie Consulting advised the participating Austrian companies in the case studies and came to outstanding results.

Furthermore Sattler Energie Consulting is a partner of all federal programs and the company is well known as a leading consultant in the area of energy efficiency in the industry.

##### **GUIDELINES OF BMU (MINISTRY OF AGRICULTURE, FORESTRY, ENVIRONMENT AND WATER MANAGEMENT) AND EA (ENERGY AGENCY)**

The task for Sattler Energie Consulting is to lead preliminary talks with the person in charge of the federal regions and to arrange cooperation with the Austrian Energy Agency. At the

same time, based on these preliminary talks, a technical concept for the consultation process should be developed.

The aim was to inspire cooperation between the federal states and to convey the added value of such collaborations as well as the extended qualification of the consultants.

An important part of this process was to clearly state that not the quantity of consultations or some statistic measures would evaluate the success but the number of implemented measures and reduced kWh and CO<sub>2</sub> emissions. The aim for the first year was to reduce energy usage at about 60 GWh, primarily through electrical energy.

#### PRELIMINARY TALKS WITH PERSONS IN CHARGE OF THE FEDERAL REGIONS

The preliminary talks had two basic aims. One was to convince the customer (person in charge of the federal region) of the advantages of state wide cooperation. The second and equally important part of these talks was to find out the expectations concerning a successful consultation process to develop a firm basis for a final concept.

All regional managers were asked questions by a questionnaire onto the following aspects:

- previous experiences (positive and negative) with **klima:aktiv** (e.g. the existing program **eco:facility**)
- expectations for the intended program and suggestions for improvement
- obstacles anticipated and how to tackle them.
- special considerations applying to the single federal states
- the possibility of financial support and the existing budget in the federal state
- „landscape of consulting“, „consulter pool“ and their qualifications
- and many more

#### RESULTS OF THE QUESTIONNAIRE AND SUBSEQUENT CONSIDERATION

The most surprising result was that the ‘consulter pools’ in many federal states were not effective enough for consultations in a complex industrial company. One reason is that in some federal states energy consultation was only a minor topic within the ecological company consulting service. Therefore, the number of qualified consultants is very low. Another reason is that most of the consultants were trained on the topic of ecology rather than energy. But also, their customers so far were mostly small business enterprises (e.g. tourism in Tirol) rather than large industrial companies. Because of this, the regional managers voiced concerns that most of the consultants would not have the qualifications to provide consulting services at the high standards the industry expects.

The consulter pool:

All participating consultants are freelanced and independent and work in the economical sector. In most cases they work together with the regional partners for years, so they still have huge experience. The bigger part of them is specialised on the topic of energy efficiency in companies but less of them have experiences in big industry companies. To get an easier start

the consultants, which normally work on the free market, have the possibility to provide advancements through the regional program. Advancement is in principle for the customer, not for the consulter.

The regional management offers an attractive advanced training for the consultants and give possibilities to exchange experience.

#### GUIDELINES FOR IMPLEMENTATION

Given the above results, the main guideline for implementation of the programs was to provide the consultants with adequate support in form of extensive documents to ensure the success of the following aspects

- how to make a good first impression
- particular know-how in industrial energy processes
- instruments for qualified consulting services which provide particular, available and objective results
- support from the first analyses up to the implementation of measures in the company

#### Realisation of the concept

The goal of the extensive preliminary work was to provide a detailed, attractive and customised offer for participating companies in order to reach the mission statement of reducing energy usage at about 60 GWh - primarily through management of electrical energy.

#### SUMMARY OF THE OFFERS

For this initiative to be successful, the quality of consulting is absolutely crucial. Therefore, a comprehensive consulting concept with effective instruments was developed. The consultants are specialised to find the systems with the highest potential for reducing energy with an as small as possible technical, financial and organisational effort. In the foreground is the support in implementation of ecologically relevant measures and investments.

