

# BEST - PRACTICE CATALOGUE



# 1. Take part. Build sustainable. – Touring Exhibition

## Context and objectives

A fundamental approach to increase the energy efficiency is the energetic improvement of buildings. In Germany more than 40% of primary energy are consumed in the building sector. Over the last years there has been research and development of buildings with a reduced demand of energy. It was identified that heat insulation achieves sustainable energy savings. For more than 17 years, the concept of a passive house has proved it self. In the process the minimisation of heat losses, the ideal alignment of solar collectors and the realisation of efficient building equipment are adjusted, so that the rest of the energy demand is as lowly as possible. So, the Saxon Energy Agency supports builders and people who want to refurbish their buildings all the way from the beginning to the finish.

## Partners

The project is under the auspice of the Saxon state minister for agriculture and environment Frank Kupfer. Advanced trainings regarding the topic energy efficiency, system engineering and legal frameworks are arranged by Saena. The campaign will be extended to a partner network involving different areas of expertise, for example the Saxony chambers, industrial union and the building sector. Also local architects and engineers are assisting in the project.

## Description of good practice

In the project "Take part. Build Sustainable." future builders or building owners will get information in advanced trainings, that prepare them for energy efficient building projects, among others the campaign energy efficient buildings.

The perfect house is warm in the winter and cool in the summer. So, Saena organized a touring exhibition "passive house". The campaign is giving information concerning architecture and necessary requirements.

What is “passiv” at the passive house and doesn’t it need any heating. Really?

This and some more questions were answered by the Saxony touring exhibition “passive house”. It focuses on private persons, builders, planners, future house owners and interested citizens.

Five information bars, 2 material tables and an “experience-table” are giving the visitors an extensive knowledge about future building constructions. A short movie represents the specific field “passive-housing”. Significant factors about construction and planning are practically presented and best practice examples in Saxony are shown. The exhibition is connecting knowledge about loan programs and future trends in the passive house concept.

Especially for kids there is a specific feature in the TV: “The movie with the mouse”. The movie shows, suitable for children, how a passive house is build from start to finish.

## Results

The touring exhibition supports the dissemination of passive house information in all regions of Saxony. So, the builders and building owners have the possibility to get some know-how on how to cut their energy costs without decreasing utilisation- and living-quality. A positive effect is, that the touring exhibition is guest in smaller municipalities for one month.

## How to replicate it ?

That campaign in Saxony has been successfully approved by builders and house owners. The exhibition had currently (Stand: July 2011) visited 52 stations in Saxony. Further information are available at the SAENA homepage ([www.Saena.de](http://www.Saena.de)). A passive house supports the targets of the energy- and climate concept and is a good possibility to implement this project in other regions of the EU.

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## 2. European Energy Award

### Context and objectives

The European Energy Award® is an implementation-oriented instrument for climate protection and energy efficiency policy in Saxony. With this instrument, the community is given an often-tested management and controlling instrument. There are four main steps in the process of certification: "Analyze - Plan - Check - Adjust". With its process orientation it can be used as a tool for energy saving, efficient use of energy and for increasing the use of renewable energy in communities. Existing energy savings can be identified with the help of the European Energy Award®. The main tool of the eea®, in addition to the energy-team, is the catalogue of measures: It guarantees the systematic and sustainable development of existing energy savings.

### Partners

#### **partners in the eea® certification process:**

**energy-team** (to commit responsibility within the community, representatives of various departments of the administration and municipal enterprises, possibility that external energy experts and committed citizens join energy-team)

**consultant** (accredited external expert, support of the energy-team, monitoring of certification process and implementation of annual performance reviews, SAENA provides list of eea®-consultants)

**auditor** (accredited external auditor, implementation of certification, ensuring the quality standards of european eea®-requirements )

#### **federal office as licensor and central administration in Germany:**

B.&S.U. Beratungs- und Service-Gesellschaft Umwelt mbH

#### **funding:**

Saxon State Ministry of the Environment and Agriculture

Saxon State Ministry of economics, labour and transport

## Description of the good practice

### Zschadraß - CO<sub>2</sub>-neutral gym with eco design

In 2002, a modern sports hall in environmentally optimized construction was built in Zschadraß, near Leipzig. The hall is characterized by a pioneering design and an innovative energy concept. The community Zschadraß was certificated as an eea®-community in 2007. Due to its steps for increasing energy efficiency and the usage of renewable energy sources the gym saves 74.000 kilos of CO<sub>2</sub> per year. Currently Zschadraß covers 28% of its energy needs by itself.

