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ALIANZA DEL CLIMA

# save energy save the climate save money

Guide for local and regional governments

Conseil des Communes  
et Régions d'Europe  
Council of European  
Municipalities and Regions



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# [ Forewords ]

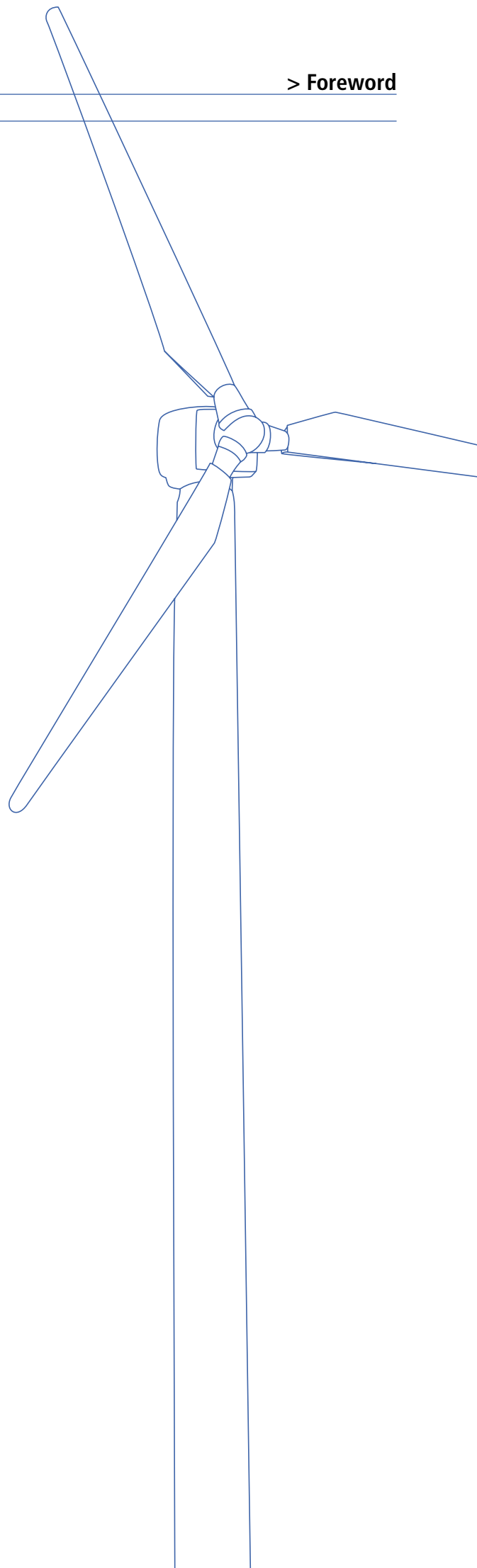


Mrs Bärbel Dieckmann  
Mayor of Bonn  
Chair of CEMR Forum on Sustainable  
Development  
Chair of the World Mayors' Council  
on Climate Change

Energy related issues have climbed up the political agenda in the recent past. Energy costs have increased continuously and represent a considerable budgetary burden to everyone.

There is an increased need for political action and encouragement to use energy in a more efficient way. Local and regional authorities can introduce energy saving measures, use renewable energy sources and improve energy efficiency. This guide, prepared in cooperation between the CEMR Network on Energy Issues, Climate Alliance and Energie-Cités, aims to provide assistance to local and regional politicians and practitioners to integrate energy issues into the different areas of their policies, e.g. the planning, design, construction, and running of facilities, and in the provision of services.

I hope that this source of ideas, measures and good practice examples will encourage many local and regional governments to develop and implement actions to achieve a sustainable energy use.





Mr Andris Piebalgs,  
The Commissioner for Energy

I have a clear objective: my priority is to improve the way in which Europeans use energy. Energy efficiency and renewable energy figure among the top spots in my agenda in themselves, but they can also contribute significantly to other central objectives such as enhancing our security of energy supply and the competitiveness of our industry. This rationale is fully justified when considering the challenges facing Europeans today: climate change, dependence on imported fuels, the need to invigorate economic growth, creation of employment through intelligent energy schemes and, not least, the higher quality of life enjoyed by citizens living in a cleaner environment.

