EnercitEE

Improving energy efficiency – contributions from five European regions

INTERREG IVC
INNOVATION & ENVIRONMENT
REGIONS OF EUROPE SHARING SOLUTIONS

European Union
European Regional Development Fund

STAATSMINISTERIUM FÜR UMWELT UND LANDWIRTSCHAFT

Freistaat SACHSEN

EnercitEE: European networks, experience and recommendations helping cities and citizens to become Energy Efficient

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Preface

Over recent years it has become clear to us that energy efficiency is both the biggest challenge facing the European Union and, at the same time, the biggest opportunity.

The newly adopted energy efficiency directive (2012/27/EU) highlights the importance of energy efficiency in reaching the Union's 2020 targets. The directive commits member states to, among other things, defining national energy efficiency targets (art. 3), achieving yearly energy savings of 1.5 % of the annual energy sales through the energy efficiency obligation scheme (art. 7), and providing a long-term strategy for the building sector aiming at a 3 % refurbishment rate for public buildings (art. 4 + 5).

In order to reach the Union's energy efficiency objectives, **EnercitEE** focused on five regions: Saxony, Southeast Sweden, Haute-Savoie, Emilia-Romagna and Lower Silesia. With an emphasis on **E**uropean **n**etworks, their **e**xperience and **r**ecommendations, all partners involved helped **cit**ies and **cit**izens to become more **E**nergy **E**fficient (see chapter 2).

The exchange of experience has been an essential part of the programme (see chapter 3). All partner regions have different policies, programmes of action, experiences and knowledge in the fields of climate protection, energy efficiency and sustainable transport. Interregional symposia, training sessions, study visits, a policy advice seminar and a policy maker exchange offered the possibility to discuss and compile political approaches, policy instruments, and examples of good practice and case studies from five **EnercitEE** regions. Partners jointly developed practical guidelines and policy recommendations. Learning from each other helped the partners to further develop their own energy efficiency policies at both the local and regional level (see "House of **EnercitEE**", chapter 1).

The eleven subprojects of **EnercitEE** played an important role in increasing energy efficiency at the local level, both through policy making and small-scale pilot implementations (see chapter 4). Six of the projects focused on energy efficient citizens, five on energy efficient local authorities. Through exchanging their experiences all subproject participants helped to identify good practices, made these available, and developed and tested tools that contribute to energy efficiency policies. Four thematic blocks have been covered:

1) **Education & communication:**
   ActEE, SCC, E-FoxES and LEEAN
2) **Training & advice:**
   EEMTE, PraTLA
3) **Local climate protection:**
   CLIPART, SustraMM
4) **Finances & incentives for energy efficient buildings:**
   FIPREC, GRACE, RIEEB.

On the one hand, real energy savings could be achieved through the implementation of these subprojects, at the same time raising awareness in the two main target groups. On the other hand, these projects account for changes made at the local level, influencing local energy efficiency policies and maximising the effects of regional policies. The reader of this handbook is encouraged to proof the subprojects for suitability in his or her region and is very welcome to make use of the ideas presented (see also chapter 5 for an overview of the overall results achieved).

We, the EnercitEE partners, set our sights on preparing regions and cities to comply with future energy efficiency requirements, as well as on understanding other regional and local approaches within Europe, exchanging experiences and, in the end, helping build a joint European energy market. We are happy to share our experiences with you, and invite you to get inspiration from the approaches, methods and tools presented.

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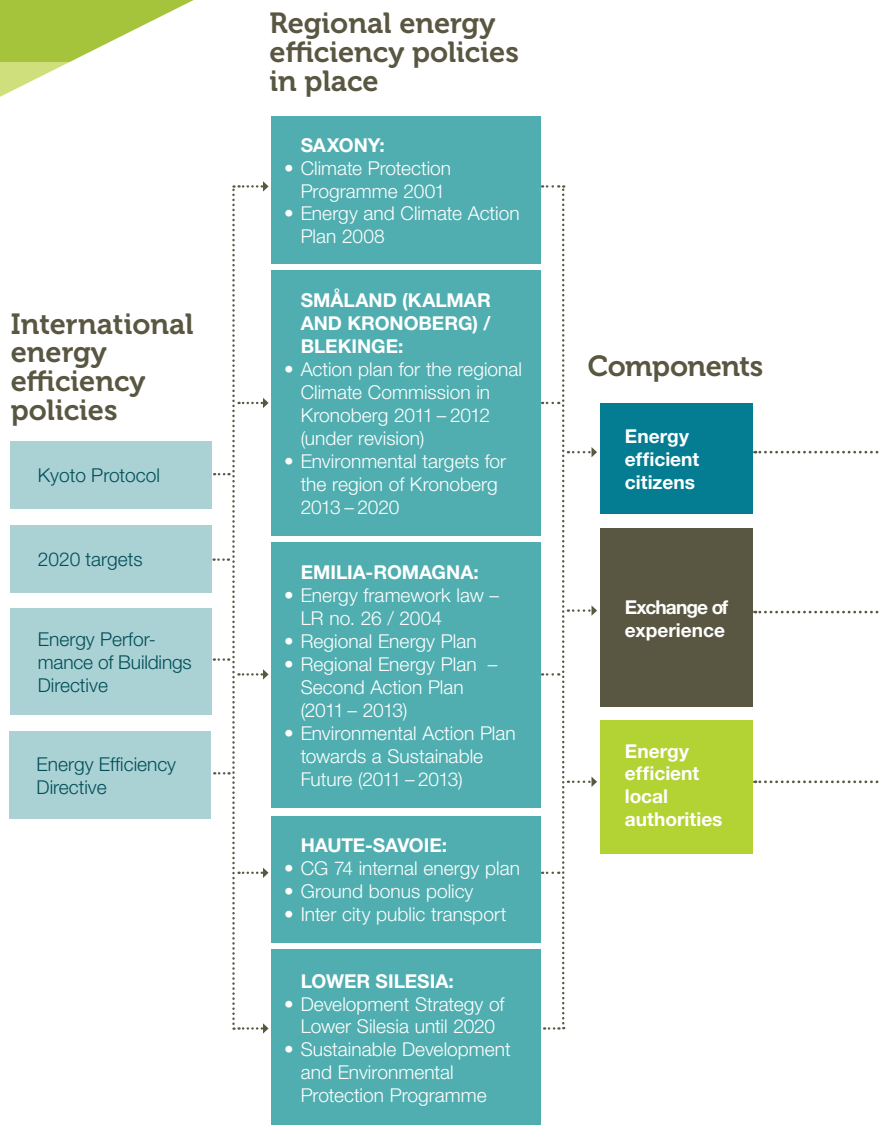
House of EnercitEE



Subprojects	Main Results
LEEAN Local Energy Efficiency Advice and Networks	• Joint policy paper • Best practice catalogue • 2 guidebooks for builders • Info kits for tenants • Colouring book for children • 35 regional training sessions/ workshops organised
E-FoxES Energy saving Foxes in European Schools	• Reports on regional starting conditions • Common conception for energy saving contests in schools • Implementation of 3 contests in 3 European regions • Curriculum for teacher trainings • European award for the best pupil's project • 19 training sessions organised
SCC The Sustainable Climate Challenge	• SCC good practice list • Guideline of the project on behavioural change – how and what to do • Over 2,000 citizens challenged, over 500,000 kWh/a and 150,000 kg CO_2 saved • Energy efficient local actors yellow book • 3 energy saving school competitions
ActEE Actions and communication tools about Energy Efficiency	• Communication tools dealing with energy efficiency (energy games, educations campaigns, energy evaluations) • Good practice database • Eco guide for mountain resorts • Eco guide for mountain gear • "Consumabile game" – helps to educate children about sustainable consumption
GRACE GRAnts and other incentives for Cost and Energy efficiency	• Overview of available incentives and grant programmes supporting the EU 2020 strategy • Analysis of 3 funding programmes per region • Policy recommendations to improve existing and new funding programmes
SustraMM Sustainable transports for Managing Mobility	• 12 good practice examples on mobility management • 4 guidelines and recommendations on mobility management • Over 12,000 people reached through actions and campaigns • 150 trained city officials/city administrators
Component seminars and training sessions: • Energy efficient heat / power generation and distribution • Communication and motivation • Energy efficient buildings and innovation • Mayors in Växjö: Learning from the best • Policy advice seminar Wrocław: Instruments and policies for local and regional energy planning and implementation	
EEMTE Energy Efficiency in Municipalities – Training and Exchange of experience	• 4 energy efficiency training concepts for public institutions • 30 training sessions / workshops to improve energy efficiency in municipalities • User's manual passive house • Joint evaluation manual of training concepts
FIPREC Financing Instruments by Potential and Requirements of Energy saving Contracting	• Workshops and training courses for local authorities, planners, architects to increase the knowledge of financial models • Guidelines for local political authorities • Provision of financial instruments tailored to the needs of local authorities to implement measures in the energy sector • Public presentation of several best practice energy performance contracting (ESC) projects in the partner regions
RIEEB Regional Impact with Energy Efficient Buildings	• External experts reviewed the national regulations on energy efficiency of buildings in more than 30 buildings • 30 training sessions and workshops organised • Joint publication: "Energy Performance of Buildings Directive (EPBD) – Implementation in Germany, Sweden, Poland and France" • 2 plausibility tools for national authorities
CLIPART CLImatic Planning And Reviewing Tools for regions and local authorities	• "Initial Clipart Report" (ICR) and wiki on climatic planning and initiatives – more than 50 projects and good practices from 5 European regions • Clipart handbook: Climate change planning for regional and local authorities • Energy- and CO_2 – balancing for Saxon municipalities
PraTLA Practical Trainings in Local Authorities	• Joint publication: "Contributions of students of four European countries to boost Energy Efficiency in communities" • 70 students completed practical trainings in 58 local authorities

Adapted & new local & regional energy efficiency policy directly or indirectly influenced by EnercitEE

Saxony:
- Saxon Energy and Climate Programme

Småland (Kalmar and Kronoberg) / Blekinge:
- Energy Plan of Växjö
- Regional Climate Commission Plan

Emilia-Romagna:
- Regional Energy Plan – Second Action Plan (2011 – 2013)

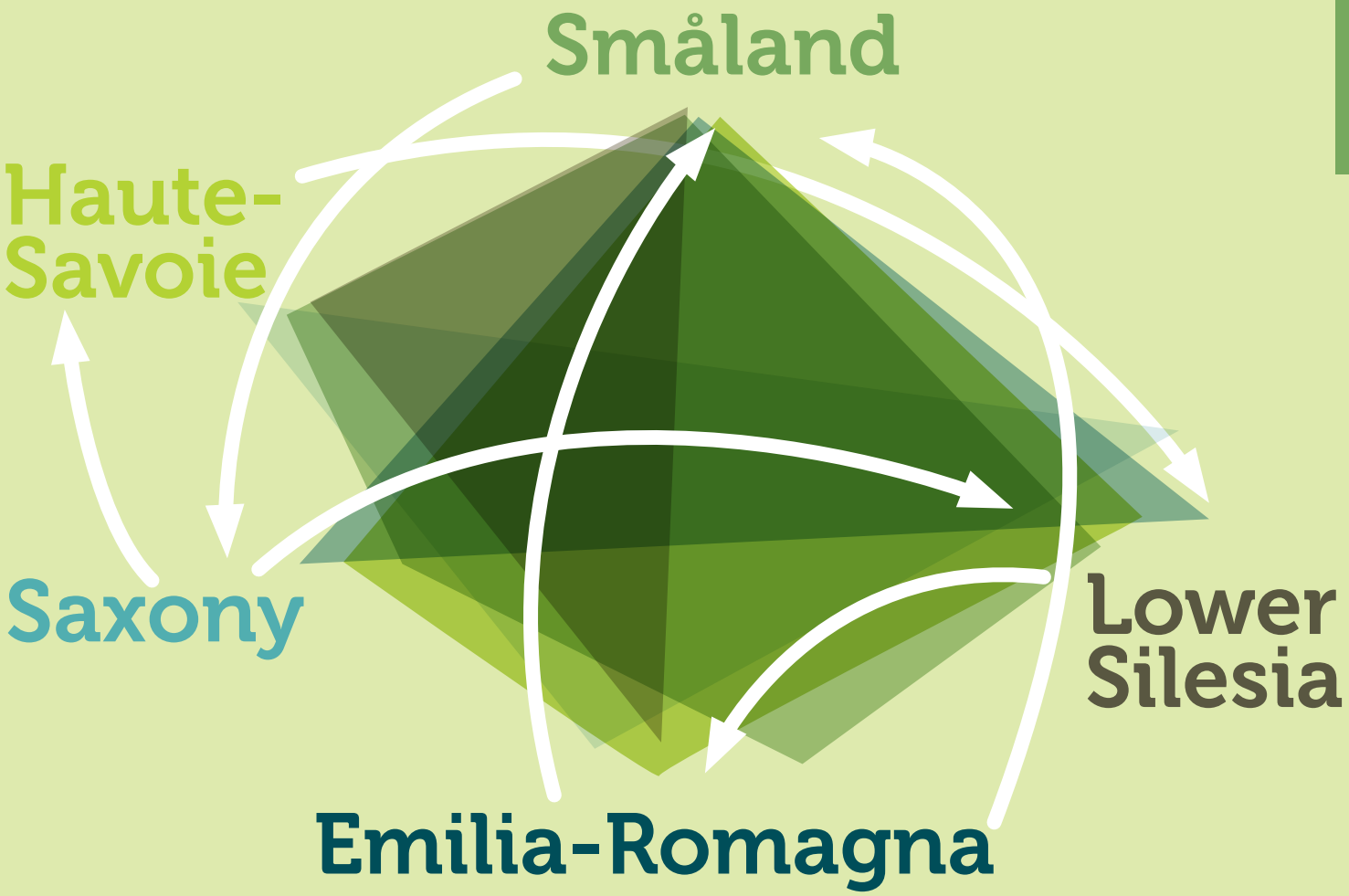
Haute-Savoie:
- Regional Energy Climate Plan
- Atmosphere Protection Plan

Lower Silesia:
- Development Strategy of Lower Silesia until 2020 – update

Future

Strategies and policies to improve energy efficiency in each region

Overview:
What inspires regions to advocate energy efficiency?



