

klima:aktiv – the Austrian initiative for climate protection

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Abstract

klima:aktiv – a holistic approach

In 2004 Austria launched its long-term umbrella programme for active climate protection (until 2012). It combines various market-constituent measures and effectuates target-oriented implementation. klima:aktiv is an innovative add-on to common instruments, introducing target-group oriented programmes in the areas construction and living, mobility, company policies, electricity saving and renewable energy sources. By following a systematic approach, klima:aktiv is determined to effect a breakthrough in the use of climate-friendly technologies and services for increased energy-efficiency and of renewable energy sources, as well as to accrue their market shares.

Implementing tailor-made, target-oriented programmes

klima:aktiv programmes develop technological and organisational solutions able to compete on the market, take care of innovative quality standards and promote training of all relevant groups. Implementation of the klima:aktiv programmes must be accomplished within set time limits and results in concrete measurable targets.

8 programmes already launched (May 2005):

- eco:facility – innovative refurbishment of private service buildings

- e5 programme – energy-efficient municipalities (similar to European Energy Award)
- Solar thermal programme (“solarwärme”)
- Quality management for new biomass district heating stations and heating plants (“qmheizwerke”)
- Mobility management for companies (“Betriebliches Mobilitätsmanagement”)
- Refurbishment of residential buildings (multi-family houses) (“wohnmodern “)
- Energy wood (“energieholz”)
- Biogas – heat, power, gas and transport fuels from renewables (“biogas”)

Programmes for heat pumps and for energy-efficiency in small and medium-sized enterprises are next to be launched. By the end of 2005, the number of thematic programmes number will raise to about 15.

More than 3 million Euro/year – plus contributions from partners

The government provides over 3 million Euro/year. In addition, relevant economy branches are invited to contribute. The partners allow for easier access to the target groups. Thus, actions are capable of making powerful impact in terms of market transformation and energy savings.

Introduction

klima:aktiv is the Austrian initiative for active climate protection. The umbrella programme started 2004, is planned

to run until 2012, “hosted“ by the Ministry of Agriculture, Forestry, Environment and Water Management (“Lebensministerium” for short) and managed by the Austrian Energy Agency (A.E.A.). The aim is to widely introduce energy efficient and climate-friendly technologies and services in the fields of

- construction and living
- transport & mobility, company policies
- electricity saving and
- renewable energy sources

The advantage of combining all these various topics in one umbrella programme mainly results from the fact, that the instruments used (subsidies, coaching, training, quality management etc.) might differ in content but not so much in form. Thus, the single thematic programmes profit from each other (cross-fertilisation). Not only can they learn from their own mistakes but also from others. Vice-versa, success stories will quickly work a circuit and all other programmes can profit.

Furthermore, the sheer number of programmes gives the whole initiative quite some awareness and makes “the whole more than the sum of its parts.”

Next to investment subsidy programmes and legal & fiscal instruments, klima:aktiv now provides targeted support for e.g. further education and vocational training of key players, for quality management or for target-group specific information, motivation and marketing. The single klima:aktiv thematic programmes set targeted impulses and therewith help to transform the market. By following a systematic approach, klima:aktiv is determined to effect a breakthrough in the use of climate-friendly technologies and services for increased energy-efficiency and of renewable energy sources, as well as to accrue their market shares.

The central instruments of the national climate strategy (of which klima:aktiv is a part) such as subsidies for investments, fiscal measures, legal measures, are now supported and accomplished by klima:aktiv. The already existing approaches are combined in the programme and thereby given added value.

AIMS OF KLIMA:AKTIV

- Reduce energy consumption and CO₂-emissions and accelerate the use carbon neutral energy sources
- Amend the start chances and raise market share of climate friendly products and services
- Create a competitive advantage for the Austrian economy: fit for the future, sustainable and innovative
- Activate and network important players and stakeholders

Information and contact: www.programm.klimaaktiv.at

Management & organisational structure of klima:aktiv

Under the aegis of the “Lebensministerium”, management and co-ordination of klima:aktiv are handled by the Austrian Energy Agency. Defining, specifying and preparing themat-

ic programmes, managing calls for tender & placing contracts, controlling & monitoring, evaluation & assessment, co-ordination of further education, vocational training marketing and public relations, reporting to the ministry etc. are part of the complex task.