Achieving those objectives is our mutual challenge. European institutions have long been promoting a sustainable energy future in the international arena and at EU level. This has been implemented through legislation to improve energy efficiency in buildings and the use of heat and power, as well as by laying down a common objective for the use of bio-fuels and electricity produced from renewable energy sources. We have promoted research and the dissemination of cost-effective energy

solutions through various funding schemes, never neglecting the importance of an active dialogue with stakeholders on ways to improve our policies. However, while addressing these actions to governments and the industry has proven essential, it is not sufficient in view of the magnitude of the challenges confronting us today.

Our success will only be possible if the citizens are aware of their crucial role in reaching these goals and if they resolve to introduce changes in their daily habits to save energy and help tackle climate change. Every small energy saving change of behaviour counts - we must bear in mind that our individual decisions on how we live, how we work and how we move are all central to the way energy is used. The fact that buildings and transport alone represent more than 80% of our energy consumption is the best illustration of this point.

In order to bring this important matter across to the citizens we must first co-operate with those actors closest to them, namely the local and regional governments. The realisation of EU policy greatly depends on the success of local governments in their ability to communicate ideas and involve the citizens. It therefore gives me great pleasure to express my support for this guidebook, a tool that will in my view effectively promote sustainable energy policies enabling us to work together with the citizens towards achieving our shared ambitions and fulfilling our common goals.

# 1. Local and regional government - key actors in sustainable energy policies

Energy issues have a major impact on environment, employment and the everyday life of EU citizens. Both the trend of increasing energy prices and the necessity to limit emissions are raising energy issues on the agendas of public and private bodies. Energy costs represent an increasing budgetary burden for local and regional governments and therefore it is essential to develop efficient ways to rationalise the use of energy.

The local and regional governments work with all aspects of energy policies. They can influence **energy demand** directly through the management of their own energy use, but also indirectly by informing and motivating end-users as to how they can apply energy more efficiently. Strategic decisions related to urban development such as promotion of high urban densities, or integrated land use and transport planning affect the energy consumption of citizens. Furthermore, local and regional governments can use public procurement to promote energy-efficient products and services.

Local and regional governments also take important decisions that have an impact on the **energy supply**. Decisions on the energy mix in favour of more efficient systems and renewable

energy can promote local energy production and reduce dependencies on energy resources from other parts of the world. Local energy production can also boost the local economy by creating new jobs.

Finally, **climate change** is a growing challenge facing local and regional governments. It creates imperatives to protect people from risks to health and well-being. Climate change can have a direct impact on local and regional governments through extreme weather conditions, floods, soil damage and erosion, structural damage, etc. Local actions are important in both mitigation (slowing down the effects of climate change) and adaptation (protecting ourselves against the effects of climate change) placing local and regional governments in the forefront of climate protection policies. Many actions aimed at combating climate change relate to the improvement of energy efficiency and the use of renewable energies.



## Why the guidebook?

This guidebook is aimed at local and regional governments, both elected representatives and technical personnel. It contains a pool of ideas, measures and good practice examples that help local and regional governments develop and implement action plans for sustainable energy.

The guidebook answers the following questions:

### How to approach the energy issues at local level?

#### Where to start?

- › Ten action steps for local decision makers.

### How can local and regional governments take action?

- › Concrete examples on what type of action and measures local and regional governments can take for sustainable energy management (based on different roles and functions of local and regional governments).

### What are the links between local energy policies and climate protection?

- › Making a link with sustainable energy policy and the other policy areas that are important when combating climate change.

### What is the European dimension of sustainable energy policies?

- › Possibilities for project funding and the recent European legislative measures.

### How to get help; how to find ideas for action; and where to get support for exchanging experiences?

- › Introduction to European Campaigns and tools; possibility for European partnership.

## [ 2. Sustainable energy management ]

### *Towards sustainable energy policies*

Working towards sustainable energy policies requires cooperation with all departments of the local and regional government. It is also important to get all local players - public and private - involved. Energy issues should be seen as everybody's responsibility; the sustainable energy policy

works best, when energy issues are mainstreamed into all activities of the authority. Integrating energy requirements into already existing sustainability strategies or environmental policies of the authority might be the easiest way forward.