Saxony, Småland, Emilia-Romagna, Haute-Savoie and Lower Silesia – all these regions have been working closely together on the improvement and implementation of energy efficiency policies. Within the framework of **EnercitEE**, the regions opted for a common approach, exchanging ideas on energy efficiency, instruments and best practices, giving advice and strengthening the energy efficient behaviour of citizens and local authorities. What was their motivation to advocate energy efficiency? Here, representatives of the regions explain it to you, hoping that their motivation will inspire you.

Saxony

Frank Kupfer
Saxon State Minister of the Environment and Agriculture

Energy efficiency is a cornerstone of a successful and sustainable energy and climate policy. This is particularly true in Germany, where the energy transition project (*Energiewende*) calls for serious efforts to be made to reduce energy consumption and CO_2 emissions. With a principle of "think globally – act locally", municipalities and citizens are challenged to make their own contribution and strive towards greater energy efficiency. However, debates on energy policy are often restricted to the national level, even though innovative solutions for the long-term challenges of climate change and sustainable energy can often be found by looking outside the scope of the activity under consideration.

For this reason, Saxony decided to take the lead in the INTERREG IVC mini-programme **EnercitEE**. The aim of the project was to exchange and further develop new proposals and strategies dedicated to increasing energy efficiency through interregional experience and pilot implementation of exemplary instruments. In the fields of energy efficient buildings, sustainable mobility and conceptual measures for municipalities in particular, there was potential for development that should be exploited. In addition, Saxony expected to increase energy efficiency through communication and information, and thereby also the acceptance of corresponding measures by citizens, municipal staff and other stakeholders.

Results and experiences from **EnercitEE** were integrated into Saxony´s first combined Energy and Climate Programme (2012) – which was adopted in March 2013 – and thus will further contribute to the European energy efficiency targets.

Småland

Gunnar Nordmark
Chairman of the Regional Council of Southern Småland | Chairman of the Regional Climate Committee

Think global – act local
The climate is changing. Almost every day we get new reports from scientists and the media telling us that the temperature of the globe is rising. The question is not whether it is happening, but how much the temperature will rise during this century. The consequences for mankind will be terrifying if we are not able to stop climate change. It is time to think global and act local.

The regional council of Southern Småland and its Climate Commission are aiming to be the greenest region in Europe – not to compete for a title but to contribute to a sustainable future, not only for our small part of the world but for the entire planet. One single small European region cannot do everything, but if we work together, we can make a difference.

That is why we, through Energikontor Sydost, are participating in **EnercitEE**. In the county of Kronoberg, regional authorities and municipalities have agreed, among other things, to focus on energy efficiency and sustainable transport. Giving local authorities and their citizens the opportunity to make climate smart choices for the future is a key aim. In support of these efforts, our participation in **EnercitEE** has given us new knowledge, shown us good examples of best practice and is an inspiration in policymaking. **EnercitEE** has also been helpful in establishing contacts useful for the future and in being part of creating a sustainable and climate smart Europe.

Emilia-Romagna

Gian Carlo Muzzarelli
Councillor for Economy, Energy Planning and Sustainable Development, Green Economy and Buildings

On 14 November 2007, the Emilia-Romagna Legislative Assembly approved the Regional Energy Plan (REP). This plan represents a strategic instrument to rule and address the synergies between energy, economy and environment.

Energy efficiency and energy saving are our first choice and our first investment, while citizens and local bodies represent the main stakeholders. Starting from these considerations,

the region of Emilia-Romagna has found a perfect synergy between its Regional Energy Plan and the **EnercitEE** project, which represents an extraordinary instrument for sharing experiences and examples of best practice, allowing us to enhance our policies and stimulate change and creativity.

Collective purchasing groups for energy efficient building retrofits, low-cost communication instruments to disseminate energy-saving behaviours, mitigation and adaptation policies; these are just some of the most interesting **EnercitEE** themes that could have a significant impact on the energy plan and on the future of the region.

The REP objectives and the expectations that we have on **EnercitEE** results are very ambitious. We owe this to our sons, to our grandsons and to future generations. But we owe this also to ourselves: to support the economic upturn on a newer and more solid basis, to be more competitive and attractive, to respect our tradition, to be a dynamic and cutting edge region, and to match up to our own ambitions.

Haute-Savoie

Pascal Bel
General Councillor of Haute-Savoie

One of the main drivers of development in society is energy. The use of coal and oil has helped to produce, transport, build and consume beyond measure. Today, the shortage of energy resources is leading us to rethink our development model, which is very difficult. However, thinking of new ways of using energy is more accessible:

- Reduce our needs (lower heating to 20°C instead of 22°C, for example)
- Improve energy efficiency (e.g. high performance buildings)
- Develop renewable energy (biomass, solar thermal and photovoltaic, for example).

Time is running out to make the transition to a low carbon society. **EnercitEE** is an opportunity to synthesise and share experiences and know-how developed by different European regions in terms of energy efficiency. This mini-programme, which draws together the strategic functions of five European regions to innovate on the topic, has allowed ambitious collective experiments. I am sure the partners will know how to take advantage of the experience in their regions in order to achieve the European targets for reducing consumption. The advantages of such an approach will benefit all.

Lower Silesia

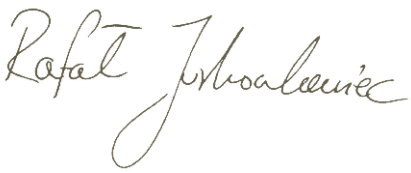
Rafał Jurkowlaniec
Marshal of Lower Silesia

Efficient use of resources and environmental protection are two of the main objectives of the Development Strategy of Lower Silesia until 2020. Priority actions include introducing energy efficient solutions, supporting a climate smart economy and increasing the share of renewable resources in energy production.

For our regional authority it is also essential that these goals are achieved through interregional and cross-border cooperation. INTERREG IVC's **EnercitEE** project is the ideal way to put this into action, as it promotes exchange of information and sharing of experience between the project partners.

The most important aspect during the project implementation was the opportunity to involve local communities and institutions from Lower Silesia in developing activities in close cooperation. Overall, seven Lower Silesian institutions participated in subprojects carried out under **EnercitEE**. I would like to congratulate them on behalf of the regional authority. It is through these efforts of local authorities and institutions that the region of Lower Silesia is becoming more and more energy efficient.

In thanking all partners, institutions and organisations involved in the development and implementation of **EnercitEE** for their current cooperation, I wish to take this opportunity to encourage them to keep developing other interesting ideas for activities to support energy efficiency in the European Union.



Saxony, Germany

EnercitEE created real added value in terms of energy efficiency and climate protection in Saxony. It was possible to initiate many processes and concrete measures on a regional as well as on a local level. Activities carried out and results achieved in the region contributed to the development of Saxony´s first combined Energy and Climate Programme. Through the interregional exchange, as a core element of INTERREG IVC, many examples of good practice have been exchanged between the regions. Valuable impetus for future climate and energy policies was given by information and knowledge transfer and by the further development of strategies in many fields of activity.

In Saxony, subprojects achieved excellent results in four thematic priorities. The first priority to mention is in the field of energy efficient buildings. The subproject RIEEB elaborated a possible course of action to optimise the implementation of the European Energy Performance of Buildings Directive (EPBD) in Saxony (see box on p. 13). The subproject LEEAN dealt with communication and information and developed a comprehensive manual for builders focusing on energy efficient refurbishment and construction. The manual can be adapted to local or regional characteristics. Finally, EEMTE was dedicated to the topics of user acceptance and behaviour in energy efficient buildings (passive

Policy recommendation

Shape sustainable local politics – involve citizens
Climate and energy policy often deals with the competing interests of different stakeholders. Its long lasting effect is closely linked to its acceptance by citizens. Therefore it is crucial to shape the planning process for climate protection measures in a transparent way right from the start. Early information and involvement of citizens during the course of implementation increase the chances of successfully finalising the measures or projects. Furthermore, knowledge of public opinion gives policy makers a sound basis for making the required decisions.

The key to an ongoing and successful energy and climate policy in a municipality is an interested and committed citizenship that – in the majority – understands and supports the necessity and reasonability of climate protection measures.


Florence on the Elbe

EnercitEE mid-term event “Energy-efficient Saxony” on 27 February 2012

> Participating in SustraMM enabled us to strengthen the topics of sustainable transport and mobility management in our city significantly. The success of the project became evident through the decision of the city council to include the item City Bus in the budget for 2013 /14 – a commitment on the part of policy makers to continuing the project. This success is also due to strong interest among the citizens in Pirna. Without **EnercitEE** we wouldn´t have got this far.

Matthias Richter, *Head of Urban Rehabilitation Department, City of Pirna*

Policy example

The European Energy Performance of Buildings Directive (EPBD) is implemented at the national level in Germany by the Energy Savings Regulation (EnEV). However, implementation revealed some issues in construction practice. The subproject RIEEB was developed to analyse compliance with requirements of the EnEV during the planning and construction process of a building on the one hand, and to support its enforcement by the building authorities in Saxony on the other. The results of the survey helped to identify the need for action and to prepare the next steps towards an optimised implementation of the EnEV in Saxony.

houses) by conducting training courses for communal staff and developing a passive house user manual.
Incentives and financing programmes for energy efficiency measures in municipal properties and for private builders were a second main topic. The subprojects GRACE and FIPREC analysed such programmes, carried out thematic workshops and set up recommendations for further programme development.

Third, measures for awareness raising and behavioural change among school pupils, who hold a key role as multipliers in their families, were tested and enhanced by the subprojects SCC and E-FoxES. These strengthened and perpetuated, on a regional level, the intensive consideration by students of climate protection and sustainable energy issues in schools.

Considerable progress was also achieved in the area of conceptual and planning measures for the municipal administration – the fourth main priority. In SustraMM, the city of Pirna developed a concept for sustainable mobility management for its administration. The subproject CLIPART assisted Saxon municipalities in setting up a local energy and CO_2 budget and also set up a guide for data collection. Finally, the administrations of several municipalities were supported by engineering students in further developing communal energy and climate protection policies within the scope of practical training (PraTLA).

As a driving force to increase energy efficiency by municipalities and citizens, the advice and information service provided by the Saxon Energy Agency SAENA at the regional level was optimised and intensified by **EnercitEE**. Activities of subprojects were actively accompanied and supported by the Saxon State Ministry for the Environment and Agriculture, with the aim of achieving valuable results that may be considered during political decision processes at the regional level.

It became obvious that European legal requirements are sometimes implemented in a different way in the regions. However, certain key aspects are definitely comparable and thus transferable from one region into another.

Småland, Sweden

EnercitEE is mainly about exchange of experience and learning from each other. At the policy exchange seminars and in the subprojects, we saw many good examples of what works and came across new ideas for regional and local policies. For example, a new policy for climate change adaptation has been developed as part of the CLIPART project. We will distribute the handbook developed for local authorities to all cities in this region to support them in their climate protection work. On a local level, the city of Växjö has decided on a new energy plan with input from **EnercitEE**.