Several structures (boards and panels) on different levels (as an umbrella of the whole programme or within single thematic programmes) care for good communication between different players and stakeholders affected by the programme, e.g. governmental bodies, (energy) agencies on federal and regional level, programme managers, trade associations, industry etc:

- Executive committee (“Lenkungsausschuss”): a high level body consisting of Directors General of the ministry and high-level representatives of the “Länder”, Austria’s provinces; meeting once a year to finally decide the yearly working programme and proposals made by the steering group.
- Steering group (“Regieteam”): this body consists of ministry representatives on operational level from different departments as well as the klima:aktiv management team within the A.E.A. and a “Länder”-representative. Meetings take place approximately four times a year. Main task is to prepare the working programme for the coming years.
- Network conferences of thematic programme managers: It is their responsibility to get a programme started and meet the targets set in contracts and the yearly klima:aktiv working programme, respectively. They are working with specific target groups and all stakeholders. Furthermore, programme managers meet regularly in “network conferences” in order to discuss general issues arising in one or more programmes.

Market transformation

klima:aktiv follows the idea of market transformation (MT). The following is characteristic for this approach:

- MT is a targeted effort to change the market
- in case of success MT is very likely to have long-lasting and far-ranging consequences and results
- typical for the MT approach is active and comprehensive inclusion of all relevant market players (which can be quite a lot)

In this case, market transformation wants to raise the share of energy efficient products and services (see Figure 2).

Success factors for market transformation

- profound knowledge of the market
- commitment of stakeholders (market key-players)
- integration of different measures into a coherent program
- well managed process with good timing
- “make the users key stakeholders”

Several strategies can be followed to transform the market:

- strategic niche management

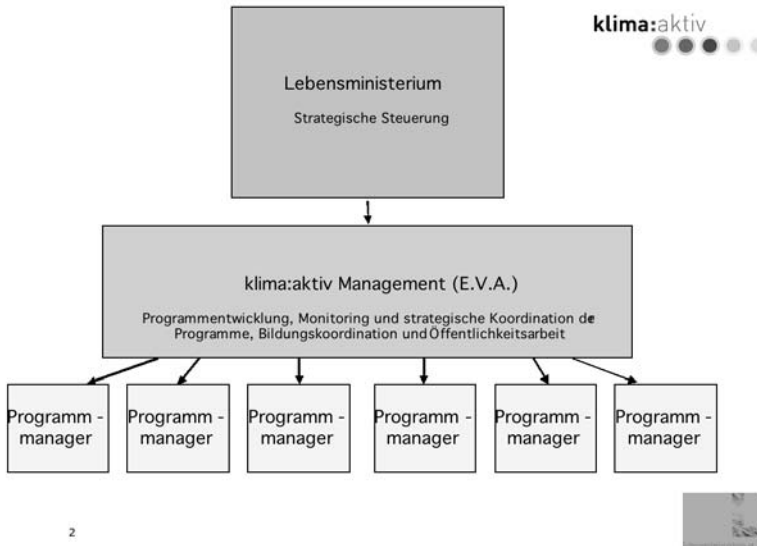


Figure 1. Structure of klima:aktiv

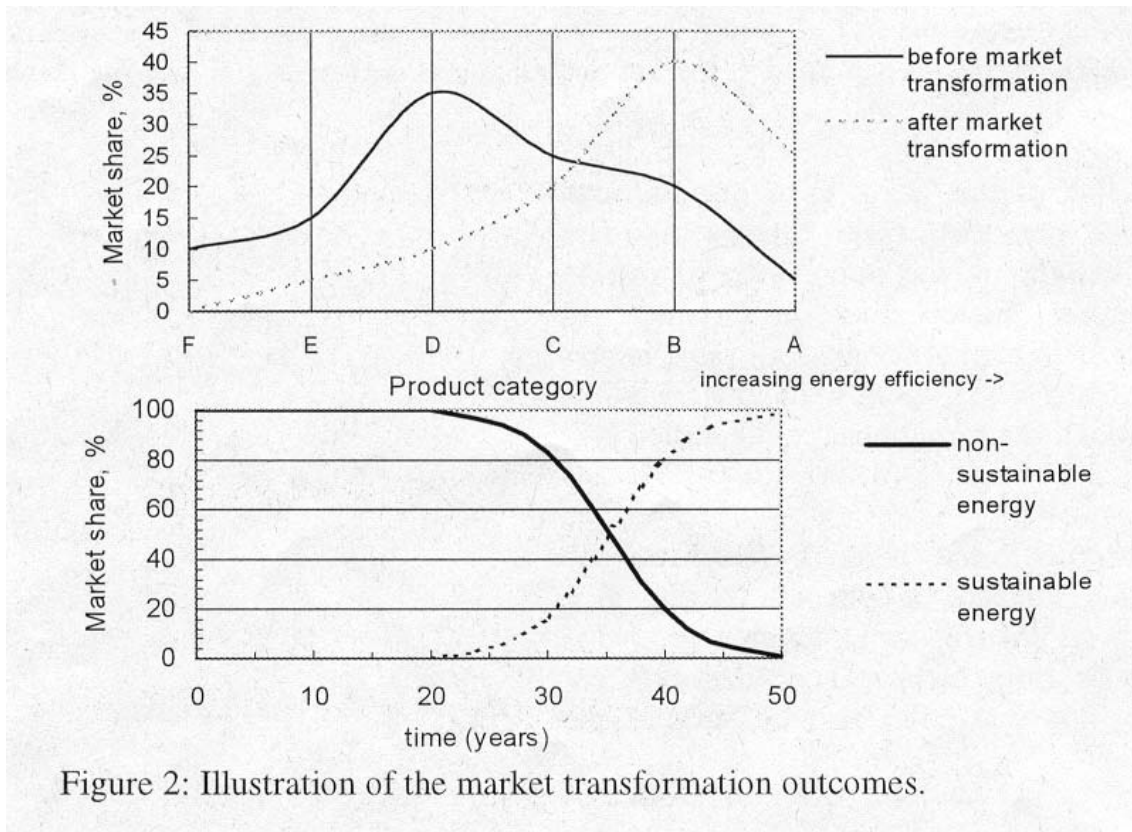


Figure 2: Illustration of the market transformation outcomes.

Figure 2. When to talk about market transformation

- business concept innovation
- procurement actions

The main advantages of an MT approach are comparably low costs and sustainable effects. The main barrier for MT: it falls “between all stools” as there are research, project, investment subsidy etc.

“Horizontal” activities

All thematic programmes aim at informing, motivating and training of their respective target groups. Therefore it makes sense to co-ordinate further educational activities and also public relations. The task is to develop strategies on how to optimally fine-tune further education and public relations/marketing of the single thematic programmes and their specific target groups on the one hand and the “um-



Figure 3. Logos.

rella programme” klima:aktiv and the general public on the other.

Activities such as further education & vocational training, marketing & public relations are partly outsourced to suited institutions or persons and form a ”horizontal“ structure, tackling all thematic programmes and the overall initiative. However, after thorough market investigation, every single thematic programme defines for itself if and which form of the services are appropriate. Since several programmes have need for e.g. marketing, these activities are harmonised and co-ordinated to avoid redundant action and to bundle “like-minded” activities. That is why there are functions such a “public relations co-ordinator” and an “educational coordinator”.

PUBLIC RELATIONS

klima:aktiv stands for an active and successful contribution to climate protection with measurable results. The aim is to abolish the apparent contradiction between economy and ecology.

klima:aktiv wants to talk a modern, “life stylish” language. klima:aktiv does not want to moralise and “teach” but show the advantages of climate protecting action and products.

Sensitize, inform, co-ordinate, support, motivate and invite – that is what klima:aktiv will do. Awareness of klima:aktiv especially among the target groups concerned, but also among the public will be raised. Ads, articles in newspapers and specialised magazines, give-aways etc are part of the campaign to make the brand klima:aktiv well known.

klima:aktiv stands as a “brand“, a corporate design. Under the umbrella of klima:aktiv several programmes, actions and services are combined. No thematic programme will appear with own logos or “sub logos“ 8 exempt klima:aktiv mobil, combining the transport relevant activities and thematic programmes. The logo and brand klima:aktiv is only to be used under certain conditions and within activities carried out within or closely linked to the programme.