Regarding the eea®-certification, there are much more different good practise examples:

2007: Freiberg – green electricity for municipal buildings (2009: 227 buildings), special support of PV development, energy-efficient street lighting

2007: Görlitz – reduction of CO<sub>2</sub> emissions, project model for energy performance contracting

2007: Delitzsch - Cost savings through energy management system for 142 municipal buildings

2008: Oederan – initiation day of renewable energies

2009: Niesky – thermography of houses

2009: Bad Dübén –public relations, advice centre, network development (private and public)



Picture 1



Picture 2



Picture 3

## Results

- improvements of CO<sub>2</sub> balance
- reduction of electricity and heat consumption in municipal buildings -> reduction of operating costs
- raising awareness regarding energy efficiency and potential energy savings
- development of public roadshows

## How to replicate it ?

The examples above demonstrate the broad variety of energy efficiency actions initiated by the process of certification. To replicate these examples and to raise awareness regarding energy efficiency, public authorities and citizens have to be informed about potential energy savings and potentials of CO<sub>2</sub>- and cost reductions.

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## 3. Initial Measurement

### Context and objectives

Initial measurement stands for the initiation and implementation of start measurements for an energy efficiency analysis in municipal buildings provided by SAENA GmbH and energy consultants. By initiating and implementing start measurements in various local properties, local decision-makers should be aware of analyzing the potential savings by optimizing the existing facilities. Based on the measurement results the appropriate measures for savings should be implemented. The data is given to the users and energy consultants for an energy efficiency potential assessment. The model-based and collaborative projects are supported with basis measurements and a result measurement. Outcomes of the analysis are published in a public-effective documentation.

### Partners

initiation and implementation of start measurements:

local energy agency (i.e. SAENA GmbH)

advice to the measurement results and coordination of actions for efficiency improvements:

local energy consultant

### Description of the good practice

Initial measurements provided by SAENA GmbH from 2009 to 2010:

16 municipal buildings

- office and administration buildings
- schools and kindergarten
- sports hall
- multi-purpose building with swimming pool



Picture 4



Picture 5

## Results

In general, a significant saving of final energy even with non-or low-investment measures for system optimization can be achieved. It is estimated that in almost all plants measured efficiency potential can increase, depending on the type of building, by about 10 to 30% or € 500 to 12,000 € per year by optimization of the plants (hydraulic balance, building control, etc.).

## How to replicate it ?

Strengthen the cooperation between energy consultants and local energy agencies. Inform public facilities about the possibility of initial measurement. Representation of the cost savings resulting from the process of initial measurement.

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# FRANCE

# 1. The use of a “bill mask” to help interpreting electricity bills

## Context and objectives

Until a few years ago, the general public in France only had access to a single electricity and gas provider (EDF-GDF). With the liberalization of the electricity market (on July 1st 2007), new providers were able to offer their services to private individuals. In preparation for liberalization, the entity EDF-GDF split into two distinguished companies: EDF and GDF. Customers used to receive one only bill for electricity and gas, but by the end of 2006, they got to receive two different ones.

With the arrival of new providers, there will be soon as many styles of bills as there are energy providers. This may exacerbate the difficulties families can face in understanding their bills and create confusion among consumers.

A local work group was set up after the end of SHARE project (IEE programme). It identified the need to help families to understand their electricity bills and developed the “bill mask” as an advice tool. The aim is to help families to extract the useful information to enable them to monitor annual consumption and so, to be in a better position to control their expenditure on energy.

## Partners

The bill mask was funded by EDF (the principal electricity provider in France) and 1000 copies were printed. It was distributed:

- Directly to families in difficulty
- Through social workers, to use in advising and supporting their clients
- By the “energy ambassadors”, for whom the ability to analyse consumption by telephone is facilitated by the prior sending of the bill mask to any family that needs it.



Picture 6

The **Local Energy Efficiency advice and network (LEEAN)** is a subproject of EnercitEE developed in five european territories to sensitize municipalities’ teams, donors, energy agencies and organizations about energy efficiency. The goal is that they can, in return, sensitize inhabitants.

## Description of the good practice

The tool consists in a sleeve in which someone can slid an electricity bill. It has windows cut into it in the relevant positions so that the important information on the bill can be highlighted, and linked to explanations.

Loïc Lepage, French manager of SHARE project, declared: "The experience of using the bill mask has been transmitted to other French associations interested in the issue of energy among households in difficulties. We hope that sharing this experience will encourage the multiplication of the results we achieve through the SHARE programme, and perhaps it will encourage the use of this tool beyond the Haute-Savoie department".

The bill mask is now used in other regions of France and by different organisations in Region centre, in Rhône Alpes Region and some other to come (Havre, Seine-Eure).

Discussions are taking place to make a similar tool, in collaboration with GDF, the French main gas provider.