The **EnercitEE** project has also been very useful for developing new projects. Ideas have come from other regions and new ideas have emerged over the course of the project. One idea is to have a joint delivery system of goods to municipal units for several municipalities at the same time. This saves kilometres and reduces CO_2 emissions.

Better understanding of other regions

With the **EnercitEE** project, we have got a better understanding of the situation in other regions and the obstacles that they face. Sometimes people from our region tend to just ask: "Why don't you do it the way we do? We have over 60 % energy from renewables." The answer of course is obvious: because the prerequisites are very different. Sweden has a national economic framework that promotes renewables and energy efficiency by way of an energy tax, a CO_2 tax and a national building code that has been in operation for a long time, and moreover, renewables are available locally.

However, we have also noticed that while the other **EnercitEE** regions and countries are advancing their energy efficiency work, Sweden is lagging behind and is now only barely fulfilling the EU directives instead of leading the way. The Swedish government is even trying to find a way to stop local authorities from having more stringent energy performance regulations for new buildings than those set down nationally.

Structural funds

The **EnercitEE** project has also given us a much better understanding of the implementation of the EU directives in different regions. We realised that the structural funds, which are not being used at all for energy efficiency in Småland, are the main source of funding for other regions' energy efficiency efforts. We realised how important it is for regional politicians to see that the regional funds can be used to reach regional energy efficiency targets. Influencing the expenditure of regional funds for the period 2014 – 2020 will become a main focus for regional work in 2013.

Policy recommendation

Local and regional level:

- Do it right from the start, it is much more costly to fix things afterwards.
- Strive for political consensus – a consistent and coherent policy is much more efficient.

National level and EU:

- Stop subsidies for fossil fuels, it undermines both investments in energy efficiency and renewables.

Swedish wooden house

Seeing is believing

Southern Småland hosted a study visit and a policy exchange seminar in order to share how energy policy can be implemented through real projects, for example district cooling from biomass, wooden energy efficient eight-storey houses and bicycle-friendly measures. Around 30 mayors from the **EnercitEE** regions came to Växjö to see the projects and to listen to the Mayor Bo Frank. Many were surprised to hear a conservative mayor promote far reaching goals and radical measures. Mayor Frank wanted the European Commission to subscribe to the CO_2 tax.

> Economy and ecology are just two sides of the same coin. Wasting energy is very costly both in terms of economy and ecology, and this is clearly shown by the **EnercitEE** project and its subprojects.

Bo Frank, *Mayor of Växjö*

About 30 mayors from the **EnercitEE** regions visit Växjö's energy efficient wooden houses

Policy example

The Climate Commission in Southern Småland, consisting of representatives from industry, university and the regional council, is developing a new action plan with inspiration from **EnercitEE**. As a direct result of the **EnercitEE** project, there will be a focus on influencing the structural funds so that they can be used to implement the regional energy efficiency policy.

Emilia-Romagna, Italy

In 2007, the region of Emilia-Romagna set up its Regional Energy Plan (REP) and the related three-year action plans. The second action plan (2011 – 2013) is currently being implemented. It is an operative instrument which specifically addresses actions in the fields of energy and environment in the region.

EnercitEE significantly helped the region to further develop and implement its energy plan. **EnercitEE** contributed in particular to two energy policy areas of the Regional Energy Plan: 1) Energy efficient buildings (axis 4) and 2) Local energy planning, information and communication (axis 7).

Energy efficient buildings

Considering the reduced growth prospects for the building industry (new buildings represent a share of less than 1 % of the entire building stock), the main challenge concerns the existing building stock. In Emilia-Romagna, this stock is composed of approximately one million buildings, with a total assessable surface area of over 300 million m² in buildings with high energy consumption of around 170 – 180 kWh/m²/a, resulting in a final consumption of approximately 50,000 MWh/a. The new triennial plan for the region of Emilia-Romagna pursues the goal of reducing energy consumption by 12,800 MWh by 2020 through actions targeted at existing buildings. One of the main policies of this axis focuses on facilitating the energy efficient retrofitting of buildings, both in the residential and the public sector.

In the latter sector, **EnercitEE's** subproject FIPREC developed a model contract as well as technical conditions for energy saving interventions in public buildings which can be easily implemented and carried out by local authorities. Thus, local authorities will be able to implement tangible energy efficiency and resource saving actions in the public sector. Important experiences and examples in terms of how to facilitate the implementation of building retrofitting in the residential sector were provided by SCC and GRACE. SCC, on the one hand, created a citizens' collective purchasing group promoting the installation of external thermal insulation and photovoltaic panels.

GRACE on the other hand focused on the policy aspect by analysing and assessing existing programmes of incentives and grants for energy efficiency at the local and regional level. In particular, GRACE elaborated suggestions and recommendations on how to further develop existing programmes or how to establish new funding schemes for energy efficiency measures.

Local energy planning, information and communication

EnercitEE has been appointed by the REP as the main strategic regional project for communication and information with the action of identifying and disseminating good practice on energy efficiency. Thanks to LEEAN, the first steps towards the creation of a regional energy network have been made. More than 80 organisations have been linked, which will facilitate the region in disseminating information on energy efficiency policies and sharing technical content.

At the regional policy level, important contributions have been made in the field of changing citizens' behaviour and con-

Mayors from Emilia-Romagna participating in the study trip to Växjö.

Policy example

The EU's white paper *Adapting to climate change: Towards a European framework for action* is encouraging the further development of national and regional adaptation strategies with a view to considering mandatory adaptation strategies from 2012. At the national level, the National Adaptation Strategy is still under preparation and will be finalised at the end of 2013, while at the regional and local level there is little experience and a lack of knowledge in terms of adaptation strategies and tools. CLIPART developed a practical tool in the form of a handbook that concisely describes climate change. It provides a number of supporting procedures and tools for local and regional administrators who wish to improve or introduce policies for mitigation (i.e. cutting greenhouse gas emissions) and adaptation (i.e. understanding and managing the impact of climate change on the environment and society). Thanks to this practical handbook, mayors and technicians are going to take into consideration adaptation strategies in the elaboration of their Sustainable Energy Action Plans (SEAP) at local level.

View of the city of Bologna, Emilia-Romagna.

sumption attitudes by ActEE, and in the field of local energy planning by CLIPART. ActEE developed an innovative and low-cost communication tool package that was adaptable for use at both the local and regional level and was suitable for local authorities as well as energy agencies. The suggestions and results achieved will make relevant contributions to designing the energy efficiency communication strategy of the region. CLIPART developed a practical tool (handbook) which describes a number of supporting procedures and tools for local/regional administrators who want to improve or introduce policies for mitigation (i. e. cutting greenhouse gas emissions), and adaptation (i. e. understanding and managing impacts of climate change on environment and society).

The Energy and Green Economy Department of Emilia-Romagna, together with ASTER who promoted, managed, facilitated and addressed the participation in **EnercitEE**, will use the achieved outcomes and good practices identified to improve the main regional energy policy tool (REP) and promote exchange at local, regional and interregional level. It is expected that the outcomes of **EnercitEE** will have a catalytic effect: through the improved and deepened knowledge in the matter of energy efficiency policies and tools, Emilia-Romagna and the other partner regions will not only better achieve their energy efficiency goals but also lead the process of changing the behaviour of citizens – the main way towards energy sustainability.

Policy recommendation

Communicate with citizens in order to implement local energy policies successfully

Energy savings, energy efficiency and waste minimisation are strictly linked to the citizen's behaviour; the potential of these savings is huge and has a long-term perspective.

Therefore, policies addressed to citizens should:

- Be more attractive. Communication should be simple, clear and effective; the direct advantages to the citizen have to be identified (e.g. cost reductions or a competition with prizes).
- Provide training and education as a basis for behavioural change (starting with education in schools and training employees).

Policy makers implementing policies on communication and information should take into account the following main aspects:

- Communication plan: clear identification of objectives, actions, means, costs, targets and implementation periods are key
- Governance: involve stakeholders, discuss and share objectives, avoid episodic on the spot initiatives, exchange results, promote successful initiatives
- Assessment: assess the impacts of an action in order to select and replicate successful initiatives and evaluate the effectiveness of communication actions.

> "The current incentive system allowed us to introduce renewable energy sources in our schools. However, it was not possible to reduce the annual energy demand and improve energy efficiency. The project FIPREC developed a model contract together with technical conditions that will enable us to improve energy efficiency in our public buildings. This financial tool has been developed to be transferable and I am confident that other mayors will follow our example and will use it to cut energy costs and realise investments without overloading the city budget."

Daniela Aureli, *Mayor, City of Castiglione dei Pepoli*

Haute-Savoie, France

The department of Haute-Savoie has a policy in place for reducing its greenhouse gas emissions. The policy's initial aims are to reduce the emissions produced by the institution (2,700 staff, 160 buildings, 700 vehicles) and as a result of local policies (construction and maintenance of roads, construction and maintenance of schools (50), school transport and social welfare). Following on from this pilot implementation within the local authority, the Climate Action Plan will become regional, which is to say that it will set its sights on reducing the emissions of the whole region.

EnercitEE subprojects provide an opportunity to test out actions that will produce results over the region. Dynamics were created in discussion with stakeholders on the issues, as a result of which future reduction targets are to be introduced. **EnercitEE** is embedded in the progressive development of the strategy to combat climate change and has provided a positive experience for the services of the General Council. Exchanges of experiences with other European partners have shown us different point of views that are useful in strengthening our own strategy.

The experience that was of the most value for the region of Haute-Savoie was that of Småland. The exemplary energy policy with which this region has been leading the way since the 1980s provided many important lessons which have had a strong influence on our strategy:

- Factors that helped to achieve continuity in the management of energy policy are to be highlighted. Meetings with the representatives involved in the design of these strategies were very interesting and gave a great deal of information to the French mayors who visited Växjö. This allowed us to say: energy autonomy is possible in a 21st century society!
- It is achievable partly through the implementation of effective and monitored technology solutions, such as district heating. This technology, highlighted by some groups in France, does not benefit from an advanced enough implementation in France to demonstrate all its positive aspects. The example of Växjö is, here again, a convincing demonstration.

Policy recommendation

Energy is used for a range of activities: heating, travelling, producing and transporting goods, construction, food – the list goes on. For each of these, improvements can be made to reduce energy consumption. The most logical way to achieve this is collectively to produce solutions for reduction, to record them in a common document and then to provide the necessary means to implement them. This is a necessary step, but it is not enough: in order to create meaningful change, this objective must first of all be shared with all the stakeholders of the society, who will then contribute to the collective discussion and implementation. The collective commitment requires that everyone understands the reasons for the choices to which we are committing ourselves. Then, we must stick to the aim, that is to say we must keep on with the efforts for the long term so that it continues despite any political or economic changes that might occur. It is in this sharing and continuity that the greatest difficulties lie. Therefore, energy efficiency policies require a strong political will and the majority to have a good understanding of the issues.

Vallée d'abondance – view of Sur Bayard, Haute-Savoie.

Policy example

The Departmental Plan for Energy conducted by the General Council of Haute-Savoie aims to make use of energy efficiency in the region. On the one hand, it includes requiring local stakeholders working in the field of energy to jointly identify their actions. On the other hand, it defines the action plan to be implemented to achieve the objectives of the group. **EnercitEE** enables the realisation of nine subprojects focusing on energy efficiency and the implementation of a policy that lacked concrete actions and forces. More than the number, it is the diversity of the actions, stakeholders and target audiences addressed by this programme that has boosted energy policy in the region. Some projects initiated by **EnercitEE** are still running, without financial European grants, because their outcomes help to consolidate local energy policy:

- Awareness raising among pupils, festival-goers, municipal agents, consumers, tourists etc.
- Training of technical staff in charge of event organisation and those in charge of fuel poverty
- Improved thermal performance knowledge among building professionals
- Data acquisition on greenhouse gas emissions
- Tests of innovative transportation solutions

Training session with Christophe Lastennet – external expert of the national energy agency ADEME

> It was a real satisfaction to participate in the **EnercitEE** study visit. The different testimonies on renovation, new buildings, and biomass district heating etc. are very important for the deliberations that are currently ongoing on the department of Haute-Savoie, more specifically in the Agglomeration Council of Annecy.
> Being able to talk about concrete examples that have proven to be efficient will allow me to push forward some energy transition projects and solutions in our region. Even though our governance methodologies are quite different from those in Sweden, we could soon be implementing similar actions here in Haute-Savoie.