CO-ORDINATION OF FURTHER EDUCATION, TRAINING AND VOCATIONAL TRAINING

Main aim of this coordinative function is to provide the qualifications needed in the thematic programmes and to co-ordinate trainings and education in the various programmes. Main focus is advanced vocational training. The newly initiated pilot trainings and seminars will be developed and offered in co-operation with universities, technical colleges, educational service of the chamber of commerce etc. where possible. klima:aktiv is therefore not in competition with the educational market.

klima:aktiv qualifications will be recognisable within the corporate design. A pool of trainers provides information for educational institutions regarding the selection of further

trainers and quality standards of trainings. A first certified training will for example focus on “klima:aktiv master-builders”.

klima:aktiv thematic programmes

klima:aktiv follows a market transformation approach in the fields of construction and living, mobility, company policies, saving electricity and renewable energy sources. Within these fields, some 15 thematic programmes have been or will be launched.

The management of these programmes is subject to a call for tenders. Before that, the programme contents and aims are defined in the overall klima:aktiv working programme. Qualitative and quantitative targets are defined and pilot studies are made to come to clear targets for the business plans, which are established for every single thematic programme.

Thematic programmes aim to

- reduce greenhouse gas emission at low cost
- increase market shares of climate protecting products and services
- bring main stakeholders to support the common goals
- contribute to an innovative Austrian economy

Typical activities & success factors are to

- activate stakeholders and create a useful network
- develop further education of market partners
- introduce quality management of new products and services
- work on marketing and public relations
- lobby for better framework conditions

klima:aktiv programmes last for several years and consist of co-ordinated activities regarding a specific field. That is how klima:aktiv builds up a “whole that is more than the sum of its parts“, regarding effects and resources. Players can react on changing framework conditions and use windows of opportunity. This systematic and – in relation to single actions – long-term approach also makes it easier to find co-operation partners, who guarantee wider spreading of the programme contents.

Typical elements of programmes are information- and motivation campaigns as well as advice for accurate defined target groups. But they only show the wished effect when combined with other programme elements like the development of high quality supply, quality standards, training of important multipliers, activation of cooperation partners, accompanying evaluation, changing framework conditions etc.

With this approach quite a lot can be achieved in terms of climate protection at relative low costs.

THEMATIC PROGRAMMES ALREADY LAUNCHED (MAY 2005)

eco:facility – innovative refurbishment of private service buildings

The aim of this programme is to increase the refurbishment rate and quality of private service buildings (offices, business locations, private schools, hospitals, hotels, nursing homes and senior residences, swimming pools etc.). Therefore different models for building refurbishment (with innovative technologies by the owner himself and different energy performance contracting –EPC- and guarantee models) will be optimised and elaborated within the project. Standardised steps for project development were created to secure the quality of refurbishments.

“Consultants for building refurbishment“ will be trained within the programme. These consultants are available for building owners, who are interested to optimise, modernise and refurbish their buildings in an innovative and energy efficient way. The consultants will also give a clear view on grants and subsidies available. Reduced CO₂-emissions and energy costs will be the result. Attractive subsidies have been created for consultancy and implementation of measures.

e5-programme – energy-efficient municipalities

Since several years a number of municipalities in the Tyrol, Salzburg and Vorarlberg actively take part in the “e5“ scheme of energy efficient communities. This is the most comprehensive and ambitious contribution to meet climate protection targets on the local level. Activities include refurbishment of municipality buildings, switch to renewable energy sources, sustainable transport measures, energy efficient spatial planning and building regulations.

klima:aktiv supports the widening of the programme to other provinces (“Länder”) and municipalities by training and know-how exchange of the regional programme managers as well as the inclusion in European structures („European Energy Award“).

Solar thermal programme (“solarwärme”)

Austria is among the leading countries worldwide regarding solar thermal and installed solar collector area in more than 170 000 households (resulting in 1/3 m² per inhabitant). Aim of the klima:aktiv programme is to overcome the stagnation of new installations compared to the last few years.

Measures are targeted at three groups: single-family houses (including pre-fabricated houses), residential buildings and tourism facilities (hotels etc).

At this stage 15% of all Austrian single-family homes are equipped with solar systems. In multi-storey residential buildings the percentage this number is at 1%. Tourism facilities (hotels etc.) are equipped at a rate of 4,5%. Supported by the industry, klima:aktiv will increase these percentages and set clear and measurable quantitative targets for domestic hot water and heating supply from solar thermal facilities.