## Results

The bill mask is really well used. Prioriterre has made a new order for 3000 more copies to dis French social workers networks. It is also used in different awareness raising programmes. Prioriterre has also distributed them for free and the pdf version is available on energyambassadors

## How to replicate it?

If you have identified a target group that may have difficulties to understand their electricity bills, get in contact with the main electricity provider in your area if there is one. The idea is to identify what the difficulties of the users are precisely. Then, you shall work in collaboration with company in order to make such a tool. The data that are emphasized on the bill mask above are the invoice date, the consumption bill or estimation, the evolution of the family's consumption and the amount due.



Picture 7

## 2. “ Home visits and advices”

### Context and objectives

The basic aim of the « energy ambassador » plan of action is to help the families of Haute-Savoie in their difficulties to manage their energy bills and consumption. Whereas some families are not able to pay for their energy/water bills, there is a need to raise awareness amongst relevant actors of the social field about the environmental and economical benefits of energy efficiency and renewable energy measures existing for residents and landlords. The social staff thus trained can then help in achieving behavioural changes by occupiers of social housing by promoting good practice examples in the social housing context, indicating what is technically and economically possible.

### Partners

This plan of action was launched and funded by the Council of Haute-Savoie for 10 years and by the IEE programme. We worked with a network of social case workers; they become our “Energy ambassadors”.

### Description of the good practice

One possible mode of action in the field of energy efficiency advice is to intervene directly at home with families and advise them on their energy consumption.

Families that can benefit from these interventions are selected during local energy fund commissions. These commissions rule on financial help requests from families unable to pay for their energy.

So that the visit is profitable, it is important that

theoretical consumptions of other similar families in a similar sized and aged accommodation.

Comments on the appropriateness of the subscription options in energy supply chosen by the family and personalized advices to reduce consumptions are also given.

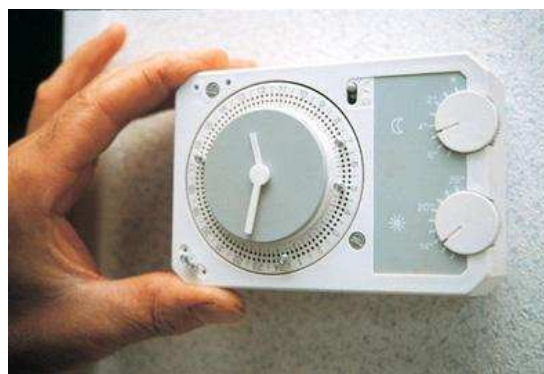
The ambassador can also give « small material » (like watertightness joint, low consumption bulbs, timers) if it seems necessary, and remains available to answer any

the family has a voluntary approach. Thus, the visit is proposed to the family by letter but they have to take the step to have an appointment.

During the visit, the ambassador asks the family about its life habits, measures its energy consumptions (based on the invoices) and visits the accommodation in order to identify possible problems related to the construction or to the equipment.

After the visit, a report is sent to the family: it includes a rapid description of the house, the family consumptions with comments based upon

question the family may have.



Picture 8

## Results

In total more than 50 social workers have been trained to identify technical solutions for people in situation of fuel poverty. Besides, a guide to help the social workers to identify what may be the causes of an important energy bill in any family has been created and is regularly updated.

The estimated results were that 50% of the contacted households changed their behaviour within a year and saved between 5 to 20% of their energy consumption. A survey is being led within the European energy ambassadors project. Partners may have more accurate results by the end of 2011.

## How to replicate it?

Then, the energy ambassadors are able to distribute some tools we have made. We have set up different kinds of tools in order to implement changes of behaviours in energy consumption such as a bill mask to get the target group to read their invoices and understand their level of consumption. It is a good basis to get them to consider their role in energy efficiency. We have also set up a guide for the general public with a few tips on energy savings and a little game (find the 10 mistakes) on energy consumption in an indoor environment. It is very play for children too.

### Limits of the home visits

When the ambassador visits a house, he/she intervenes essentially on behaviours.

If it seems necessary, he/she can write a letter to the owner to inform about work that would be interesting to do in this accommodation, this mail being only a recommendation and information, not an obligation.

We can observe limits to this system when the accommodation/the building itself presents real problems and when, even after the visit of an ambassador and after the family has implemented sparing behaviours, comfort and/or consumption problems still persist.

After reflexion a new programme has been developed with the partnership of Rhone Alpes Region and Act habitat « Helping Fund for Small Improvements » to finance small works such as repairs (Ventilation, broken windowpanes, leaks ...). Prioriterre has also developed a tool box for social workers with demonstration material (water flow reducer, water saving shower head, programmable comfort thermostat ...). This tool box can be borrowed by any social workers that book for it.