Gilles François, *Mayor of Argonay, Vice president to the environment at the Annecy Agglomeration C2A*

Lower Silesia, Poland

By joining the **EnercitEE** partnership, the regional authority of Lower Silesia was provided with a powerful tool to support the development of wide-reaching energy efficiency actions in the region – both in terms of content and financially. Having had no comparable instrument in the past, we wanted to use it to achieve the best possible results, together with our project partners.

The idea of subprojects developed especially for municipalities and local institutions, so much inherently embedded in **EnercitEE**, was perfectly in line with our regional competences. The communities in Lower Silesia vary greatly in terms of their energy approach; while some are quite advanced and have already implemented steps to become more energy efficient, others might be lacking the necessary know-how, experience or funds. **EnercitEE** gave us the opportunity to support them all. As a result, the participants carried out many different activities, from offering paid internships for students, through analysing the quality of existing energy advisor networks, to inspecting municipal buildings in terms of their energy efficiency (energy certificates or characteristics). There is no doubt that, through **EnercitEE**, municipalities got useful help and data to discuss their local energy and environment protection plans in order to further improve and develop them.

The subprojects enabled us to accomplish one of our main policies – to inspire, motivate and guide local communities towards a more sustainable, climate smart and healthy life. This policy was further extended practically with the Policy Maker Exchange – an opportunity for the municipal leaders to visit Växjö, the "greenest city" in Europe, and meet their European counterparts. All in all, seven mayors joined the visit, but there were many more eager to go. This proves that local authority leaders fully understand that if they wish to be successful in increasing energy efficiency in their communities, it is essential to look around for inspiration and expertise, keep their mind open to new solutions and learn from the best. We hope that some of the ideas picked up in Växjö will motivate them to implement or transfer similar activities to Lower Silesia.

Working within interregional partnerships was another important factor for the regional managers, the subproject coordinators, and all the others involved in project activities at some point (energy experts, mayors etc.). The ability to learn from other regions' experiences, share ideas, discuss and debate, and possibly even present our own best practices as examples was just invaluable. Contacts and knowledge gained during this time will surely be of benefit in the future.

Also inspired by the project's principles, we decided to promote the idea of CO_2 emission reduction by encouraging municipalities to consider joining the Covenant of Mayors (CoM). For this purpose a representative of the European Commission was invited to our regional conference in March 2012 to explain the basic foundations of this initiative. In addition, the Lower Silesian municipalities which had already joined the CoM provided their own experiences and comments. This initiative will be ongoing.

The project timeline coincided with a major update to the Lower Silesian Regional Strategy for Development until 2020. This important document, set up in 2005 just before Poland could fully take advantage of EU funds, needed serious revision and modification. We took the recommendations

Policy example

The implementation time of **EnercitEE** coincided with a major update to the Lower Silesian Regional Strategy for Development until 2020. Therefore, a set of recommendations was set up based on the project's activities (e.g. subprojects, the Policy Advice Seminar in Wrocław in 2011) in an attempt to influence the new version of this important document. It is hoped that, as a result of these recommendations, a new regional centre for the management of all energy related issues will finally be created.

View of the historic city centre of Wrocław, Lower Silesia

> Participation in one of **EnercitEE's** subprojects was a great experience, bringing a lot of benefits to our institution and to the beneficiaries involved, and it was definitely worth being part of it.
> The subprojects was very successful, both in terms of work experience for young people and in terms of organisational challenges. The students' internships and final papers have been assessed as very creative, reliable and will certainly serve as a basis for further work to improve energy efficiency in the region.

Natalia Janik, *KARR S.A., Lower Silesian coordinator of PraTLA*

Policy recommendation

When preparing policies to increase energy efficiency in the region, it is always essential to take the needs of local communities into account. It can be a quite complex task, though, as these can vary greatly. However, you need to vary your activities to fit with the municipalities' current situation, their advantages and shortcomings, so that no community should feel they are left behind.
Always bear in mind that while there are some external policies and requirements, imposed by the EU or national regulations, for example, which are mandatory in the long term, improving the local quality of life in the form of economy (energy saving) or a cleaner environment (less pollution) is the major factor here.
Remember that the European Union has tools and initiatives to make your work easier and more comprehensive. Funds are available from the European Regional Development Fund (ERDF) and different structural programmes, and there are many related networks to join and analyses to refer to as well. It is advisable to look for inspiration in different regions and countries. Maybe somebody, somewhere, has already come up with something similar, and it would be worthwhile to transfer it.
Finally, consistency and patience are never to be underestimated. Increasing energy efficiency is a task that definitely needs time. The effects are not seen immediately but, when they appear, you know you have undoubtedly contributed to the improvement of life in the EU.

Regional **EnercitEE** conference in March 2012

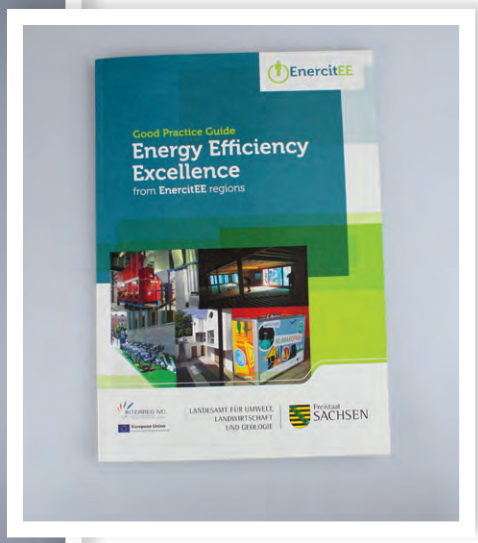
drawn up by our experts during **EnercitEE's** Policy Advice Seminar, an international meeting held in October 2012 in Wrocław, and submitted them as the basis for further consideration during the consultation period.
As a result, the current strategy design includes many new items directly or indirectly influenced by **EnercitEE**: introducing energy efficient solutions (in transportation and construction), supporting a climate smart economy or increasing the share of renewable energy provision in overall energy generation.
One of the most important points is undoubtedly the idea of establishing a – currently non-existent – organisational structure responsible for coordination and management of energy related activities, including increasing energy efficiency in particular.
Throughout the project's lifetime we looked at the energy structures of our partner regions: their capabilities, range of activities and organisational schemes, and talked to their representatives to get as much useful information as possible. This knowledge will be compiled to affect and assist the establishment of our regional energy agency. Hopefully, once created, this institution should direct and facilitate any future energy activities, planning and cooperation in the region.
EnercitEE has already become established in the region as an important and innovative energy instrument. It provided a whole range of stakeholders – mayors, municipal staff, communities and energy experts – with the opportunity to meet a common goal, that of increasing energy efficiency in the EU, by cooperation. It is our wish that its concepts and ideas shall be further developed.

Exchange of experience

Good Practice Guide

The exchange of experience is the heart of **EnercitEE**. With the compilation of the *Good Practice Guide*, an important milestone has been reached in this regard. The jointly developed brochure demonstrates the energy efficiency potential in the specific areas of competence of the five partner regions. It highlights prominent areas of energy efficiency potential, such as buildings, heat/power generation and distribution, sustainable transport and innovative technologies, as well as communication & motivation. **EnercitEE's** goal is that some of the ideas will be transferred to other European regions and help local authorities and citizens to improve their energy performance. The *Good Practice Guide* is free of charge and can be downloaded on **EnercitEE's** website in English, German, French, Polish and Italian www.enercitee.eu/documents.

Good Practice Guide



Interregional symposia

Background and aims

The main aim of the interregional symposia was to exchange experiences on regional and local energy policies among the five regions. All aspects, including both positive and negative issues and results, have been incorporated, allowing every partner to learn from the examples presented, draw their own conclusions, select good tools from other regions, adapt them to their regional requirements, and transfer them accordingly. With reference to the knowledge and experience in the different fields of energy efficiency in the five **EnercitEE** regions, the interregional symposia dealt with the following subjects:

- Energy efficient heat/power generation & distribution – Småland, April 2011
- Communication and motivation to increase energy efficiency – Haute-Savoie, February 2012
- Energy efficient buildings & innovation – Saxony, October 2012

1st interregional symposium – Energy efficient heat/power generation & distribution

The first interregional symposium focused on energy efficient heat/power generation and distribution, and therefore gave the **EnercitEE** regions the possibility to exchange the different regional energy situations, the linked strategies, the use of renewable energy, and CHP (Combined Heat and Power), as well as their distinct plans for the future. The goal of the symposium was to improve understanding of the various points of departure for the partners on their journey towards energy efficiency. The data and energy policy goals presented below describe the state of the art in the regions in 2011, consequently, the data were collected in 2009 and 2010.

EnercitEE members at Sandvik Plant, Växjö

Exchange of experience

Starting with **Saxony**, the long tradition of lignite mining has to be taken into consideration. This fuel still serves as Saxony's main energy source (41 %; compared to 11 % in Germany as a whole). As lignite is considered to be a "bridge technology", it will remain the main energy source until the major share of produced energy is provided through renewable energies and distributed via newly built high-voltage grids. Saxony strives to increase the share of renewable energies in its gross electricity consumption to 24 % by 2020. The share of CHP in electricity generation was around 20 % in 2006 and it is aimed to increase this share to 30 % in 2020.

In comparison to Saxony the **county of Kronoberg** in Sweden is a small region, with just 180,000 inhabitants. It is known for the large number of local district heating plants with small grids for heat transmission. It further comprises two combined heat and power plants – the Sandvik Plant in Växjö and the Ljungsjö plant in Ljungby – using biomass, peat, and waste for their combustion. The biggest part of the county's energy supply, 54 %, is generated through renewable energy systems. Since 75 % of the area is covered with forest, biomass dominates the renewable energy sources here. In order to increase efficiency within the county, the Regional Climate and Energy Strategy indicates that more investments should be made into solar thermal technology, the expansion of wind power, and hydro power plants.

The region of **Emilia-Romagna** mainly uses energy produced from oil (31 %), natural gas (62 %) and renewable energies (7 %; of which 4 % is produced from biomass and 3 % through hydroelectric production; wind energy and photovoltaic (PV) provide a marginal contribution to regional electricity produc-

EnercitEE members in Växjö

tion). The natural gas infrastructure is very well developed. District heating is widespread, with 26 plants and a thermal energy production of almost 1,200,000 MWh. One of the most important actions made at regional level has been the reconversion of thermal electric power plants; cogeneration plants have also grown rapidly in recent years.

Haute-Savoie has a rather high share of nuclear energy (75 %) and also of hydro energy (20 %). The share of renewable energy is around 20 % for electricity and 37 % for heat, but very low for transport. CO_2 emissions are moderate, with 7 t/capita/a. There is interest in developing renewable energy systems and also CHP, but not on a large scale. The challenge for the region is to implement sustainable public mobility due to the natural environment in the mountain area. Potential exists for increasing the share of renewable energies by using more hydro, solar, and wind power, as well as biomass.

The region of **Lower Silesia** is rich in natural resources which have been used to produce electricity: lignite output 11,356,000 tons (2007), coke production 502,000 tons (2006). Large lignite deposits, as yet unexcavated, are located in the northwest of the region, where a major power plant is being designed and will be built using the newest and thus most efficient technologies. The national strategy is to support the development of renewable energy systems in Poland and to reach a share of 15 % of renewable energies in the total energy use by 2020. The region has multiple renewable energy resources: water energy, wind energy, biomass and geothermal waters. Insignificant so far are photovoltaic and solar panels.

EnercitEE members visiting the district heating system in Rottne

Lessons learned

Each region has a different starting point. The ambitions are in general high on all levels but linked to traditions, energy sources, economy, and incentives. From the example of Småland (Kalmar and Kronoberg) / Blekinge the partners learned that long term thinking and actions are essential in order to gradually move closer to a society based on low energy consumption using renewable energies. In order to realise such a goal, political will and decisions are crucial in setting the direction and establishing binding targets. This is true at the EU, national, regional and local level.

Energy providers are important stakeholders. All players in the whole energy chain need to get a better understanding of climate change and must be involved into any efforts to tackle this issue. Since energy costs represent an important share of the regional gross domestic product (often between 8 – 15 %), it is important that a decisive part of the energy chain can be covered by regional resources, e.g. renewable energies or fossil fuels sourced within the region. In all of the **EnercitEE** regions there is still potential to develop CHP in general, and especially based on biomass. After all, it is quite difficult for regions with an energy infrastructure based on fossil gas and/or lignite to make big changes in the short term. However, step-by-step planning and actions are necessary to move towards a greater use of renewable energy systems.