Quality management for new biomass district heating stations and heating plants (“qmheizwerke”)

Per year 20 to 30 bigger biomass heating plants and 50-70 smaller „micro-nets“ are established in Austria, subsidised by the government (yearly investments: around 60 Mio Euro).

To increase technical and economical efficiency, new planning handbooks and software are being developed in co-operation with Switzerland and Bavaria. These, as well as specific training, will be offered to planners of heating plants, who will be supported by independent quality management experts.

Efficient usage of subsidies and an increasing number of biomass heating plants and local district heating is the aim of the programme.

Mobility management for companies (“Betriebliches Mobilitätsmanagement”)

Commuter travel and company trips cause a good deal of overall traffic. The programme aims at avoiding trips and replacing individual motorized transport by more sustainable modes such as car pooling, public transport, cycling or walking.

A number of Austrian pilot projects have shown reductions of CO₂-emissions of 3-30%. The programme aims at increasing the number of participating companies by a targeted information and motivation campaign. Furthermore, mobility management at big events (sport, concerts etc.) will be implemented.

Businesses profit from MM measures. There are more parking spaces for costumers when employees do not use their car for commuting. Former parking space can be used to set up new production units, once employees take the bus or cycle to work. Less energy consumption and cost is the result of renewing the company fleet and train the drivers in an economic driving-style.

The programme gives grants for implementing all these measures. Preconditionally, a mobility concept has to be developed.

Refurbishment of residential buildings (“wohnmodern“)

Residential buildings (bigger than single-family houses) show quite a potential to increase energy efficiency by refurbishment regarding a higher refurbishment rate and better quality. (Re-) developers, facility managers and refurbishment companies will be supported through qualification and coaching activities to optimally implement refurbishment measures.

energy wood (“energieholz”)

Ambitious build up of a large number of new biomass-CHP-plants as an outcome of the Austrian "green electricity act" leads to a rapidly increasing demand for fuel wood in the next years. At least 2 Mio solid cubic meters of fuel wood have to be brought additionally into the market until 2007 to cover the increasing demand in Austria.

The annual increment of wood is just partly utilized in the Austrian forests. Especially in small-structured private forests, there is a huge amount of unused forest stands. Major barriers against better utilization of fuel wood from these forests are high production costs due to poor harvesting

technology and weak supply logistics, lack of market transparency (demand, prices), slow information transfer, missing network of relevant stakeholders and the lack of a general concept for fuel wood production.

The “energy wood” programme aims on enhancing the mobilization of unused wood from the Austrian forests by building up a multi-stakeholder network, launching information campaigns, organizing specific workshops and field trips, initiating educational modules, giving inputs to improve the harvesting technology and the transport logistics, enhancing R&D activities concerning all aspects of fuel wood production, increasing transparency on the fuel wood market and giving advice to politicians. The Austrian Energy Agency will be responsible for the “energy wood” programme as programme manager, playing an important integrative role as focal point for all relevant actors. The programme has started with the beginning of 2005 and is designed for a runtime of 4 years.

Biogas – heat, power, gas and transport fuels from renewables (“biogas”)

The „green electricity act” has led to a boom in new biomass plants and facilities. It is now the aim to have these and new facilities professionally planned and operated. Clean energy in form of electricity, heat, biogas (bio methane, also for transport use) will be available for the consumer. Furthermore, legal and technological barriers will be tackled and all stakeholders will be networked.

FURTHER THEMATIC PROGRAMMES TO BE LAUNCHED

Energy efficient SMEs (“Energieeffiziente Betriebe“)

Small and medium enterprises show considerable energy saving potentials. Due to lacking personal and time resources these potentials are not exploited sufficiently. Based on existing networks of advisory and consulting and with the help of specified marketing among target groups, companies will be informed and motivated to increase energy efficiency. Benchmarks and best-practice solutions per branch of trade will serve as inputs. Some concrete technologies that will be checked in detail and where advice will be offered, are energy efficient motors, lighting and waste heat recovery in selected branches.