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## 3. “Aid Fund for Small rehabilitation works”

### Context and objectives

With the general rising of the energy costs, more and more families can hardly pay their bills and are sometimes in very difficult situations. In order to help those families, different solutions were set up in the department to help those families but these are essentially financial helps and, in some cases, the actions undertaken are limited because of the poor condition of the buildings. Small works are usually at the expense of the tenants but are not taken into account by any social system even though they concern many households and represent an important potential for savings and for an improvement of comfort for the families. Therefore, the implementation of an “aid fund” appeared necessary in order to complete the already existing operations.

### Partners

Our technical partners are Act-Habitat (an association that informs the general public and local authorities on the topic of housing. It promotes national and regional policies in favour of the rehabilitation of existing building, the improvement of the inhabitants’ quality of life, the creation of private social housing...). Prioriterre and Act-Habitat put their competences together to facilitate this operation: Act-Habitat intervenes more on the administrative work and prioriterre on the technical aspects.

The financial partners were a few at the beginning of the operation (Region, Regional Energy Agency, Foundation de France); today, the Region is about the last one to bring its financial contribution.



## Description of the good practice

It is a financial help aiming at supporting the realization of “small rehabilitation works” in the dwellings. The small works covered by this fund were chosen in order to generate a decrease in energy and water consumption.

A steering group composed of the project partners was constituted in order to: implement the project, work on the functioning rules of this fund, follow its functioning plan and evaluate it.

The public concerned is a low-revenue public, tenant or owner, living in a dwelling in which small works (financed by the fund) would bring a real improvement as far as comfort and/or energy savings are concerned.

How does it work:

- The families or the social workers in charge of them ask Act-Habitat to send them an application form to receive the fund.
- Act-Habitat receives and selects the cases
- A home visit is organized in order to spot the potential energy savings: it is realized by a technician from Act-Habitat who identifies the small works to do and provides personalized advice focused on behaviours on a visit with an Energy Ambassador from prioriterre who gives their opinion on the priority of the works to be carried out (impact on the energy consumptions and the comfort of the inhabitants)
- Act-Habitat places an order for works to the enterprise contractor and works on the financial plan of the project.
- After the works, the technician from Act-Habitat does a second home visit to check at the works realized.

The fund has been implemented over a test year (2009-2010) and it is still a little early to identify the results.

The expected results are a decrease in the number of energy poverty situations in the department of Haute-Savoie and the improvement of the condition of dwellings. We are also hoping to contribute to a potential decrease in the number of demands for financial help that are regularly addressed to the Energy fund of Haute-Savoie.

On the environmental level, the decrease of water and energy consumption generated by the works should contribute to the reduction of the greenhouse gases of the Haute-Savoie and to the preservation of resources.



## How to replicate it?

In order to do the same thing, you need to work with the bodies already working in this field, knowing the local context and having an experience on energy poverty. Besides, they have to be able to work together in order to pool their technical (advices on works to carry out, home visits) and administrative skills (files management, financing plan construction...).

You also have to find financial partners able to work on the small works as well as on the facilitation work which, is quite important on this kind of operations.

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# Italy

# 1. Energy Front office or Info point

## Context and objectives

In recent years, practical experience demonstrated the relevance of providing citizens with free and accessible information about energy consumption facts, energy saving technologies and practices, etc. At the same time experiences showed that local authorities have difficulties in reaching the citizens in order to make them aware of energy efficiency matters. The objectives of this best practice is to inform, to educate and to help the citizens to improve their own behaviour about energy sustainability and their choices and to have awareness about their own energy consumption (electricity and heat). Moreover the involvement the citizens about energy theme allows them to contribute actively reaching the European objectives "20 -20 -20".

## Partners

- Local authority
- Technical Body
- Energy specialist
- Citizens
- Firms

## Description of the good practice

This best practice refers to energy info point of a local authority located in a public reachable building. The info point is open in a specific period (for example once weekly) and offers an information and consultant services to citizens about environmental and energy sustainability, energy efficiency. The service is performed by energy sector specialists.

The offered information and services can be:

- Information about energy technologies and best practices for energy saving and renewable energy household production
- Information about economic incentives/ incentive bonus

The **Local Energy Efficiency advice and network** (LEEAN) is a subproject of EnercitEE developed in five european territories to sensitize municipalities' teams, donors, energy agencies and organizations about energy efficiency. The goal is that they can, in return, sensitize inhabitants.

- Information about building energy certification
- Software application or web application about the energy saving in domestic uses
- Support to develop purchasing groups about energy and energy efficiency
- Training course or educational activities

The firms are involved in some of these services in order to offer to citizens opportunities about products and innovative technologies.

## Results

At present some Public Administrations of Emilia Romagna such as Provinces or Municipalities opened energy front office or energy info point to offer information and services to citizens.