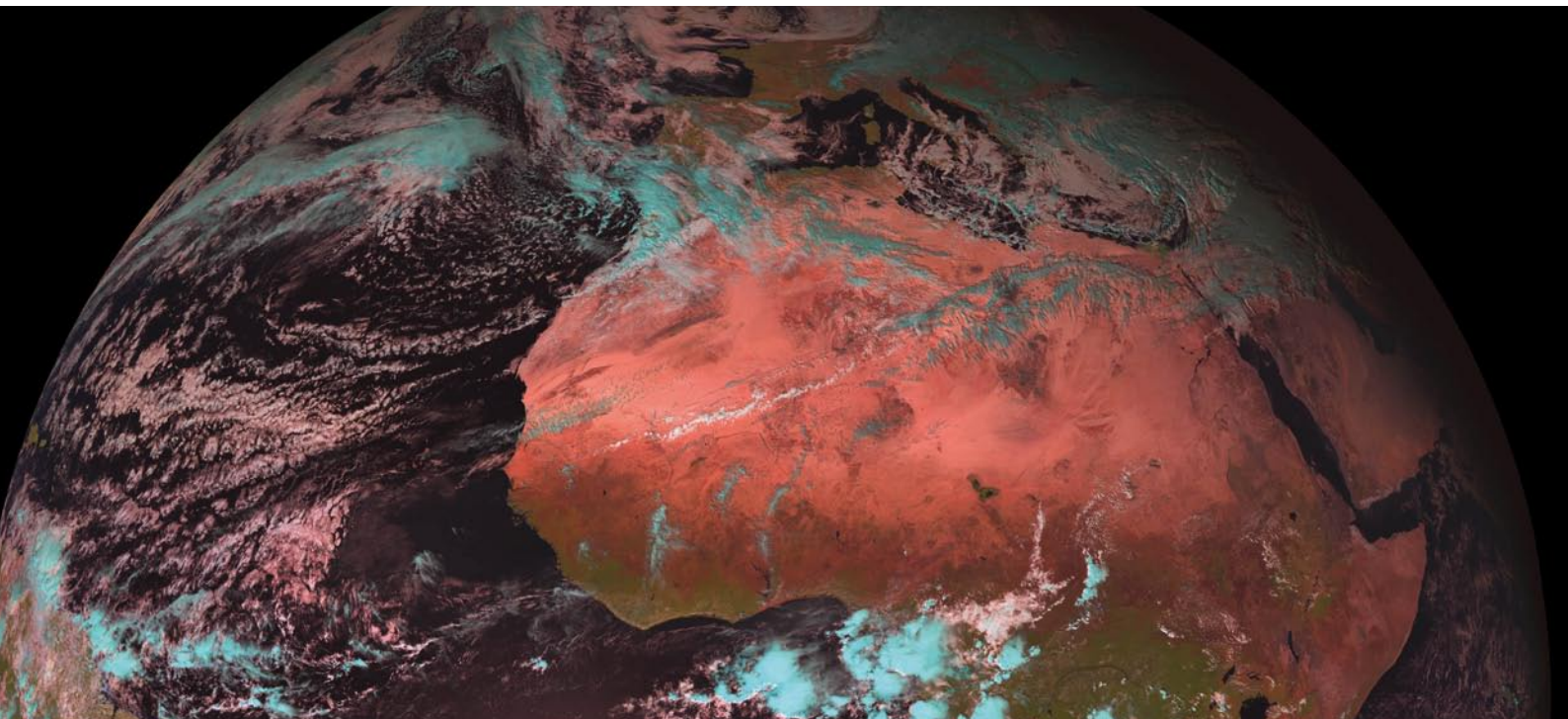


Photo ESA



The following ten steps can help local and regional decision makers to start implementing sustainable energy policies. These steps can provide a framework, which helps to develop the necessary process for local energy action.