#### K:A EEB PROTOOLS AS A FIRST STEP

The **klima:aktiv** PROTOOLS were the first step in the right direction. The target of the PROTOOLS is to allocate instruments to ease the way from the first contact up to the realised savings. This instrument should help the multipliers, the consultants and the further potential participants to ease this way and to reach a satisfying result for all involved.

The development was carried out in a close collaboration with consultants and multipliers which are involved in the program (table 1). As a result, the following documents, summarised in the name of **k:a PROTOOLS**, were developed:

#### Contact form

This form was developed to get a professional introduction for the consulting service and start the process best possible way.

The contact form includes

- confirmation of dates
- data request for the initial consultation

**Table 1: summary of the offers**



**Program Offer**

**energy efficient companies**

offer	company	who	What	how
supported first check (energy check)	For companies which are interested in possible saving potentials	Advisor of the regional programs in the federal states	First estimation of saving potentials. Decision support: if and to what extend measures for increasing energy efficiency are economic.	Contact the regional program partners. Ask for financial support and clarification of modalities.
Detailed consulting, analyses of energy and systems	For companies that already implement energy saving measures but want to optimize particular energy sections.	Specific consultants whose commitment depends on the eeb-program management and the regional program	Technical and economical evaluation of measures for increasing energy efficiency in the areas of concern. Create a concept to a preliminary project.	Contact the eeb-program management.
Financing and Financial support	Companies with an invest-decision for ecological measures.	Information centres for financing and advancement are coordinated through the eeb-program management	Specific consulting in all questions to finance and advancement for ecological relevant investments.	Contact the eeb-program management.
Implementation: Consulting and attendance	For companies which decide to implement ecological measures.	Information centre which is coordinated through the eeb-program management	Supporting attendance in implementation of ecological relevant measures and investments.	Contact the eeb-program management.
Partnership-program	For industrial companies with high energy demand which make contribution to the implementation of the klima:aktiv program through broad working energy saving measures and through realising such ecological projects (klima:aktiv)	eeb- program management	Supporting attendance in implementation of ecological relevant measures and investments. Specific consulting in all questions to finance and advancement for ecological relevant investments.	Contact the eeb-program management.

**Table 2: Assessment checklist**

list of compressors (fixed)						
compressor	demand		idling		Quantity delivered [m³/min]	pressure niveau [bar]
	time [h/a]	power [kW]	time [h/a]	power [kW]		
Kaeser I	1000	40	500	20	7	
Kaeser II	3000	55	2000	30	9	
idling to total				possible saving potential	specific energy for delivering [kWh/m³]	energy [kWh]
time proportion		demand proportion				
0,333		0,200		20%	0,1190	50.000
0,400		0,267		27%	0,1389	225.000
				0%		0
<b>Summe</b>						<b>275.000</b>

- Authorisation to organise missing data of contractors
- Confidentiality declaration

**Excel Tools**

The emphasis of the first step was concentrated on motor-systems. This decision was based on the fact to use the experiences of the MCP – the motor challenge program. Firstly, to assess the situation concerning the powered systems, an ascertainment over basic areas and an estimation of their energy consumption compressed air, pumps, vans, cooling machines and other machines,...) is done. This first assessment should uncover weak points and give an estimate of potential savings.

The developed tools include:

- A checklist with a general survey of data about use, running time, performance data of the motors and basic data for identifying possible weaknesses. (Table 2, Figure 1))

An Excel-Model to show the demand and to make a control of plausibility on the basis of a electrical energy bill.