A little number of them have been successful thanks to availability of economic resources, information materials, specialist staffs and tools (for example software, web application,...).

## How to replicate it ?

It would be necessary to support local authorities in order to promote the capillary spread of these reference points for citizens. It would be useful to develop proper coordination and support at upper administrative (i.e. regional) level, aimed at producing common tools and practices. The aim could be to make available for local structures common informational tools and define agreed rules at territorial level for their economically sustainable management.

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## 2. Collective ownership photovoltaic plants

### Context and objectives

This practice aims to enable single citizens or families to enjoy benefits of photovoltaic plants ownership despite lack of the needed economic means or available roof for installing photovoltaic plants. It foresees the involvement of citizens, as householders or firms owners, in order to participate to the energy production from renewable resources in a collective or participated way. This solution allows a high level of energy production from renewable resources, reducing the fossil energy consumption and the energy consumption costs.

### Partners

- Local authority
- Citizens (households, firms, existing local association)
- Promoting subject (if different from the local authority, such as a local association, a local energy purchasing group, etc).

### Description of the good practice

The practice relies on a partnership stated between a local public administration (municipality) and a number of citizens aimed at produce energy from one or more photovoltaic plants.

The local authority creates an announcement in order to promote the taking part of citizens in a collective investment aimed at realizing a renewable energy production plant, the local authority making the roof of a



Picture 9

public building available for the installation of the photovoltaic plant and the citizens financing the investment, paying limited/restricted shares of the investments (from minimum shares to a maximum share fitting the cost of an household plant). The electricity production from solar energy supplies the public uses.

The citizens that decide to participate to the investment take part in a company. This company is responsible for design, management and maintaining of the photovoltaic plant for 20 years. After that, the local authority take the ownership of the plant. The citizens receive during the entire period (20 years) the economic return of the investment connected with existing regulated economic incentives and benefits based on electricity production and selling.



Picture 10

## Results

This kind of initiative allows citizens to become renewable energy producers and to sell energy obtaining all benefits proposed by existing national economic incentives. The cost of investment in shares can be coherent with economic availability of each participant member. So, the initiative aims at involving families or other actors that are not able to invest in EE and RES interventions on their own house.

The referring case study, implemented within the municipality of Castelleone (province of Cremona), has involved the citizens of a small town (about 10.000 inhabitants). The installed photovoltaic power is about 60 kwp and the location was the roof of a public school. Electricity estimated production is about 64.000 kwh / year and the pay back of the investment is about three years. The economic return of investment is on the average 5% of the investment.

The interest of the citizens has been high and so the local authority decided to realize other collective plants.

Collective ownership photovoltaic plants experiences are in progress, with the same working scheme, in some towns/municipalities of Emilia Romagna.

## How to replicate it ?

This best practice can be easily replicated in other places, small and big towns. The role of the local authority or some other promoting structure (i.e. a local energy helpdesk) for the information and the involvement of citizens is very important in these type experiences. The knowledge of citizens about offered opportunities must be clear and so it's important that dedicated structures or actors provide detailed information about the initiative, the implementation scheme and the expected financial revenues.

A secondary purpose of the initiative is to promote interventions by citizens about energy efficiency and RES energy production to their own houses.

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## 3. Purchasing Groups in energy sector

### Context and objectives

The development of renewable energy in household context in order to reduce the energy consumption and to improve the energy efficiency is not easy reachable. The families/householders themselves generally need technical support to decide the more suitable investment. Citizens often are not able by themselves to know what and how to invest to improve the energy efficiency of their house and to choose the convenient investment to produce energy from renewable resources.

The objective of Purchasing Groups is to help the citizens to invest in energy efficiency products and in energy (electricity or heat) production from renewable resources having economic advantages (scale economies and more bargaining power) and the quality products.

### Partners

- Local authorities
- Citizens (households, companies or firms,...)
- Technical body (energy agency,...)
- Energy plant installer
- Banks

### Description of the good practice

Purchasing Groups represent a opportunity for citizens to invest in energy efficiency and in renewable energy production for their own house or, in general, for their own buildings by joining a group of purchasers of energy or energy efficiency products or Renewable sources plants. A purchasing group can be composed either by householders or firms, located in the same town or different ones.

There are purchasing groups in different energy related sectors, for example solar *groups*, the members of the group (citizens, firms...) decide to invest in solar energy and to install photovoltaic plants on the roof of their buildings. The citizens take part in these groups on a voluntary base. They are not bound to purchase a photovoltaic plant but



they join the group in order to guarantee a proper bargaining power to the group itself and have the opportunity to install the plant at due time.

The purchasing group has not legal status but it defines the common interests of members.