### Ten steps towards a Sustainable Energy Policy (for decision makers)

1. **Have a clear vision** of your policy objectives (reduction of greenhouse gas emissions and local pollution, self-reliant and stable economy, job creation in the region, etc.) and a strategy to get there. Make the energy policy part of the Sustainable Development or Integrated Environmental Strategy of your local or regional government.
2. **Develop an action plan** with measurable and realistic targets, timeframes and responsibilities. Remember to assess and monitor progress regularly and add new targets and measures when necessary. Clearly defined responsibilities and sufficient, qualified and dedicated staff are necessary.
3. **Appoint a contact person** for sustainable energy, someone who can enthuse, influence and have impact within the community. And give them your continued backing and support.
4. **Reduce energy use in your own buildings** and facilities through good utility management and energy-saving measures. The money you save can be reinvested. You will also show a good example to your citizens.
5. **Encourage energy efficiency measures** in social housing and install them in any publicly owned homes. Promote energy efficiency in privately owned housing in your area. For example use planning and building control measures to encourage developments and refurbishments in integrating energy efficiency and renewable energy sources.
6. **Encourage renewable energy** production and use in your area.
7. **Clean up your own vehicle fleet and implement a green mobility plan** for the whole community. Low carbon and clean fuel vehicles reduce local air pollution and are cheaper to run.
8. **Establish a strong partnership** with your local energy agency, energy information centre or other relevant organisation to help deliver practical sustainable energy solutions to all residents and SMEs and other local companies.
9. **Promote your activities** in the wider community, use your website and information materials to let your community know that you are committed to a sustainable future. Encourage partnership arrangements with local businesses, schools and other organisations to engage the whole community.
10. **Share experiences** and lessons through networking activities to gain from the existing experience and enable other local and regional governments to improve their services.

Source: Adapted from SOLACE Environmental panel

# 3. How can local and regional governments take action?

Energy efficiency measures, renewable energy projects or other energy-related action can be introduced in various activity areas of local and regional governments. This section defines these activity areas and provides a number of examples of possible measures and actions that local and regional governments can take. These actions and measures are further illustrated with a series of case examples from different cities and towns in Europe.

These roles are:

Local and regional government as

1. Consumer, service provider and model
2. Planner, developer and regulator
3. Advisor and motivator
4. Producer and supplier

## *1. The local and regional government as consumer, service provider and model*

For carrying out their tasks local and regional governments occupy many buildings for office space, etc., and therefore they consume substantial amounts of energy, for example

for heating, hot water and the lighting of public buildings. Introducing energy saving programmes and actions to public buildings is an area in which considerable savings can rapidly be achieved.

It is important that local and regional governments set a good example through their own actions. The «European buildings directive»<sup>1</sup> will provide an additional incentive to reduce energy consumption in public buildings. The directive will require public buildings to have energy certificates, which will also be displayed to building users; this will allow the citizens to see for themselves whether public buildings are energy-efficient.

Local and regional authorities also provide services, which can be energy-intensive such as street lighting and public transport. Some of these services might be contracted out to another service provider, rather than provided directly by the local government. However, this does not mean that the local or regional government cannot influence their energy use. By establishing energy criteria when awarding service contracts or applying high-energy requirements when purchasing products, the local government can improve their energy performance in the long run and also reduce public expenditure.

<sup>1</sup> Directive on Energy Performance of Buildings (2002/91/EC)

### Ideas for actions and measures

#### ENERGY MANAGEMENT

- ☐ Appoint energy officer or establish an energy department depending on the size of your municipality's energy bill. Some local governments have been using one energy officer per two million euros spent on energy and water in the municipality, as a rule of thumb
- ☐ Monitor and evaluate energy consumption of all public buildings, in every building individually. The larger buildings should be monitored weekly and the smaller ones annually
- ☐ Ensure access to energy consumption data for non-municipal buildings to help guide consumption in the wider community
- ☐ Make sure that staff responsible for buildings (maintenance, security, cleaning) are aware of energy management and the necessary energy-saving measures
- ☐ Establish an internal information campaign highlighting the importance of energy issues; communicate regularly the energy saving measures applying to staff (heating, lights, computers turned off)
- ☐ Establish a separate budget line for energy saving investments
- ☐ Create a saving programme, which ensures that some or all of the savings are reinvested in other sustainable energy measures

#### ENERGY PERFORMANCE OF BUILDINGS

- ☐ Subject municipal buildings to systematic reviews of potential investments (energy audits)
- ☐ Develop energy metering in all public buildings
- ☐ Use renewable energy sources or cogeneration in municipal buildings
- ☐ Review existing energy supply contracts, in particular with respect to «green» electricity
- ☐ Develop local standards for operation, construction and refurbishment, and have them approved by the local council
  - Use best possible energy standards when retrofitting public buildings
  - Use low-energy standards in new buildings
  - Set sustainable building standards for new and renovated buildings
- ☐ Use appropriate financial tools for financing energy efficiency measures, such as performance contracting and revolving fund