- Mathematical model for a rough potential estimation. (Table 3)
- All results and recommendations in a graphic form arranged after need for action and priority in the areas as well as the expected results. (Figure 2)

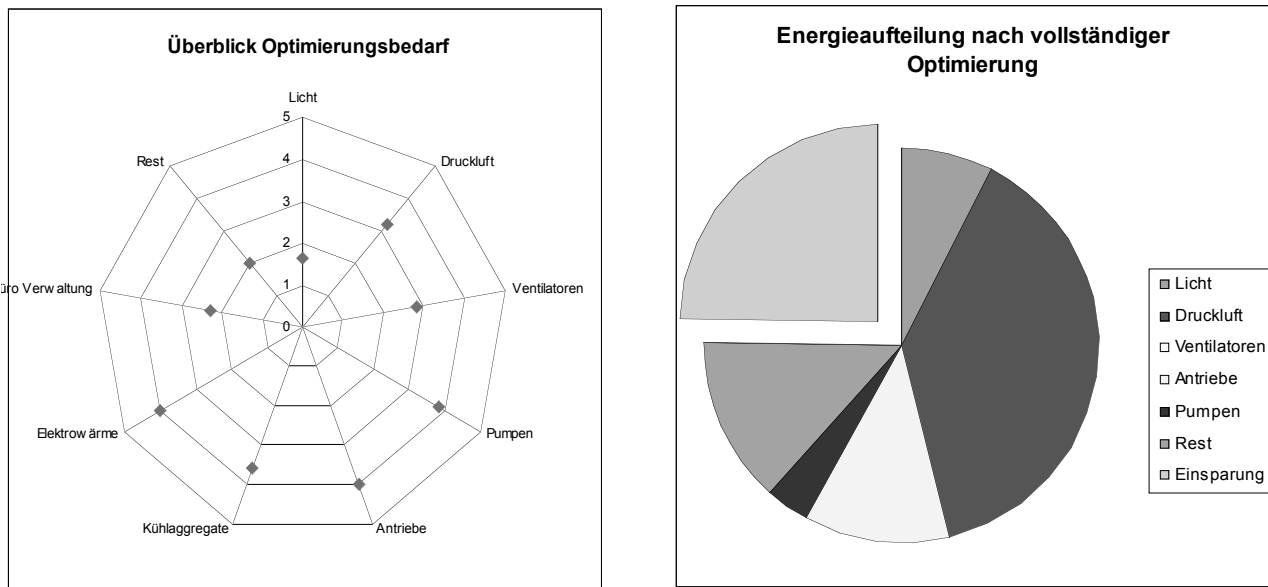


Figure 1: General survey about demands before and after measures

Table 3: Demand and potential shared in section of energy usage

	Actual condition	Actual demand on energy [kWh]	Potential [%]	Savings [kWh]	Energy demand new [kWh]
2.1 Lightning	1,6	47.180	5	<b>2.198</b>	44.982
2.2 Pressured Air	3,2	327.381	28	<b>92.875</b>	234.506
2.3 Ventilation	2,8	0	9	<b>0</b>	0
2.4 Pumps	3,8	33.000	33	<b>10.822</b>	22.178
2.5 Electrical drives	4,0	87.500	18	<b>15.750</b>	71.750
2.6 Cooling unit	3,6	137.250	14	<b>19.781</b>	117.469
2.7 Electrical Heat	4,0	33.000	18	<b>5.940</b>	27.060
2.8 Office & Administration	2,3	5.460	4	<b>193</b>	5.267
Rest	2,0	84.229	3	<b>2.106</b>	82.123
<b>Total</b>		755.000	20	<b>149.665</b>	605.335

**Report Model**

The report model includes a standardised structure with the main chapters and headlines. It is possible to copy the descriptions and results which are generated in the tools in this document easily. Together with an additional commentary a short report can be created easily. Figures and diagrams must be commented on every time.

**Info-Tools**

The Info-Tools are intended as supportive material for the initial consultation and also for further and detailed analysis. They provide:

- background information about the figures and functions of the consulting tools
- the specific know how to a correct use of the excel tools

- detailed know how to the different topics of energy usage, possible saving potentials but also how to realise the targets of energy saving

In addition to the technical support material, an Info-Tool was developed to provide help for the optimal processing of requests for financial support and other energy-relevant investments.