- The offered advantages are:
  - Consumer guarantees and protections
  - Quality products
  - Good prices (cheap prices)
  - Definition of common technical and quality requirements for plants to be installed
- Collective competitive tender



Picture 11

Within the group working scheme usually a technical commission assesses and selects the most suitable firms installing the plants and also the most suitable financing measures offered by banks. In some cases there is a technical body, for example a local energy agency, with the role of supporting the group in a technical choices.

Each member of group has the opportunity to have a site visit and an estimate for photovoltaic installation without obligation of installation.

## Results

In Emilia-Romagna, until now, many purchasing groups were born in energy sector. They obtained a good interest of private citizens or firms. Thanks to the solar purchasing groups, for example, over hundreds households took part and some firms. A part of them installed already photovoltaic plants in their own buildings.

The first solar group in Emilia-Romagna was established in the Modena province in 2009. It is composed by 150 registered households; 55 photovoltaic plants were installed.

There are also purchasing group for energy efficiency in houses aimed at promoting intervention such as the improvement of windows, boilers, etc.

## How to replicate it ?

Citizens often do not know these type of initiative to support their economic investment in the energy sustainability. In this case it is important to have a reference subject (i.e. an e Energy front office or info point) at local level with dedicated skills and information material.

Another general starting point is to create a widespread system in the regional context and to promote this type of initiative that can be supported by local advisory structures.



# Sweden



## Results

The information brochure has been very successfully and it's still published in several websites. The Public Housing Companies have received a good adapted tool to disseminate to their customers, the tenants. The energy and climate advisors have received material that gives them a more broadened toolbox and they can thereby give better advisory service to all citizens.

The different groups of immigrant have expressed gratitude towards the brochure and the fact that they have the possibility to obtain the same information as their neighbours.

In Sweden it's not possible to obtain information of someone's nationality one can't keep that kind of records. Therefore the Public Housing Companies as well as energy and climate advisors cannot without good local knowledge send or hand out information in other languages than Swedish. The brochure in foreign languages have there for been disseminated at different events and published at several websites.

## How to replicate it

The concept to make the brochure in several languages can easily be used in other regions or countries. To provide Public housing companies, energy and climate advisors etc with material especially designed for a significant target group is a good way of creating good advisory services.

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## 2. Energy and Climate advisory network

In all municipalities in Sweden you'll find energy and climate advisors. They will answer the citizen's questions free of charge on heating systems, district heating, biofuels, energy costs, government grants in the field of energy and a great deal more. The advisors are financed by the Swedish Energy Agency by a Government grant.

In the south east region of Sweden (Kalmar, Kronoberg and Blekinge) the energy and climate advisors are organized by a network arranged by the Energy Agency for Southeast Sweden (ESS). Within the network experiences, information and inspiration be transmitted among the participants.

### Partners

Swedish Energy Agency, Energy Agency for Southeast Sweden and the municipalities in the region.

### Description of the good practice

How do one reach out with the information about Energy and Climate advisory services to the citizens so that all use the services? How can one make sure that all citizens get equal information? The purpose of the network is to keep the quality of the EE-information at the same levels in all municipalities. This is obtained by seminars, trainings, newsletters etc all arranged by ESS.



Picture 13

## Results

The energy and climate advisors network has strengthened the cooperation between the civil servants, if you no someone's face it easier to pick up the phone and give a call if you need help or advise. The seminars and trainings have increased the competence among the participants. It has been easier to carry out events and campaigns together. When to educate people it's important to reiterate the same message over and over, when you work together you can spread your message in more media by divide the costs for different channel among the municipalities, e.g. one municipality make a radio spot and another a newspaper ad.

It is though crucial that the coordinator has time and financial resources to run the network.

## How to replicate it

The concept to create networks for Energy and Climate advisory is already spread all over Sweden with very good results. A first step is to analyze the structure for energy and climate advisory and give someone (person, organization) the responsibility to create a system for exchanging experience by email or a virtual collaboration space.

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### 3. X-mobile, EDU-people

ESS is working with to school project that's connected to one another.

**EDU people** is a project that focuses on how to exchange knowledge. The project involves Experimentlabbet and the Polish Experyment science center, located in Gdynia. Together they have an exchange with 16 educators each where the objective is to produce a number of tools to spread knowledge between professionals.

**X-mobile** is about developing a mobile exhibition program focusing on the energy and climate. The project is addressed primarily to teachers and pupils in county side schools. The travelling exhibition will offer training and e-learning with the EDU-people method.

#### Partners

Edu people is a project within the South Baltic program and involves the two science centers Experimentlabbet and Experyment. The X-mobileproject is supported by the Swedish Energy Agency and The Regional Council in Kalmar and Stenungssund County. The project accomplished by XL together with Molekyverkstaden, a Science centre in Stenungssunds.