*The city of Stuttgart (Germany) is using a **revolving fund** to invest in energy efficiency measures. The city's energy department pays the initial investment cost and the other departments return the investment cost based on the yearly cost savings generated by the energy efficiency measures. For example if the investment cost for thermal insulation for a school roof is 20,000 euros, the energy department pays the investment and the school pays back the amount of their energy savings to the energy department, in this case 4,000 euros per year. In five years the investment is paid back and new investments can be made.*

### OUTDOOR LIGHTING

- ☐ Draw an improvement plan for outdoor/street lighting
- ☐ Use low-consumption lamps, such as low-consumption sodium lamps
- ☐ Carry out preventive maintenance

*Lighting accounts for a large total of local government energy consumption and costs. Possibilities for capital and maintenance cost savings are significant.*

*Although energy-efficient alternatives appear to have a higher initial cost or lamp price, they offer the cheaper alternative in the long term. Energy-efficient lamps can last up to 15 times longer than their less energy-efficient equivalents and the payback time in most cases is less than six years - an investment worth making. For example, a 125W Mercury lamp has an annual total cost of €53.33 per year compared with €33 for a 70W high-pressure sodium lamp - an average saving of over €20 per lamp.*

*Despite having an initial purchase price that is on average €10 cheaper than its more energy-efficient high-pressure sodium equivalent, mercury lamps are more expensive to maintain, need replacing more frequently and consume more electricity.*

*The City of Lille (France) recently set up an office to train its purchasers to look for substitute products that limit environmental impact. One of their six initial priority products is street lighting.*

*For more information on energy-efficient lighting: [www.elcfed.org](http://www.elcfed.org)*

### PURCHASING AND SERVICE CONTRACTS

- ☐ Establish criteria for awarding contracts; look at the service specifications and where appropriate include energy aspects, such as high-energy efficiency requirements
- ☐ Give justified preference to products with certified environmental labels or high-energy performance

*The European Commission has published a handbook for Green Purchasing, which explains in concrete terms how public purchasers can integrate environmental considerations into public procurement procedures. The publication is available in all EU languages:*

*<http://europa.eu.int/comm/environment/gpp/guidelines.htm#handbook>*

*Please also see a database that provides environmental information on different product or service groups*

*[http://europa.eu.int/comm/environment/green\\_purchasing/cfm/fofgreenpurchasing/index.cfm](http://europa.eu.int/comm/environment/green_purchasing/cfm/fofgreenpurchasing/index.cfm)*

## > How can local and regional governments take action?

> 1. The local and regional government as consumer, service provider and model



European Commission

### MUNICIPAL VEHICLES AND TRANSPORT USAGE

- ☐ Carry out an audit of the vehicle fleet and adopt an energy-efficient fleet renewal policy
- ☐ Use low emission/clean vehicles
- ☐ For official journeys use low emission/clean vehicles or work bicycles
- ☐ Develop a travel plan for employees; for example provide your own staff with bicycle parking and shower facilities and promote car-sharing for journeys to/from work

### PUBLIC TRANSPORT

- ☐ Modernise the bus fleet (low emission vehicles, fuel cell buses)
- ☐ Reduce congestion and increase traffic flow through
  - public transport acceleration (bus lanes, priority traffic lights)
  - integrated ticketing
- ☐ Develop incentives to increase the use of public transport by commuters (discount and loyalty fares etc.)

*City of Stockholm (Sweden) has been promoting the use of clean vehicles for 10 years. Today almost half of the city's fleet consists of clean vehicles and 1 % of cars sold in Stockholm are clean vehicles. Stockholm aims to increase the access and proximity of biofuels, but also to help the market penetration of clean vehicles.*

*The City of Stockholm has set the following targets for the year 2006: 4 % of vehicles sold in the city should be clean vehicles; 60 % of the municipal fleet should consist of clean vehicles and these vehicles should use 80 % of biofuel when fuel flexible. Further information: <http://www.osmose-os.org>*



### Local examples

■ In 1990, **Leicester City Council (England)** (280 000 inhabitants) set an objective to reduce consumption of energy and CO2 emissions by 50% by the year 2025. A central focus has been on monitoring the energy used in the city through intelligent metering that feeds data back into the Council every 30 minutes from public buildings and also from some small and medium-sized companies within the City. The aim is to demonstrate the benefits of real time energy monitoring through energy, water and CO2 reductions.