**FURTHER STEPS**

Depending on the support model, a detailed check up is done for areas which have shown huge saving potential or urgent need of action in the initial check-up. The analysis identifies precise saving potentials, gives an estimate of the economy and the technical feasibility.

An important part of the program is the continuing support throughout the process of implementing the changes. This is also the biggest difference to most other current programs and has been a weak point. To ensure the success of the implement-

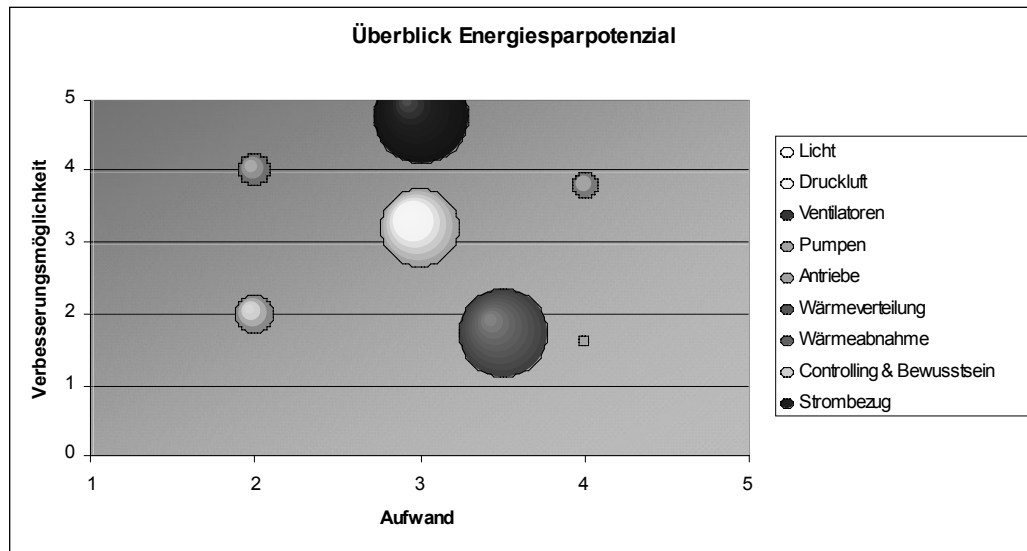


Figure 2: Description of potentials and effort for implementation

ed strategies and to reach the set goals, a consultant will be in attendance throughout the whole process.

Till now the regional consulting programmes to the topic of energy were just a small part of the ecological company consulting. The **klima:aktiv eeb** leads the programmes to invest more money to energy and climate protection so that consulting cases were attend from the beginning to the end. For example Styria developed a special module for attendance in implementation. The “local authority loan Public Consulting” give a subsidy to get high quality proposals for advancement. Now it is more important to get quality instead of quantity.

Furthermore, an evaluation will be done by the end of the first year. Based on the results, consultants will have the opportunity to exchange experiences between each other and furthermore, a decision will be made where and whereby the consultants will need the continuing support to reach the envisioned goals.

### Implementing the program – workshops for consultants and federal programs

After six months the development of the Protools was finished. In the next step the consultants needed to be familiarised with these tools. To this end, workshops were held in all federal states. Contents of the workshops were the presentation of the tools and a predefinition of the goals set in each specific federal program, as well as the modality of implementation and advancement. The presentation of the tools resulted in a very positive feedback from the consultants. To find out the right proportion of quite enough but not too much information for the consultants was a crucial point. A fine balance has to be found on how much information is relied to the customers as they have to pay for the consultations (with the exception of the financial support available), so too much and unnecessary details should be avoided. Still, it is important to relay all information necessary to be able to show reliable and precise results.

### WORKSHOPS AND FIRST FEEDBACK OF THE FEDERAL PROGRAMS

The first workshop took place in Innsbruck and was expected with much eagerness on our part. The feedback showed that the above mentioned evaluation was correct. We received similar positive feedback from workshops in Vienna and Lower Austria.