2nd interregional symposium – Communication and motivation to increase energy efficiency

The second interregional symposium of **EnercitEE** in Annecy, France in February 2012 covered the complex issue of behavioural change and various facets of achieving it. It turned out to be very challenging to motivate citizens and local authorities' staff to get actively involved in energy efficiency actions and to implement specific measures. The **EnercitEE** partners set out to exchange experiences on this topic and to learn from different regional and local approaches, in order to find and further develop interregional and new tailor-made communication and motivation instruments, as well as policies to get both local authorities and citizens actively involved.

Exchange of experience

An expert from the French energy agency ADEME (Agence de l'Environnement et de la Maîtrise de l'Energie), Christophe Lastennet, gave a lecture on achieving behavioural change for energy efficiency programmes. He started with a statement that change is always an emotional journey, and distinguished eight steps to achieve behavioural change:

1. Establish a sense of urgency
2. Create the guiding coalition
3. Develop the vision of change
4. Communicate for buy in
5. Empower action
6. Generate quick wins
7. Don't let up
8. Anchor changes in culture

The lecture was followed by a lively discussion dealing with the practical implementation of achieving behavioural change. It seemed quite important to give everybody the opportunity to be involved – advocates and opponents – to gain an understanding of the opposing viewpoint and to try to find out what lies behind a common attitude. People might eventually "join the club" if they have the chance to act and contribute.

Some subprojects of **EnercitEE** were selected to present their experiences on how to achieve behavioural change and their approaches within the context of the project. LEEAN provides target-oriented information on energy efficiency; SCC involves citizens by organising competitions; ActEE shares low-cost communication tools for municipalities to reach citizens; SustraMM promotes sustainable mobility; EEMTE tries to reach municipal staff through energy efficiency measures, and CLIPART promotes climate change awareness and adaptive planning within municipalities. For all subproject participants it was important to point out that, at the regional level, the work of non-governmental organisations (NGOs) in this regard should be borne in mind. Regional policy makers need to be informed about energy efficiency – informed and not lectured.

Lessons learned and recommendations

Regarding the question of how to reach different stakeholders, such as politicians at the local and regional level, citizens, industry, and civil servants, the conclusion was that different stakeholders/target groups need different activities/approaches/messages. Explaining an energy efficiency measure to children has to be done in an easy and understandable way. Teenagers can be reached by cool and funny actions and activities (e.g. special video clips about energy saving) or the use of new media, like Facebook and Twitter.

Training session: Christophe Lastennet – external expert of the national energy agency ADEME – giving the key note speech "Appetite for Change – theory of change"

Politicians can be reached through formal means such as legislation and networks, but also with training sessions for staff of local authorities and public institutions. Important in this regard is the basic information, provided in the form of a strategic document for public authorities. Engagement of citizens can be supported by small associations and non-governmental organisations. NGOs in particular are engaged to do certain campaigns since they are sometimes closer

to the specific target group. All participants agreed that it is rather important to evaluate the measures and tools, in order to know which are successful and should be followed in the future:

- the means of communication should be adjusted for different target groups (citizens, entrepreneurs, etc.) to reach a broader audience
- different tools should be used for different aspects
- there needs to be some economic benefit to attract people: events/competitions should be organised
- there needs to be evidence of future gain: improvements in quality of life should be made clear

Workshop about exchange of experience on good communication and campaigns in Annecy

3rd interregional symposium – Energy efficient buildings & innovation

The 3rd interregional symposium covered the topic of energy efficient buildings. On 19 May 2010, the European Union adopted the Energy Performance of Buildings Directive 2010/31/EU (EPBD) which is the main legislative instrument to reduce the energy consumption of buildings. Against this background, the symposium aimed to deepen knowledge regarding this directive and to discuss its implementation in the different **EnercitEE** partner regions. Problems were determined and possible solutions identified.

Exchange of experience

To guarantee a fruitful exchange of experience, all **EnercitEE** partners invited an expert who was familiar with the EPBD and energy efficient houses. The basis for the discussion was laid through an introductory lecture about the different laws and ordinances through which the EPBD is being reflected in Germany, France, Italy, Sweden, and Poland. Among the guiding questions for discussion and debate were the following:

- How does the practical application of the EPBD work in **EnercitEE** partner regions (energy performance certificate, verification management, control mechanism, etc.)?
- Do involved stakeholders (e.g. energy consultants, building authorities) have the necessary qualifications in terms of EPBD requirements?
- Are the goals of the EPBD achievable and what is hindering a successful implementation?

Workshop on the implementation of the EPBD in Leipzig

Arkadiusz Suliga presenting facts and figures for Lower Silesia

Lessons learned

It turned out that all member states determine their own energy performance requirements and their levels of ambition. Sweden, for example, has no funding or support for the implementation, and the government is even trying to find a way to stop local authorities from having more stringent energy performance regulations for new buildings than those set down nationally. Poland on the other hand has national funding, but there is a lack of knowledge and also a communication gap between the different stakeholders actively involved in the implementation. Germany, France and Italy all have strong regulations on a national and regional level and provide subsidies that pave the way for implementation, but they are also facing some problems. All regions pointed out the very high cost of applying energy efficiency measures in existing building stock as a main obstacle for future implementation. Emilia-Romagna in particular has numerous historic buildings to which the EPBD does not apply.

There was consensus on the fact that although the EU decides the content of the EPBD, it does not provide any means or tools for implementing it. What is needed for a smooth implementation is the establishment of financial support, loans or funding programmes for carrying out energy efficient refurbishments of existing buildings, otherwise the targets will not be met. For new buildings, the EPBD targets seem achievable in both the financial and technical regard. The **EnercitEE** partners have developed policy recommendations to be forwarded to politicians at the European, national and regional level.

Policy recommendations

- EPBD: Monitoring is a key challenge and should be improved! More incentives, training, campaigns and activities aimed at encouraging institutions to be energy efficient – to help them implement the Directive in a practical way (regional/local authorities, companies, builders, citizens, tenants, etc.) – are needed. Mandatory training sessions should be set up for energy consultants. The EPBD is a good start but its targets are very ambitious – therefore, intermediate goals need to be defined in order to help meet these.
- Energy Performance Certificates (EPC): More control and supervision at the national and regional level – to make the EPC more understandable for users – is needed. Energy coordinators should be appointed for the whole building process to solve the problem of the differences between calculation and reality.

Policy seminars

Policy advice seminar

From 26 to 27 October 2011, energy experts from Saxony, Småland, Emilia-Romagna, Haute-Savoie and Lower Silesia met in Wrocław to exchange experiences between the regions on various quality management systems, control tools and existing energy planning instruments and policies, and to discuss their pros and cons. The seminar was divided into two parts. The first part consisted of three workshops on the following topics:

Local & regional energy plans, concepts and balancing

The first workshop focused on the goals and contents of energy plans and strategies. Comparing the different approaches and backgrounds of the **EnercitEE** partner regions, it is still possible to draw a number of common conclusions for energy policy making, both at the regional and the national level (see figure on p. 28).

Specific tools & instruments of municipalities

The second workshop dealt with specific instruments that had been planned or implemented to support the policies that were discussed in the first workshop. An overview of these instruments for municipalities and their suitability in the different regions was created. Examples and good practices are: the European Energy Award (Saxony), local grants for energy efficiency initiatives (Lower Silesia), tax exemption for biomass (Emilia-Romagna), and the Ground Occupation Bonus (Haute-Savoie).

Involvement of citizens & soft measures

Workshop number three especially considered the citizens' involvement as a specific way to achieve local and regional energy efficiency goals. The experts evaluated different approaches to involve citizens and gave an overview on new trends in soft measures. Even though the topic was broad, and several local and regional initiatives existed, the discussion

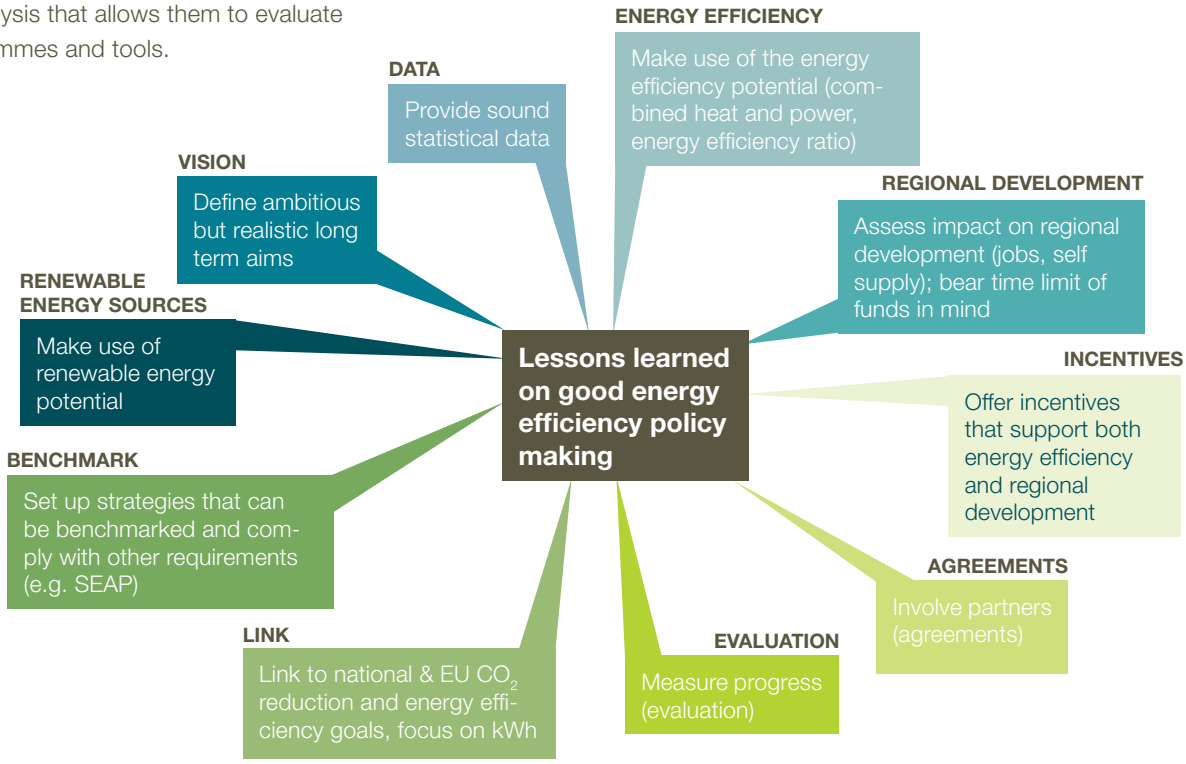
Open sessions in which the experts discussed the different status regarding energy efficiency instruments in the regions.

underlined common elements that are considered important for the involvement of citizens and the implementation of soft measures. Amongst other things, it was highlighted that communication should be simple, clear and effective, and should identify direct advantages to the citizen such as cost reductions or prizes in competitions.

The second part of the seminar was characterised by open sessions (World Café) in which the experts provided suggestions and recommendations to tackle challenges in the regions and/or at the local level. Above all, formulating a vision to become fossil fuel-free or to define ambitious energy efficiency targets for a city or region can be an important step towards the future. The overview of different regional recommendations revealed certain parallels between the different European regions. Obviously, most regions lack an impact analysis that allows them to evaluate energy programmes and tools.

Systems to evaluate, structure, audit and award energy efficiency measures, such as the European Energy Award, have been recommended several times. Further, the experts reported that a poor coordination and interlinking of existing energy and climate plans on various levels (EU, national, regional and local) often make it more difficult to implement certain measures. A better communication between and information of key players is required. At last all participants agreed to provide additional training opportunities for the major target groups. Emphasis should be given on pupils as future energy consumers and local authority staff serving as a good example. Politicians should learn eventually that energy efficiency should play a more prominent role in political decisions.

The summary of the seminar, including the presentations by the experts, the outcomes of the workshops and policy recommendations have been compiled into a brochure that is available on **EnercitEE's** website www.enercitee.eu/documents. This brochure can serve mayors and other decision makers, energy advisors and staff of climate and environmental protection units as a basis for introducing new strategies, instruments and approaches in their local or regional energy efficiency work and as inspiration for further discussion.



Policy maker exchange – Learning from visionary Växjö

"Europe's greenest city" was host to more than 30 mayors from Poland, France, Italy and Germany from 30 May to 1 June 2012. Learning on the spot and sharing experiences with and between mayors was a primary element of the INTERREG IVC mini-programme **EnercitEE**. As **EnercitEE** contributes to the improvement of local and regional policies and provides assistance in the transfer of knowledge on energy efficiency and sustainable transport, the idea was born to organise a 2.5 day study trip for mayors to learn from the City of Växjö in Småland, Sweden which represents a shining example of climate protection. Back in 1996, politicians in the municipality decided that Växjö should become a fossil fuel-free city. Since then the city has worked successfully on environmental and climate issues and has received several awards for its remarkable engagement. Since the early 1990s Växjö has reduced its CO_2 emissions by 41 %, and its emissions now measure 2.7 t/capita/a (2011).