Costs for implementing this system are an average of £3,000 (€4,500) per building. In addition the software costs and the staffing costs to monitor the buildings need to be incorporated. There is also an annual service charge to ensure that the meters are maintained and that the system is operating properly. Even though the costs are rather high the Leicester City Council finds the system cost effective. The simple payback time is estimated to be around five years. Initially the savings are in the form of «quick wins», water and gas being the obvious ones in terms of poor control. However, further monitoring enables identification of additional savings and can also point out the effectiveness of energy awareness training of the building occupants.

Further information:

<http://www.leicester.gov.uk/housing/PDFs/EnergyMetering.pdf>

■ City of **Czestochowa (Poland)** (80,000 inhabitants) has participated since 2003 in a programme of energy and environmental management carried out by the Polish Foundation for Energy Efficiency (FEWE). The programme is based on a database of public buildings, which describes the building use, characteristics and energy consumption. The project introduced effective monitoring of energy and water consumption, which resulted in many actions and improvements such as training for energy managers, improved insulation, adjusted indoor temperatures (thermostats) and cuts in unnecessary energy use.

The review of the tariff regimes and checking the past energy bills generated immediate savings, which were often significant. For example a review of several school buildings resulted in an immediate refund of 4,000 euros for the tariff and 12,500 euros for overpaid bills. The monitoring programme also looked at the water use and sewage disposal with a result of 9,000 euros of annual savings for water use and 37,500 euros for sewage collection and treatment. This represents the cost equivalent of at least four full-time professionals in Poland showing that the monitoring system can be highly cost-efficient.

Further information: <http://www.czestochowa.um.gov.pl/>

■ **The metropolitan area of Rennes (France)** is composed of 36 municipalities; most of which are small and do not have internal resources to manage energy issues. In 1997 the local energy agency CLE (Conseil Local de l'Energie) proposed an energy management service referred to as shared energy advice to the municipalities. The service aims to:

- provide energy management by monitoring energy bills, assessing energy contracts and checking whether they are appropriate to energy needs;
- reduce energy consumption by improving energy programming and regulations;
- carry out actions in the various municipalities to raise users' awareness of energy issues and inform elected officials about planning and training opportunities for municipal staff.

The procedure consists of monitoring energy demand in the municipality over a two-month period. A report is then presented to the city council and municipal technicians. This document is aimed at awareness-raising and is designed to help elected representatives define guidelines for measures to be implemented. The cost of this service amounts to €0.6 per year per inhabitant. The municipalities are very satisfied with the service provided and the average energy savings amount to 25 kWh per year per inhabitant, which amounts to €2.5 per year and per inhabitant.

Further information: [www.energie-cites.org](http://www.energie-cites.org)

## 2. The local and regional government as planner, developer and regulator

Land use planning and the organisation of transport systems are responsibilities of most local and regional governments. Strategic decisions concerning urban development such as avoiding urban sprawl reduces the energy use of transport. Balancing housing, services and work opportunities (mixed use) in urban planning can influence the mobility patterns of citizens and also their energy consumption. Local and regional governments can develop sustainable mobility plans and encourage a modal shift towards more sustainable transport modes.

The local and regional governments can also have a regulator role for example by setting energy performance standards for new buildings. They can also promote the use of renewable energy sources, cost-effective sustainable building measures; or even require the use of renewable energy. The local and regional governments can also remove administrative barriers, and through simple permit procedures make it easier to use renewable energy sources for example for heating of houses.