Picture 14



## Description of the good practice

The education of the teachers is divided into different parts. The first step is about analyzing and studying the policies, laws and other important documents there are to set the rules for the schools plan of action. Step two provides the teachers with information about the fundamental laws of energy, to make sure that teachers have the same knowledge and understanding. Step three is about letting the teachers try methods, experiments, training materials and so on in order to find out what they can use, how to use it and in which courses. This makes the teachers confident in their role and they can easily adopt the new knowledge and can start teaching about EE.



Picture 15



## Results

The result from the work in EDU-people combined with X-mobile is very good. The method that's used in both of the project is to educate and train the teachers and give them a good toolbox to use in the classrooms. For the teachers to understand the topics, to receive good material and to have tried the different experiments themselves gives them the right tools to make EE education to an exciting subject. Learning by doing both for the teachers as for the pupils is essential to succeed.

## How to replicate it

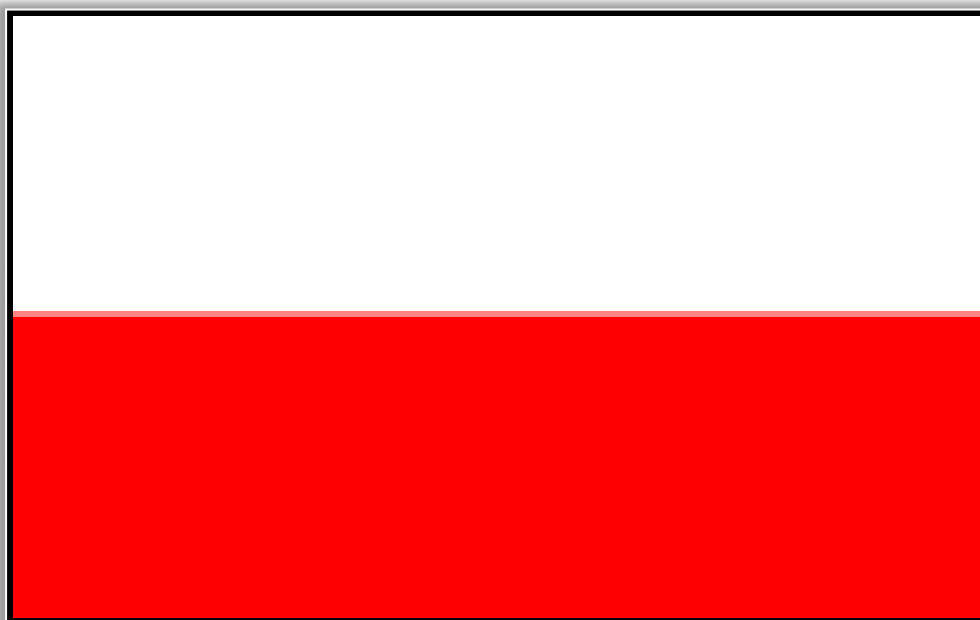
The concept to train the teachers (or others actors that work in similar ways) by giving them practical knowledge can be used in many different projects. Instead of just producing brochures and leaflets you combined them with experiments that show the teachers and the pupils what it is all about. And when they see, hear and do they can learn for life.

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# Poland

# 1. System of ecological education in Bielawa

## Context and objectives

In the region of Bielawa Municipality special attention is paid to ecological education starting from kindergartens and finishing on the post-graduate education. In association with these matters there are many organisations which are ecologically oriented: Ecological Kindergarten, Ecological Primary School, Ecological Lower Secondary School, the Centre of Renewable Sources of Energy (Secondary School) and the Department of Wrocław Polytechnics.

## Partners

Local schools and educational institutions, German Foundation of Environmental Protection (DBU), the Centre of Renewable Sources of Energy, twinning towns and cities: Lingen (Germany), Hronov (Czech Republic), Kostelec (Czech Republic), East Staffordshire (the UK), Chatham-Kent (Canada), Department of Wrocław Polytechnics

## Description of the good practice

1999 – Transformation of a Public Kindergarten No 1 into an Eco-friendly Kindergarten in cooperation between Bielawa and its partner the City of Lingen, German Environmental Foundation DBU and IGU, an international association for environmental education.

2001 – The Creation of the “Sun School, first in Poland and Central Eastern Europe. This innovative educational post opened in a School Complex.

2002 – The “Sun School” was transformed into a Centre for Renewable Energy Sources.

2006 – Primary School No.7 and Middle School No.3 were transformed into environmental posts.

2006 – A project entitled “Environmental development of the Holiday Centre Sudety was realized.