The overall aim of the policy maker exchange was to learn about Växjö and its vision to become fossil fuel-free by 2030, and to study exemplary energy efficiency solutions in the fields of transport, heat/cooling generation and distribution, public participation and future strategies. The mayors were taken for a walk around the city to visit different examples of good practice, e.g.: cycle lanes and cycle boxes; free parking for biogas, electrical and hybrid cars in the city centre; the hospital using district cooling from biomass; and passive and energy efficient wooden houses. The exchange concluded with a panel session to discuss Växjö's strategy and the impressions the mayors had received of the city's activities. It revealed that different framework conditions for local authorities in the different countries, for example with regard to tax collection, meant that certain energy efficiency solutions could not simply be transferred and implemented in the same way. Nevertheless, the experiences and impressions gained during the study trip inspired the participating mayors to further promote their own energy efficiency strategies in their home countries. The exchange of views and strategies, especially among mayors from different European regions, was also very well received.

EnercitEE members and mayors taking part in the city walk through Växjö

Mayors from the different **EnercitEE** regions listening to presentations on the visionary Växjö

Energy efficient eight-storey high wooden buildings at VälleBroar

Cycle boxes at traffic lights ensuring cyclists' right of way

EnercitEE's subprojects

Improving energy efficiency policies

EnercitEE's eleven subprojects were designed to improve local and regional energy efficiency policies. The subprojects concentrate on two target groups:

1) citizens as a key group of energy consumption (see projects on pp. 31 – 36) and
2) local authorities, both as policy-making bodies for energy efficiency and as institutions (pp. 37 – 41).

The focus of the subprojects was to facilitate interregional cooperation and small-scale pilot implementation in order to improve the energy performance of citizens, private households and local authorities and the preparation of relevant local policies in this field.

The experiences and good practices collected and generated in the subprojects are available to the public on the **EnercitEE** website and on the following pages.

LEEAN

Local Energy Efficiency Advice and Networks

Subproject in a nutshell

Lead participant: Saxon Energy Agency – SAENA GmbH
Contact: Ms Karin Röser
Email: karin.roeser@saena.de
Project partners: Prioriterre (Haute-Savoie), ERVET Emilia-Romagna Regional Development Agency (Emilia-Romagna), Energy Agency for Southeast Sweden (Småland (Kalmar and Kronoberg)/Blekinge), Municipality of Bielawa (Lower Silesia)
Duration: 01/2011 – 12/2012
Website: www.enercitee.eu/LEEAN

Aims

LEEAN concentrated on the building and housing sector, focusing on tenants, businesses and immigrants as well as on families suffering from fuel poverty. LEEAN's aims are to cut their energy costs and show them how to behave in an energy efficient way while providing them with good energy efficiency practices.

Approach

Within the framework of LEEAN, the partners from the participating regions in Germany, France, Italy, Sweden, and Poland each chose a different instrument to familiarise the target group with energy saving instruments and measures in the housing sector. In this way, the subproject promoted an intensive exchange of know-how between the regions.

Results

The tool created by the German partner is the master manual, a guide for builders. It provides information to private homeowners and those who want to refurbish their houses in terms of energy efficiency. The French tool is a tenant kit giving behavioural advice to inhabitants of efficient and non-efficient homes as well as describing the responsibilities of tenants and landlords. The guidebook for builders developed by the Italian partner addresses people who come to the Italian helpdesks, and informs citizens wishing to refurbish their homes with renewable energy technologies. It is also available as an online tool. In Sweden, ESS developed a brochure for tenants about energy efficiency in their homes. The Polish partner developed a colouring book for children, which was distributed in kindergartens and schools in order to raise awareness among the youngest about saving energy and to educate parents via their children.

Within the scope of LEEAN, about 35 regional training sessions and workshops were organised, in order to present the tools and instruments for energy efficiency measures to over 100 participants, 310 staff members and more than 250 organisations or public bodies. Another major output of the subproject is the policy paper showing interested municipalities how to adapt the approaches for use in their region.

Future prospects

In the future, the projects conducted within LEEAN will be developed further. The participating partners could benefit from each other's experiences and LEEAN could also be a good example for other regions.

The Saxon State Minister of Environment and Agriculture Frank Kupfer handing over the master manual

E-FoxES

Energy saving Foxes in European Schools

Aims

E-FoxES focused on raising awareness about energy saving and energy efficiency among pupils in the **EnercitEE** regions of Saxony, Southeast Sweden and Haute-Savoie. For that purpose, energy saving contests for schools were carried out in these regions.

Approach

A common approach strategy for the contests was set up based on the experience of the town of Bautzen (Saxony). Starting conditions for the contests in the three participating regions were investigated, including national and regional policies regarding energy efficiency, education systems, and the existence of similar activities in the countries. Experiences and educational tools were exchanged and have been integrated into a teacher training. Policy makers and further stakeholders were involved in public activities such as opening and award ceremonies. In this way, citizens were invited to think about a new lifestyle based on a reduction in their personal carbon footprint and energy consumption. The contests were documented and the most important success factors were analysed. Finally, the results, experiences and recommendations were presented in a summary, which was offered to further interested regions and municipalities that intend to implement similar contests in the future.

Results

The first energy saving school contests were implemented in the participating regions and included high-profile award ceremonies and presentations. Furthermore, a European prize was awarded to the best projects. A curriculum with tools and experiments for the classroom has been developed to train teachers. Finally, a common concept was drawn up, adapted into regional manuals by the project partners, and published on the **EnercitEE** website and regional subproject web pages.

Pupils' school project – wind power versus nuclear power

On the school roof – a field trip of primary school children visiting the photovoltaic system on top of the Philipp-Melanchthon grammar school in Bautzen

E-FoxES

Subproject in a nutshell

Lead participant: Bautzen Innovation Centre (Saxony)
Contact: Mr Jürgen Besold
Email: tgz@tgz-bautzen.de
Project partners: Energy Agency for Southeast Sweden (Småland (Kalmar and Kronoberg)/ Blekinge), Prioriterre (Haute-Savoie)
Duration: 06/2011 – 05/2013
Website: www.enercitee.eu/E-FoxES

Winners of the energy saving contest in Bautzen

The experiences gained from E-FoxES improved the existing contest in Bautzen. In the region of Haute-Savoie, a calculation tool was developed and has been made available online. It allows schools to calculate their energy consumption and gives recommendations for saving energy. In Växjö, cooperation was established with an energy supplier who offers field trips for children. A website with information about energy was also developed.

Future prospects

Bautzen Innovation Centre will continue the contest for schools. The lessons learned from the other regions will be used to improve the contest at the regional level. In Haute-Savoie the contest will continue if necessary funds are available. Moreover, the contest will be promoted outside the region.

SCC
The Sustainable Climate Challenge

Subproject in a nutshell

Lead participant: City of Växjö (Småland)
Contact: Mr Pär Wallin
Email: par.wallin@vaxjo.se
Project partners: Prioriterre (Haute-Savoie), Energy and Sustainable Development Agency of Modena (Emilia-Romagna), City of Meerane (Saxony)
Duration: 01/2011 – 12/2012
Website: www.enercitee.eu/SCC

Aims

The main objective of the project was to explore different ways to involve citizens in reaching the European 2020 targets. The four project partners challenged four different groups of citizens to consume energy in a more efficient and climate conscious way, thereby creating a bigger demand for climate smart products and services. The project supported the citizens with concrete examples of activities to cut energy use and CO_2 emissions. The target groups of citizens challenged in the project were: employees in Växjö (Sweden), school children and their families in Meerane (Germany), private homeowners in Emilia-Romagna (Italy) and eco consumers groups in Haute-Savoie (France).


Group picture of students in Meerane

Approach

The project developed different tools to support the participating citizens in changing their behaviour: two different web tools show the results of the citizens' activities in terms of kWh, CO_2 and money saved; a "yellow book" with information on climate smart products and services was produced and material was compiled for an energy competition. The project used "climate idols" (well-known local people with an interest in climate issues) to challenge the target group: employees in Växjö, and other "important people" in the other participating regions. The Italian partner developed a process to help private homeowners to invest in energy efficiency of buildings and in photovoltaic panels through energy checks and procurement of installers and products.

Results

SCC has challenged more than 2,000 citizens and has supported them through 60 workshops, seminars, meetings etc. The participants have saved more than 500,000 kWh/year compared to their previous energy use and more than 150,000 kg CO_2/year.

Future prospects

All four organisations will continue the challenge in different ways adapted to their targets' needs and national contexts. In Meerane, Germany, for example, the energy competition *Energiesparmeister* (energy saving champion) will continue in schools as a part of the city's climate action plan.


Students informed the citizens of Meerane, Germany about energy saving.


Two Swedish politicians, Anna Tenje and Åsa Björkmarker Karlsson, had an extra competition in the climate challenge.

ActEE

Actions and communication tools about Energy Efficiency

Project partners

Aims

ActEE's partners aimed to develop different communication tools dealing with energy efficiency, such as energy games, education campaigns or energy evaluations. The experiences gathered were to be exchanged between the partners. The focus was on tools that are well accepted and used by different target groups: schools, families, private or public stakeholders.

Approach

A two-step approach was chosen in order to fulfil the aim of local step-wise improvements in the context of a growing global network. The first step was to define good practices for each partner and to catalogue the strengths and weaknesses of each practice. In the second step, local needs were defined for each partner, according to the catalogue, to develop one or a number of new tools which would allow concrete results to be achieved.

Results

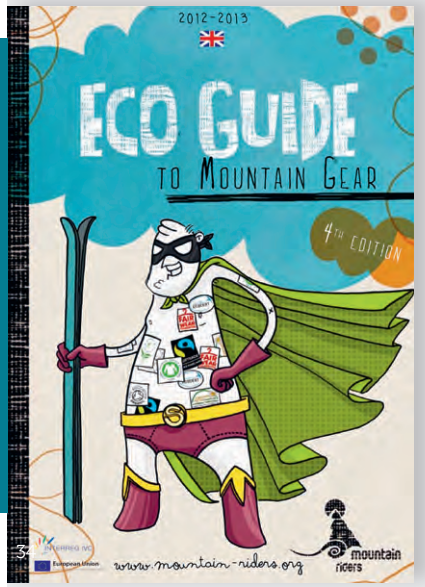
We are enthusiastic about participating in and diffusing the action we are taking locally to contribute to a global goal. Twenty private stakeholders were associated with the ActEE subproject. Three new tools were developed which allow stakeholders to engage in an innovative way in sustainable energy management and more. One of the tools identified was the *Eco guide for mountain resorts*, which evaluates resort actions in terms of sustainable development in France and all over the world according to several themes, such as eco-houses, renewable energy, eco-consumption or eco-lighting. This tool facilitates the customer's choice of resort, gives examples of positive actions, and helps professionals to define levels of sustainability. Another tool is the Italian *Consumabile game*, which helps educate children about sustainable consumption at school or with their families while playing the game. The third tool is the *Eco guide for mountain gear*, which offers information about how to buy gear responsibly, care for the materials and recycle it at the end of its life.

Future prospects

Ongoing cooperation between our organisations is already envisaged following ActEE. A common education project or study of our fields of action would doubtless be another output from the **EnercitEE** programme. A "campaign for eco actions in the mountains" for shops and the hospitality industry has been developed in France and will be fully implemented.

Subproject in a nutshell

Lead participant: Mountain Riders (Haute-Savoie)
Contact: Mr Laurent Burget
Email: Laurent@mountain-riders.org
Project partners: DAPT – Department of Architecture and Urban Planning (Emilia-Romagna), Regional Development Agency "ARLEG" S.A. (Lower Silesia)
Duration: 06/2011 – 06/2013
Website: www.enercitee.eu/ActEE



Communication tools developed and spread within ActEE

GRACE

GRAnts and other incentives for Cost and Energy efficiency

Aims

The main aim of GRACE was to analyse the costs and real impact on energy efficiency of public and private funding schemes for citizens and communities in the participating regions of Saxony, Lower Silesia and Emilia-Romagna.

Approach

Each subproject partner developed a regional overview on available funding programmes for the target groups, consolidated in a joint comparative table. All partners searched for relevant data from their funding institutions. This part of the project was the most challenging, as collecting data from funding programmes (e.g. beneficiaries, energy savings, CO_2 emission reductions, etc.) often means asking for data which is highly restricted in all regions. The partners also carried out an interregional comparison between the participating project regions in order to get an insight into the different funding modalities and to learn from each other. Furthermore, a joint methodology was developed and updated, defining the best way of analysing a minimum of three funding programmes per region.