*For example, the London Borough of Merton, in the UK, has placed a requirement in its planning law that stipulates that all new industrial, warehousing, office and live/work units outside conservation areas above a certain size must incorporate renewable energy production equipment to provide at least 10% of anticipated energy requirements.*

### Ideas for actions and measures

#### URBAN PLANNING

- ☐ Introduce energy criteria in planning (land use, urban, mobility planning)
- ☐ Promote mixed use (balance between housing, services and jobs)
- ☐ Plan to avoid urban sprawl
  - Reduce the need for new construction in particular in greenfields
  - Avoid «out-of-town» shopping centres
  - Develop and revitalise old (deprived) industrial areas
  - Position new development areas within the reach of existing public transport lines
- ☐ Plan car free or low car use areas by closing areas to traffic or introducing congestion charge schemes, etc.
- ☐ In transport planning
  - Give priority to cycling and walking paths
  - Restrict private parking in workplaces

#### URBAN DEVELOPMENT

- ☐ Designate priority areas for Combined Heat and Power (CHP) district-heating systems and for renewable energy sources
- ☐ Promote solar oriented urban planning, for example by planning new buildings with an optimum sun-facing position (also applies to northern areas!)
- ☐ Promote the energy performance of new developments
  - Define an information package of cost-effective sustainable building measures and include them in the planning and permit documents
  - Encourage and require when possible the use of energy performance criteria when municipally owned land is sold
- ☐ Promote renewables in new development
  - Promote the use of solar thermal, high energy efficiency heat pumps, etc.
  - Remove administrative barriers towards using renewable energy sources.
- ☐ Develop pilot projects, for example on CO<sub>2</sub> free settlements and houses without heating (passive house)

### Key concepts

*Passive house is a house that has the following characteristics: 40 cm insulation on the roof, 30 cm on the walls and triple glazing. In the German climate this type of building only requires less than 10 kWh/m<sup>2</sup> of heat. This means that the building can be heated without a regular heating system. Ventilation and heat pump are sufficient. The early heat consumption of a passive house is 15 kWh/m<sup>2</sup> compared to 70 kWh/m<sup>2</sup> of a new building (German standards). The additional costs of passive houses are less than 10% compared to conventional buildings.*

*Further information: [www.passiv.de](http://www.passiv.de)*

*CO<sub>2</sub> free settlements mean retrofitting districts or whole municipalities in such a way that they do not consume fossil fuels. This objective can be reached for example by improving thermal insulation (also increases comfort) and producing the local energy needs through renewable energy. The renewable energy can be produced in a cogeneration plant that uses biomass or through other renewable sources such as photovoltaic solar installations depending on local conditions.*

### Local examples

■ In order to promote the use of solar energy for hot water production, the **City of Barcelona (Spain)** initiated the Barcelona Solar Ordinance, which through local legislation requires that all new buildings and buildings undergoing major refurbishment use solar energy to supply 60% of their running hot water requirements. This solar bylaw was approved by the Barcelona City Council in July 1999 and entered into force in August 2000. From this date, many other municipalities adopted the same regulation in Catalonia and subsequently in cities of other regions. Finally through the Spanish law adopted in 2005, this obligation is now imposed throughout the country. This provides strong evidence that local initiatives can be transformed into a legislative framework.

The Barcelona Energy Agency has an ongoing evaluation programme in order to further promote and monitor the effective implementation of the solar thermal ordinance. Since the entry into force of this legal instrument the licenses requested for the installation of solar panels make up a total of 20,000 m<sup>2</sup> of solar panels (12 times more than in 2000). The equivalent energy savings represents more than 15,000 MWh/year and the reduction of CO<sub>2</sub> Emissions nearly 3,000 tons of CO<sub>2</sub>/year. Further information: [www.barcelonaenergia.com](http://www.barcelonaenergia.com)



■ As part of an overall regeneration scheme, a solar village including 121 solar powered homes is being developed for the primrose hill area in **Kirklees (UK)**. The solar installations will provide 20% of the electricity needs and 50-60% of the hot water needs of the tenants. The project will reduce both the tenants' fuel bills and the carbon dioxide emissions (over 50 tonnes per year). The project has already created social and economic benefits; enthusiasm among tenants, new local jobs and skills in photovoltaic (PV) installation. The project includes a total of 400 kW of PV power in Kirklees. This represents 4.9% of the UK's installed solar PV capacity (in 2004) demonstrating the magnitude of this project. As a next phase solar installations will be included in the new built Yorkshire Housing Group homes. Further information: [www.emasnetwork.org/en/about/bestpractice](http://www.emasnetwork.org/en/about/bestpractice)