Refurbishment of single- and two-family houses (“Eigenheimsanierung”)

Some 50% of all Austrians live in single- and two-family homes. In average these buildings show higher specific energy consumption per m² than multi-storey buildings. Professional and innovative refurbishment, especially of the houses constructed between the 1950ies and 1980ies, can lower CO₂-emissions remarkably. Target groups are therefore house owners and refurbishment professionals. By motivating the former (mainly by informing them on attractive subsidy possibilities) and training the latter, this potential shall be activated.

klima:aktiv house – passive house technology (“klima:aktiv Haus”)

An increasing share of new houses, especially multi-family houses and prefabricated (single-family) houses should be

constructed as energy efficient and climate friendly as possible. The programme pushes this development with “low-energy or passive house standards” and ecological criteria for construction and the materials used. Again, for increasing the share, attractive subsidy systems will be installed and producers are made partners.

Wood heating (“Holzwärme”)

Wood stoves have shown quite an increase in Austria in the last years. The programme wants to further boost the market share in newly constructed or refurbished houses and buildings, both in the private and commercial sector. Planned measures are once more information and motivation of target groups such as plumbers, chimney sweepers, (biomass) boiler producers, house owners and building developers. Furthermore, quality standards for wood heating boilers will be developed.

Heat pumps (“Wärmepumpen”)

Heat pumps have experienced a boom in the last years, on the one hand caused by more and more low-energy and passive houses built (due to higher building cost subsidies). On the other hand the subsidies for fossil heating systems and boilers have been decreased. Heat pumps add to climate protection when they are operating at the best coefficient of performance (COP) (especially in low-energy houses) and when cooling agents harming the climate (such as fluorinated hydrocarbons) are avoided. Aim of the programme is therefore the promotion of this type of heat pumps with an optimal COP and their use in low-energy buildings and passive houses.

Electronic equipment – saving electricity (“Geräteprogramm – Stromsparen”)

Facing increases in electricity consumption (mainly covered by fossil power stations) it takes forced initiatives to save electricity. A first step will be tackling big purchasers and users of electricity consuming equipment (office equipment, lighting etc). Because of the mere number the procurement of public bodies and big private institutions such as banks, assurance companies etc. plays the most important role when transforming the market from average to energy efficient equipment.

Mobility management in spatial planning (“Mobilitätsmanagement in der Raumplanung“)

Too often new developments, shopping centres or residential areas are established “in the open country side”. Sustainable transport infrastructure mostly is last on the list. Aim of the programme is to set framework conditions (fiscal, legal, subsidies and training) which make it more attractive to implement sustainable mobility concepts, already in the planning phase. Car-free settlements, ideal public transport connections, parking space management etc. shall guarantee at least equal opportunities for public transport, cycling and walking.

Energy performance contracting (EPC) of federal buildings (“Bundesgebäude-Contracting Phase II”)

In phase 1 of the action about 300 federal buildings got an EPC-contract. Since summer 2004 the companies are imple-

menting the offered measures. However the programs duration of phase one run out and therefore universities, military facilities and a good deal of historical buildings have not been targeted yet. Information and motivation of the building owners and facility managers concerned will lead to an increased rate of objects refurbished with the help of EPC.

Furthermore, klima:aktiv mobil will come up with several programmes (2005, 2006) targeting at transport and mobility issues:

- sustainable transport in tourism and leisure time
- mobility management on local and regional level (municipalities, mobility centres)
- mobility management for schools and administrations
- ECO-DRIVING

Conclusion – What works & Who delivers?

As part of the Austrian Climate Strategy to meet the “Kyoto” targets klima:aktiv is an innovative add-on to common instruments, introducing tailor-made, target-group oriented programmes in the areas construction and living, mobility, company policies, electricity saving and renewable energy sources. By following a systematic, market-transformation oriented approach, klima:aktiv is determined to effect a breakthrough in the use of climate-friendly technologies and services for increased energy-efficiency and of renewable energy sources, as well as to accrue their market shares.

Instruments such as information, motivation, further education and training of selected target groups and the general public try to fill the “gaps” left by - nevertheless important - legal and fiscal measures and regulations as well as investment programmes in the field of climate protection and energy efficiency.

ENERGY SAVINGS: WHAT WORKS & WHO DELIVERS?

The combination of all these measures and instruments, delivered by a multitude of players but mainly by suitable thematic programme managements, will work in terms of energy savings and energy efficiency.