Results

The regions participating in GRACE gained an overview of the programmes which support the EU 2020 strategy and their national strategies. All partners will use this overview to feed into future activities such as their energy advisory services. The evaluation report containing the project results describes the effectiveness of the different funding programmes through key figures such as "reduction in CO_2 emissions (kg) per €1,000 governmental funding" or "energy saved per €1,000 governmental funding". This allows the formulation of policy recommendations for policy makers. As a result, GRACE helps them to decide how to improve existing funding programmes and how to set up new programmes.

Study visit to a passive house in Bautzen

GRACE

Subproject in a nutshell

Lead participant: Bautzen Innovation Centre (Saxony)
Contact: Mr Jürgen Besold
Email: tgz@tgz-bautzen.de
Project partners: Wrocław Research Centre EIT+ Ltd. (Lower Silesia), Energy and Sustainable Development Agency of Modena (Emilia-Romagna)
Duration: 06/2011 – 05/2013
Website: www.enercitee.eu/GRACE

Visit to Modena's Ferrari museum which was built as a high efficiency house

Future prospects

GRACE contributed to a better advisory service for citizens and municipalities, especially for the future activities of the Bautzen Innovation Centre and the Energy and Sustainable Development Agency of Modena. The foundation of an Energy Agency in Bautzen on 1 October 2012 will ensure the continuation of energy-related activities in the district. Moreover, the project assured the extension of the co-operation established during the partnership: Wrocław Research Centre EIT+ plans to cooperate with the Italian subcontractor in a future project. Furthermore, the policy recommendations would be a great basis for starting co-operations on a regional and national basis.

SustraMM

Sustainable transports for Managing Mobility

Aims

Over its two-year duration, and through the exchange of experience within and between three European regions, SustraMM aimed to encourage changes in mobility attitudes leading to a reduction in energy consumption and greenhouse gas emissions.

Approach

The approach in the SustraMM project is to train key stakeholders in mobility management issues, e.g. eco-driving, car-sharing and demonstrating the positive effects of cycling and of changing travelling behaviours. In the city of Cluses in Haute-Savoie, the city of Pirna in Saxony and the Energy Agency for Southeast Sweden, stakeholders received two days of training. The Dresden University of Technology was responsible for scientific support to all partners. The focus was on gathering good practices in the field of mobility management from each region and spreading them by sharing and exchanging experiences and knowledge.

Results

The SustraMM partners themselves implemented mobility management measures reaching over 12,000 citizens, through actions during the European Mobility Week, a winter and electric bicycle campaign and a city bus line. Moreover, over 50 articles were published. Over 50 organisations have been involved in training courses and mobility management measures and over 150 stakeholders have been trained. During the project period eight regional/local policies were addressed and six were improved, including the policy on soft mobility in the city of Cluses.

Experiences were shared between partners through discussions in live and web meetings and the creation of factsheets. The Dresden University of Technology gathered all these experiences and lessons learned from the SustraMM partners and, in collaboration with all partners, produced:

- a good practice brochure including 12 implemented mobility management measures and
- guidelines for mobility management measures in rural areas.

Both documents are available in English, German, Swedish and French on the project website.

Future prospects

All partners plan to implement mobility management measures in the future and to use the European Mobility Week to reach more citizens and inform them about sustainable mobility. All partners have acquired expertise in training stakeholders on sustainable transport issues and plan to continue organising training courses.

Subproject in a nutshell

Lead participant: Energy Agency for Southeast Sweden (Småland (Kalmar and Kronoberg)/Blekinge)
Contact: Ms Camille Delepierre
Email: camille.delepierre@energikontor-sydost.se
Project partners: Municipality of Cluses (Haute-Savoie), Dresden University of Technology (Saxony), City of Pirna (Saxony)
Duration: 01/2011 – 12/2012
Website: www.enercitee.eu/SustraMM

The City of Cluses (Haute-Savoie, France) has a free bus policy – with four lines covering the whole town

Flyer of Pirna's old town bus line "Stadtstreicher"

EEMTE

Energy Efficiency in Municipality – Training and Exchange of experience

Subproject in a nutshell

Lead participant: The Commune of Jelcz-Laskowice (Lower Silesia)
Contact: Ms Katarzyna Ciechanowska
Email: um.fundusze2@jelcz-laskowice.pl
Project partners: The City of Leipzig (Saxony), Municipality of Cluses (Haute-Savoie), Municipality of Oskarshamn (Småland (Kalmar and Kronoberg)/Blekinge), Prioriterre (Haute-Savoie)
Duration: 06/2011 – 05/2013
Website: www.enercitee.eu/EEMTE

Aims

Within the framework of EEMTE, the partners aimed to create ways to improve the exchange of information, experiences, and good practices on energy efficiency between municipalities. This included, in the first phase, the development of information and training materials and, in the second phase, the realisation of training sessions to enable an integrated approach to improve energy efficiency. As a result, government officials and employees of public institutions would be familiarised with the topic.

Approach

During the project, educational institutions cooperated with partners from the NGO sector that are involved in activities promoting knowledge on the improvement and implementation of energy efficiency, e.g. by developing a concept of action. A manual was developed that served as a detailed compendium of knowledge on the state-of-the-art of energy efficiency. This manual, alongside the training sessions conducted, should provide the necessary information to all interested entities of local and regional authorities in the participating regions.

Results

Best practices were identified in terms of training tools for authorities and public administration employees responsible for issues of energy efficiency. In this context, the existing training tools in the regions were reviewed and evaluated. Examples of good practice are the Ecoevent from Cluses, the building monitoring system of a “passive house” school in Leipzig, training concepts and videos produced by Oskarshamn, or the training materials developed in Jelcz-Laskowice. Within the framework of EEMTE, a network of contacts between the participants involved in the project at various levels (political, administrative, expert or civil) was developed, e.g. Jelcz-Laskowice visited the partner Oskarshamn to learn about strategies on energy efficiency. Joint political initiatives were created to establish universal standards for training public administration workers.


Study visit

Future prospects

On the basis of EEMTE, new models and partnerships should be built (and consolidated) through cooperation between political entities, decision-makers and public administration staff. Examples of good practice from the participating regions could be transferred to other regions, taking into account the different local and regional situations. Furthermore, joint political initiatives to establish universal standards for the training of public administration workers could be developed further.


Project participants

FIPREC

Financing Instruments, by Potential and Requirements of Energy saving

Subproject in a nutshell

Lead participant: CISA Association – Innovation Centre for Environmental Sustainability (Emilia-Romagna)
Contact: Mr Sergio Palmieri
Email: palmieri@centrocisa.it
Project partners: Saxon Energy Agency – SAENA GmbH (Saxony), District of Olawa (Lower Silesia)
Duration: 05/2011 – 05/2013
Website: www.enercitee.eu/FIPREC

Aims

The overall objective was to contribute to solving the problems that apply in public-private partnership and project financing as a result of energy sector interventions, especially where the financial returns require a lengthy investment period. This objective was achieved through the development of contractual instruments and financial models by means of which it should be possible for energy saving measures to be developed and implemented with minimum use of equity capital, even by local target groups.

Approach

The tools that are presently used are insufficient to meet the challenges that arise as a result of the energy problem. Effective development of the third-party financing market is currently hindered by many factors, such as a lack of capitalisation, restrictions in credit, the small size of the companies and a lack of knowledge of contractual and financial instruments. The FIPREC partners aimed to contribute to overcoming these difficulties by developing specific contracting models, giving examples of best practice and ad-hoc methods of interventions (such as guarantee funds and public-private partnerships) and carrying out intensive information activity through workshops, seminars, guidelines etc. A regional final brochure will be distributed and made available on the project website.

Results

During the project, the financial models were presented and explained at various events (workshops, seminars etc.) which involved a significant number of public administrators and municipal technicians as well as representatives of businesses. Through seminars and training events, a number of staff members of the municipalities increased their knowledge of financial models. Contracting models, guidelines for local policies and examples of best practice are the elements that demonstrate how feasible and economic these measures are, leading to a higher implementation in the regions.

Future prospects

After the end of the project, the results will continue to be disseminated in all regions in meetings, exhibitions and conventions concerning energy saving. The final brochure can be used by municipalities and companies to implement energy saving measures. The guidelines for local policies will provide the basis for the practical implementation of energy plans.


Workshop on contracting in Dresden


Visit to the civic centre in Porretta Terme during the kick-off meeting

RIEEB

Regional Impact with Energy Efficient Buildings

Aims

In Europe, up to 40% of energy consumed is used by the building sector. This is a sector with a significant potential for savings, if specific measures are taken. The EU Parliament has issued the Energy Performance of Buildings Directive (EPBD) to transform this potential saving into real energy saving. The aim of RIEEB was to assess the implementation of the EPBD in four partner regions, on a legal and practical level.

Approach

An enquiry as to the national laws on energy efficient construction was made in all four countries, with a comparison of the calculation methods, enforcement measures and permitted maximum values. An investigation of a total of 37 buildings was performed to illustrate how these national regulations are actually implemented. A range of buildings was analysed, from residential multi-family houses to schools and university buildings to fire stations and city halls; both new-build and redeveloped constructions were included. Within the investigation, the energy calculations were reviewed, new energy performance certificates were issued and a thermographical investigation of the buildings was carried out, to show construction defects such as thermal bridges and air leaks. Following the investigation, each region has produced policy recommendations to be used in the development process for new legislation.

Excursion to one of the analysed residential buildings during a midterm meeting in Ronneby, Sweden

Subproject in a nutshell

Lead participant: Saxon Energy Agency – SAENA GmbH
Contact: Mr Stefan Vetter
Email: stefan.vetter@saena.de
Project partners: GodaHus (Småland (Kalmar and Kronoberg)/Blekinge)), Commune of Jelcz-Laskowice (Lower Silesia), Council for Architecture, Urbanism and Environment of Haute-Savoie (CAUE – Haute-Savoie)
Duration: 01/2011 – 12/2012
Website: www.enercitee.eu/rieeb
www.godahus.se/rieeb

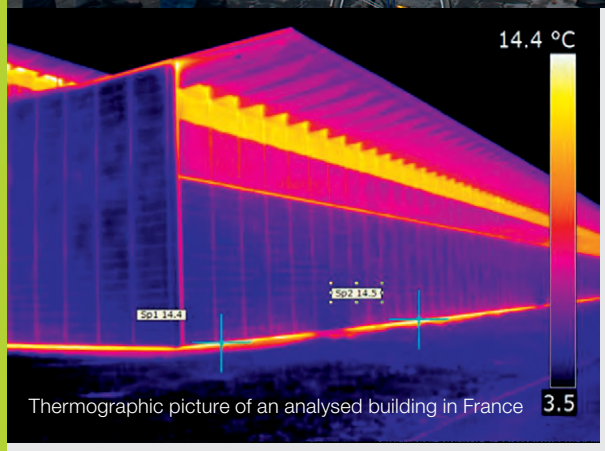
Results

Within this subproject, over 30 energy performance certificates were checked, new ones issued and thermographic examinations carried out. Over 400 participants, 110 staff members and more than 50 organisations or public bodies were involved in the 3 interregional meetings, 17 regional training sessions and 11 workshops. In these events, the results from the studies of the buildings and experiences of energy saving measures were presented to the different target groups. A final brochure on the state of the art in terms of implementation of the EPBD is available in all project languages on the RIEEB website.

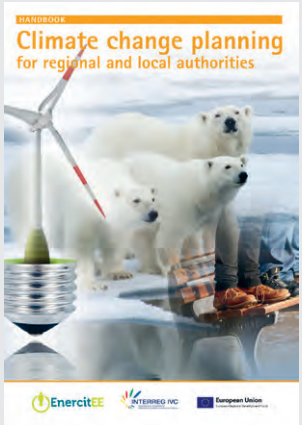
Future prospects

A plausibility tool for the building authorities was developed by the lead project partner, to simplify the verification process of building applications. This tool will be updated to comply with the new ordinances and printed and distributed to the authorities, as a follow-up step of RIEEB.