Picture 16



Picture 17

2009 – Regional Branch of the Wrocław University of Technology was opened in Bielawa. The Branch is training renewable energy specialists.  
2010 – Opening of the Forest School – educational post which enables the youngest citizens of Bielawa to learn about the natural environment and ecology in an innovative way. The school under the patronage of the Representation of the European Commission in Poland was created with the help of the German Environmental Foundation DBU.



Picture 18

At present the Bielawa Municipality makes efforts to adapt the historical pump station for an Interactive Centre of Respect for Energy and construction of a city biomass boiler room.

## Results

- Development of knowledge and ecological awareness among children and the youths, as well as among other inhabitants of the town
- Increasing of Municipality attraction thanks to the extension of offer in the aspect of education and tourism
- Creation of institutional base to gain external financial support for investments and environment-friendly activities
- Possibility of participation in competitions and environment-friendly events and activities on the local and over-regional level
- Municipality promotion by the municipality representatives taking part in conferences (also abroad) as speakers.

## How to replicate it ?

- To establish cooperation among institutions/associations engaged in ecological activities
- To extend the scope of activity of educational institutions and to pay attention to essential educational base for these institutions
- Activities related to creation of full educational system should start from educational institution in which implementation of changes is on the highest level
- To participate in competitions and environmental-friendly events and activities starting from local level and go to the further level

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## 2. Collection of expired medicines in Bielawa

### Context and objectives

In the municipality of Bielawa adopted the principle that all expired medicines residents should dispose of purpose-designed containers placed in pharmacies located in the city. Containers placed in pharmacies are emptied every 3 months or according to the needs of the telephone notification. After collecting a certain amount of waste by a specialized company, they are transferred to disposal. This method of collection of drugs was positively evaluated by the state district sanitary inspector. About the possibility of getting rid of outdated, unwanted medications city residents are informed regularly through local newspapers and television.

### Partners

Local pharmacy shops, local press and media, inhabitants.

### Description of the good practice

Discussions with the owners of pharmacies on the possibility of setting containers for expired medicines in pharmacies. Then introduced the Rules of maintaining order and cleanliness in the municipality in terms of disposal of expired medicines by the inhabitants. The next step was the purchase of containers to collect expired medicines. Contracts with the pharmacy shops owners were settled in order to set gratis containers in the public parts for the customers. Cooperation was established with the



Picture 19



Picture 20

company which collects the expired medications from pharmacies and keeps them until their transfer to disposal. The municipality signed a contract with a company that recycles expired medicines.



Picture 21

## Results

- To raise awareness among the inhabitants in the aspect of the environment protection.
- Less amount of waste materials (including hazardous ones) goes to landfill (improvement of the quality of the environment).

## How to replicate it ?

- Systematically inform and remind the inhabitants about the possibility of throwing the expired medicines to the containers
- containers can be settled at health centres in cooperation with the health centres' owners.

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### 3. The introduction of the obligation to clean up impurity caused by

#### Context and objectives

To the Rules on maintaining order and cleanliness in the municipality introduced elements requiring dog owners to remove and dispose impurities caused by dogs. According to the resolution impurities caused by dogs should be placed in baskets or containers for non-segregated municipal wastes. This method has positively been accepted by the sanitary inspector of the District. Execution of this obligation is carried out by the Municipal Police. While patrolling town, the officers give fines to those who do not clean up after their dogs. The Town Hall, veterinarians and municipal police give special hygiene kits to the dogs' owners and keep records on the kits that have been given. The kits are available at the Town Hall, the Municipal Police, the Treatment Plant and all veterinary clinics operating in the city.

#### Partners

The Municipal Police, the Treatment Plant. Local Press and Media, veterinarians

#### Description of the good practice

- Dog hygienic kits were purchased which consist of a shovel and a bag. The sets of standard packages - containing 10 bags and 10 shovels distributed for free to the owners of dogs.
- The boards with information "Clean up after your dog" are installed on the Municipality area. The inhabitants can come and show the other places where the boards should be installed Information about this action was given through local newspapers and television, leaflets and posters and introduced by the Mayor during a radio interviews.



Picture 22



Picture 23

- A letter has been sent to the Municipal Police Commander with information for animal owners about the need to meet their obligations concerning the above mentioned local law. Municipal Police didn't give any fines to dog owners for the first 6 months since the regulation was introduced. During the 6-month period the owners were informed about the obligation of cleaning after the dogs. Cleaning up sets have been given to the owners.



Picture 24

## Results

- Raising awareness among the town residents in the aspect of taking care of the neighbourhood
- Reduction of the amount of pollutants in green areas, improvement of sanitary conditions.

## How to replicate it ?

- To remind cyclically in the media about the obligation of cleaning up after the dogs

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