As a result the topic of thermo-technical optimisation was extended, as this field still was in the background of the electrical uses. Afterwards the tools were delivered to the consultants in their final version.

The workshop for Styria and Carinthia took place in autumn. Again, we received very positive feedback to the workshop. However, consultants asked for support using ‘Protools’ the first time in a company to be able to gain some first hand experience under professional guidance. This offer will be made available for consultants in 2007.

Salzburg is waiting the issues of additional tools on the topic of flue gas emissions, especially particulate matter in urban areas. This should be done before the starting workshop in February 2007.

Upper Austria has its own programs and will not participate in the state-wide program as the regional program is already very successful.

The other provinces will start the energy consulting service in the middle of 2007.

Overall, ‘Protools’ were positively accepted. The consultants agree that Protools will be very helpful for successful and efficient consulting services in industrial businesses.

Surprising was the reluctance of the regional managers towards Protools in these workshops. Their main concerns were:

- astonished about the complex requirements of a consulting service in the industry
- uncertainty if Protools would be useful in practical applications
- doubts over the feasibility of cooperation with the Federation

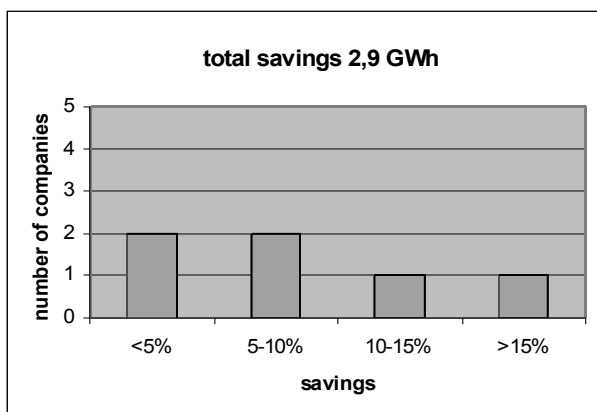
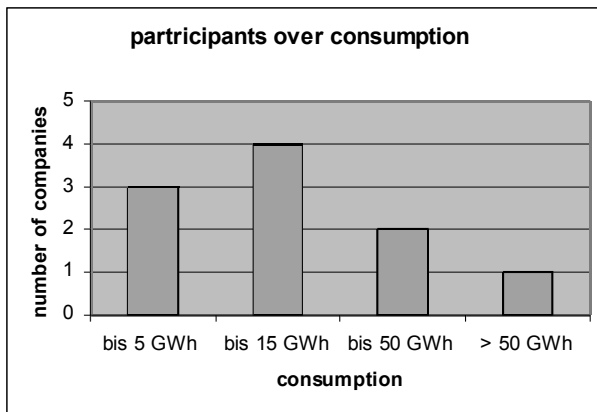
- unwillingness to commit in any form on their part to reach the Austrian goal of energy savings of 60 GWh.

### Results and effects on economy

It is difficult to reliably evaluate the existing results at this early time in the program. The first results from evaluations are expected about mid year after the first feedback from regional managers and the person(s) in charge.

#### EXPERIENCES OF THE CONSULTING FROM "SATTLER ENERGIE CONSULTING"

In the scope of the commission of the 'Motor-Challenge Program' Sattler Energie consulting held the first consultations with ProTools. We found that in the average a saving of 5-10 % of electrical energy was possible with this approach. The participating companies realised savings of up to 500.000 kWh (per company) after implementing the measures outlined in the program. These results are promising. It also means that the given target of 60 GWh could be realised within 120 consulting cases. The essential requirement for reaching the target will be the number and also the size of companies participating.



A suitable company should have an average electrical energy consumption of about 2-3 GWh. The industry sector is not decisive, the company should only have the appropriate amount of motor systems because the developed ProTools have a focus on the electrical side. (MCP: 70 % of electrical consumption is due to motor systems © saving potential up to 30 %)

#### FEEDBACK FROM THE COUNTRIES AFTER THE FIRST CONSULTING SERVICE

The feedback from the federal states and the regional managers was varied.