Workshop at the analysed functional building of the Saxon State Office for Environment, Agriculture and Geology (LfULG) in Dresden-Pillnitz, Saxony



Thermographic picture of an analysed building in France



CLIPART's final handbook

CLIPART

CLImatic Planning And Reviewing Tools for regions and local authorities

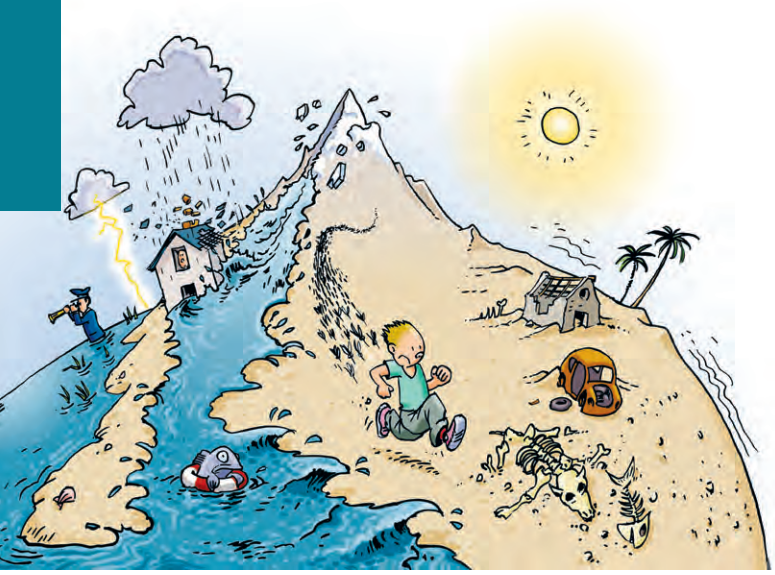
Aims

Climate change is a vital issue for Europe's citizens and administrations at all levels of government. Mitigation and adaptation policies adopted by the EU are to be deployed at the regional and local level, where most of the emissions are generated and climate change impacts are perceived. CLIPART aimed to provide procedures and tools to support regional and local authorities in climate policy planning and implementation.

Approach

In the first year, the project partners exchanged and shared existing experiences that were discussed and analysed in order to produce a general methodology that could be directly followed and applied by European regions and municipalities in order to ensure effective climate change mitigation and adaptation. The approach used was to define activities in meetings at set intervals and to keep the activities going by means of electronic document exchange and emails.

In the first year, a wiki was set up for data and information collection, leading to the production of the Initial Report (2011) which is downloadable from the **EnercitEE** website. In the second year, the partnership built on existing knowledge and on extensive internal discussion and confrontation with local authorities, staff and stakeholders to collectively produce a general procedure for climate change planning and implementation, described in a Final CLIPART Report, available as an English handbook and translated into the five project languages.



Poster of the project Air-APS (L'Air de l'Ain et des Pays de Savoie)

Subproject in a nutshell

Lead participant: Regional environmental agency of Emilia-Romagna, HydroMeteo Climate Service (ARPA - Emilia-Romagna)
Contact: Mr Vittorio Marletto
Email: vmarletto@arpa.emr.it
Project partners: Saxon Energy Agency – SAENA GmbH (Saxony), City of Växjö (Småland (Kalmar and Kronoberg)/Blekinge), Air-Rhone Alpes (Haute-Savoie), City of Jelenia Góra (Lower Silesia)
Duration: 01/2011 – 12/2012
Website: www.enercitee.eu/CLIPART

Results

The main output of CLIPART is a handbook called *Climate change planning for regional and local authorities*. In less than 100 pages it introduces climate change, and explains how to approach both mitigation and adaptation planning at the regional and local level of government, with practical examples taken from the experience of partners. The handbook was presented and publicly discussed in all regions.

Future prospects

Dissemination of knowledge collected and produced as part of CLIPART will continue via the project web page, where downloadable brochures and translations of the final report can be found. Activities related to the project are ongoing in all regions; for example, building also on the CLIPART experience, the adaptation plan for Bologna, Italy, is being prepared in cooperation with the regional environmental agency of Emilia-Romagna. The CLIPART handbook is being examined by the Italian Ministry of the Environment for possible adoption as a "soft adaptation" measure within the framework of the National Adaptation Strategy, currently in the pipeline.

PraTLA

Practical Training in Local Authorities

Exchange students implementing the "world of energy" project in a Swedish kindergarten

Steffi Hänig and Armin Verch participated as exchange students from the University of Zittau / Görlitz in PraTLA.

Aims

PraTLA seeked to improve local energy policies in cities and municipalities by exchanging experience across regions between universities and education facilities and by providing work placements for students in the field of economics and energy in local authorities. Municipalities wishing to probe and develop programmes for energy efficiency could meet students providing the theoretical knowledge. The students supported the municipalities in developing solutions, and benefited from getting to know the decision-making structures in local administrations during their work placement.

Approach

The partners' networks with local authorities or university experts were of good help in reaching the target groups and bringing the municipalities' needs and the students' interests together by organising conferences with all stakeholders. At these occasions, the municipalities first explained topics or projects, and the students were then able to choose from these. The project coordinator brought students and municipalities together and supported the students during their work placements, ensuring a successful training process. Over the course of the entire project results from student projects were presented and discussed at various levels, so that the regions involved obtained a deeper knowledge of energy efficiency.

Results

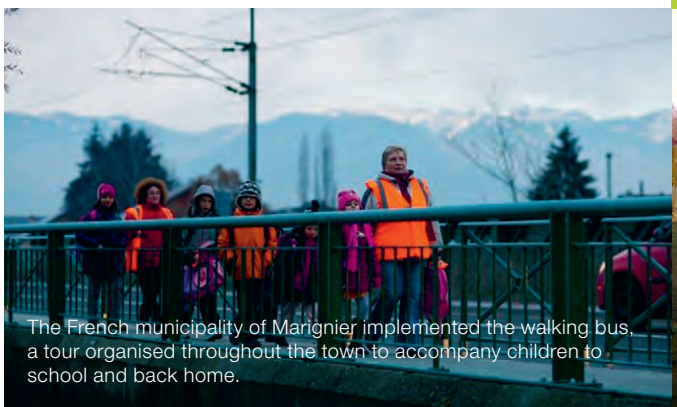
Approximately 58 municipalities and 70 students participated in the project; some of the latter participated in groups, some alone. The results are impressive: two students developed a concept for supplying an indoor swimming pool with energy. Their study examines, amongst other things, the possibility of establishing a local heating grid between municipal institutions. Other students concentrated on heating concepts for buildings, energy saving concepts and concepts for using renewable energy sources. Furthermore, an international transfer of knowledge between Småland and Saxony took place as three students worked in municipalities in the partner region. The work performed contributed, for example, to the implementation of Saxony's *Action plan on climate and energy.*

Future prospects

With the knowledge gained through PraTLA, all project partners wish to continue working with students in energy efficiency projects and in supporting municipalities in their work. All the project partners are also interested in cooperating with international partners in the future.

Subproject in a nutshell

Lead participant: Hochschule Zittau/Goerlitz – University of Applied Science (HS ZI/GR – Saxony)
Contact: Mr Lothar Kahnt
Email: l.kahnt@hszg.de
Project partners: Energy Agency for Southeast Sweden (ESS – Småland (Kalmar and Kronoberg)/Blekinge), Council for Architecture, Urbanism and Environment of Haute-Savoie (CAUE – Haute-Savoie), Karkonoska Agency for Regional Development (KARR – Lower Silesia)
Duration: 11/2011 – 10/2012
Website: www.enercitee.eu/PraTLA

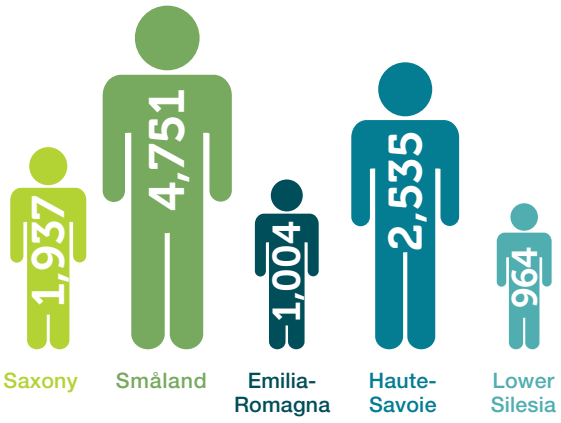


The French municipality of Marignier implemented the walking bus, a tour organised throughout the town to accompany children to school and back home.

Students and elected representatives visiting a Minergy-labelled building in Geneva, Switzerland

EnercitEE – the project in figures

... people participating in / reached by events (seminars / workshops, training, study visits, dissemination events) in the region



... new tools / instruments developed

Saxony: e.g. a training concept, an online learning tool and a plausibility tool

Småland: among which figures the RIEEB tool for real energy efficiency in buildings

Emilia-Romagna: among which several web tools e.g. for supporting the energy help desk and a methodology for energy efficiency interventions and evaluations

Haute-Savoie: such as energy efficient building monitoring tools, a greenhouse gas observatory platform or CO_2 balances for municipalities

Lower Silesia: among which a package of energy efficiency and promotion instruments developed as part of the subproject ActEE

... local policies influenced and / or improved

Saxony: The EPBD implementation in Saxony through the Energy Saving Ordinance has been influenced, as well as the energy and climate programme accompanied by the action plan on energy and climate.

Småland: Växjö's Energy Plan and the Regional Climate Commission Plan have been indirectly influenced.

Emilia-Romagna: The Regional Energy Plan and the Sustainable Communication Plan have been influenced at regional level as have, at local level, energy and climate policies of the Province of Modena as well as of the municipalities of Bologna and Marzabotto.

Haute-Savoie: Climate adaptation and mitigation policies have been improved: the internal Conseil General Climate plan has been influenced as well as the territorial climate plan which is in the pipeline.

Lower Silesia: Three project proposals on CO_2 reduction have been prepared, submitted and successfully approved by related national financing bodies. The experience gained by the municipality will be considered in the Development Strategy of Bielawa Commune 2014 – 2020.

... publications / guidelines created

Saxony: e.g. the **EnercitEE** brochure, the master manual for house builders, or PraTLA – Contributions of students of four European countries to boost energy efficiency in communities

Småland: Climate change planning for regional and local authorities and a guide for teachers, a brochure for tenants about energy saving and recommendations for mobility management for smaller cities and the countryside

Emilia-Romagna: publications have been produced, such as the handbook on climate change planning or the LEEAN guidebook

Haute-Savoie: e.g. tenant info kits for efficient and non-efficient buildings, Energy efficient training for social workers, Yellow book online (local and ecological supplier book)

Lower Silesia: e.g. brochure for Local Energy Efficiency Advice and Networks (Bielawa Municipality – LEEAN), Guidelines and analysis of the present climate mitigation and energy efficiency policy (reports from students on internship for seven municipalities – PRATLA).

... municipalities involved

Saxony: municipalities have been involved, the cities of Plauen, Meerane, Frankenberg, Oederan and the administrative district of Bautzen set up a CO_2 balance.

Småland: municipalities have been involved through subprojects, e.g. Ronneby in RIEEB, Växjö in SCC and CLIPART and Oskarshamn in EEMTE. All municipalities have a CO_2 balance.

Emilia-Romagna: municipalities have been involved in **EnercitEE**, for example 25 municipalities have been trained in adaptation planning through the CLIPART project; **EnercitEE** contributed to updating CO_2 balances at regional level.

Haute-Savoie: municipalities have been directly involved in **EnercitEE,** e.g. Cluses in EEMTE and SustraMM or Sciez, Evian, Passy, Scionzier, Marignier and Epagny in PraTLA.

Lower Silesia: municipalities have been directly involved, for example the municipality of Legnica in ActEE. The municipalities of Jelenia Góra, Bielawa, Jelcz-Laskowice, and Oława county participated as subproject partners in **EnercitEE**.

Together the **EnercitEE** partners achieved the following results in the participating regions:

people were reached by the projects

local policies have been influenced or improved

publications and guidelines have been created

municipalities were involved or set up a CO_2 balance

new tools / instruments developed

Picture credits

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Page 10, 12, 15, 16, 23, 24, 26, 28, 29: Saxon State Agency for the Environment and Geology
Page 10: Regional Council of Southern Småland
Page 10: Council for Economy, Energy Planning and Sustainable Development, Green Economy and Buildings of Emilia-Romagna
Page 11: Council of Haute-Savoie
Page 11: Marshal's Office of Lower Silesia
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Abbreviations

ADEME Agence de l'Environnement et de la Maîtrise de l'Energie
CHP Combined Heat and Power
CoM Covenant of Mayors
DH District Heating
EnercitEE European networks experience and recommendations helping cities and citizens to become Energy Efficient
EPBD Energy Performance of Buildings Directive
EPC Energy Performance Certificates
ERDF European Regional Development Fund
NGO Non-Governmental Organisations
PV Photovoltaic
REP Regional Energy Plan
SAENA SAxon ENergy Agency
SEAP Sustainable Energy Action Plan

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