In Vorarlberg, the number of consultations in industry could be significantly increased through the use of ProTools. Consultation as the tourism industry was well established beforehand. Now 120 consulting cases in tourism are complemented by 40 consulting cases in industrial business.

The consultants from Vorarlberg asked for further and more detailed background information about the function of ProTools, so that they can be much more efficiently in the consultation process.

In Tirol, we realised, most of the consultations were done in the tourism industry. ProTools was not developed for this scenario. Tourism industry is much more a part of the program than a ecofacility. However, Tirol realised this problem and for 2007 will set its main focus on consultations in industrial businesses.

So far we were not able to verify results from consultations in Vienna and Lower Austria.

The participating companies in Vienna often are very small and it can be difficult to show realised results.

In Lower Austria, the number consultation services doubled in 2006, but we could not determine if this is a result of implementing *klima:aktiv* or not. It could also be due to rising energy costs. Nevertheless, the doubling of consultations still only means 15-20 clients in one of the biggest federal states.

Styria has no measurable success up to now due to the late implementation of the program and that the training just started in autumn 2006. Another factor is the not yet enforced declaration of cooperation mainly due to unclear political structure.

An extensive evaluation will be done in spring 2007. The first results will be presented at the eceee-conference later this year.

### Conclusions

#### PROBLEMS

The expectation of the Energy Agency concerning economisation of 60 GWh was in our opinion a realistic target. Unfortunately, the realised savings clearly do not reach the target. Reasons for this are:

1. Already in the preliminary phase the federal states showed reluctance towards a state-wide program as the value of such a program wasn't clear. Furthermore, the federal states already implemented their own programs and strategies, with varied success.
2. The existing budgets were not able to support the costs of extended consulting services and it was very difficult to liquidate further funding for these services on a broad basis.
3. The federal states furthermore are trying to successfully run their own programs and therefore would have preferred more financial support from the Federation rather than a specified concept. There is also the problem that some fed-



eral states don not yet have an agreement with the Federation, which complicates processes even furthermore.

4. The contractors for equipment are not the right contact persons to realise savings because they often just want to sell their products. Therefore it is difficult to quantify how much savings could be realised through this action.

After the beginning of the program in 2006 and only a moderate success in the first year a discussion with the regional partners brings the decision to do a new start of the program in 2007. To reach better results there will be an “energy efficiency offensive” with pursuant events. This should be a possibility for consultants, persons in charge and project partners to present their best practise examples and to start the marketing campaigns more effective.

#### POSSIBLE SOLUTIONS AND FURTHER STEPS

1. To make the program more attractive to the federal states, the Austrian Federation will have to make more funding available for a practical and successful implementation. Furthermore the issue of agreements between the Federation and the single states will have to be resolved on a higher political level.
2. The regional managers complained in the preliminary phase that there are qualified consultants that are not included in the in the Pool. The Pool includes consultants which work mainly in the homes and small trades.
  - a. For the success of these programs, it is necessary to ensure continuing education for the consultants as they mostly have only very little experience with industrial businesses.
  - b. It would be prudent to involve consultants in these programs only when they already bring the necessary Know-How with them. However, in some cases this could cause problems with the guidelines of the already existing and running federal programs.
3. Given the feedback and experiences so far, we came to the conclusion that it is not only important to continuously support the consultants, but also the regional managers of the federal state. This way the consultants and regional managers work at the same level and can thus more easily establish a successful cooperation for both sides.

In summary it can be said that k:a eeb offers a promising approach to consulting energy-efficient companies and realising CO<sub>2</sub> saving measures. Sadly, so far the potential did not live up to the expectations. This is less due to technical limitations but more due to organisational challenges and human general conditions, the so called ‘Soft-Facts’. More attention will be given to the ‘Soft-Facts’ and how to improve the general conditions so that the programs can be implemented more efficiently.

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