■ The Danish Government appointed **Odense** (185 000 inhabitants) as Denmark's official national cycling city (1999-2002) and provided Odense with a grant to carry out this four-year project. The 50 sub-projects concentrated on increasing access for cyclists, ensuring better and safer parking for bicycles and providing services for cyclists such as drinking water and bicycle pumps. As a result of this intensive project 25% of all trips in Odense are made by bicycle. Bicycle use in Odense has increased by 20%; over half of the bicycle journeys are made by motorists who have decided to change their means of transport. The health-related gains of the project are also vast: concrete savings of €1.9 million have been demonstrated for the health sector. But the gains are not only financial, the number of accidents involving cyclists has decreased by 20% and the project has added 500 years to the total lifetime of citizens of Odense.

Further information: <http://www.cyclecity.dk>

■ Situated in northeast Hungary, the **City of Nyiregyhaza** with its 120,000 inhabitants is the seventh largest city in Hungary. Almost one third of the city's housing stock was constructed using

## > How can local and regional governments take action?

> 2. The local and regional government as planner, developer and regulator

industrial technology (concrete panel buildings) in the 60s and 70s. Energy consumption in these buildings is extremely high: they are very poorly insulated, have great amounts of thermal bridges, poor air tightness and severe water infiltration. Decline in the building stock also results in acute social problems and leads to the creation of deprived areas.

In order to improve citizens' comfort and decrease their expenditure the city decided to modernise its district heating system and housing stock. As a first step a programme referred to as «Opening» was launched in 1997 to upgrade secondary side distribution circuits for more than 12,800 flats achieving a considerably lower consumption and the highest possible return on the lowest investment. In the second phase, in 2001, a complex retrofitting of panel blocks, «Panel programme», was launched. However, since most of these flats were privately owned, a common agreement for funding had to be found.

The solution was to share the financing; the retrofitting was financed 1/3 by the state, 1/3 by the city council and 1/3 by the owners. The programme has been a success: already 68 blocks of houses (2890 flats) have been retrofitted successfully and a plan for retrofitting a further 129 building blocks has been prepared.

Evaluation of these complex retrofitting measures proved that an overall 68% saving can be achieved by retrofitted buildings; out of which heating modernisation accounted for 46%, replacement of windows for 13% and insulation of the facade for 9%. Due to the considerable savings that can be achieved and the improvement of the state and value of retrofitted flats, there is great interest in the programme and energy efficiency on the part of citizens.

Further information: [www.energie-cites.org](http://www.energie-cites.org)

*The Beacon Council scheme (England and Wales) on sustainable energy was set up to disseminate best practice in service delivery across local governments. The scheme has been operational since 1999 and each year, the scheme provides a successful, positive way of recognising achievement, spreading best practice and enabling authorities to learn from each other. Further information: [www.idea.gov.uk/beacons](http://www.idea.gov.uk/beacons)*

■ In the **Carrick District Council (England)**, the Beacon Community Regeneration Partnership implemented energy efficiency improvements in the Beacon Housing Estate in Falmouth, once one of the most deprived areas in Cornwall. Every home of the estate was audited and the most appropriate energy efficiency measures decided. Loft insulation, external or cavity wall insulation and central heating were chosen as the measures most likely to quickly and effectively cut energy wastage on the estate. Moreover, other measures such as double-glazing and draught proofing were already available through other schemes. The residents were given a choice of which surface finish and colour they preferred. After the measures were installed each household was given advice on energy saving measures. A two-monthly newsletter and leaflets regularly reiterated these messages.

Some of the major achievements include: energy efficiency improvements have been made to 900 homes; central heating

and insulation measures have been installed in 300 properties in the first year, a total of EUR 274,000 (£186,000) was saved on fuel bills. The Regeneration Partnership believes a range of other changes can also be attributed to the housing improvements: there have been health improvements among residents, including a 50% drop in the numbers suffering from asthma; the local school reports a 100% improvement in the standard school examination results of boys; the crime rate has dropped dramatically, including a reduction in domestic violence incidents and the number of children on the «Children at Risk» Register; vandalism is at an all-time low; there is increased employment; more people are wanting to move to the estate; and there is a remarkable upswing in community spirit.

Further information:

<http://www.idea-knowledge.gov.uk/idk/aio/650659>  
and <http://www.csep.co.uk/>

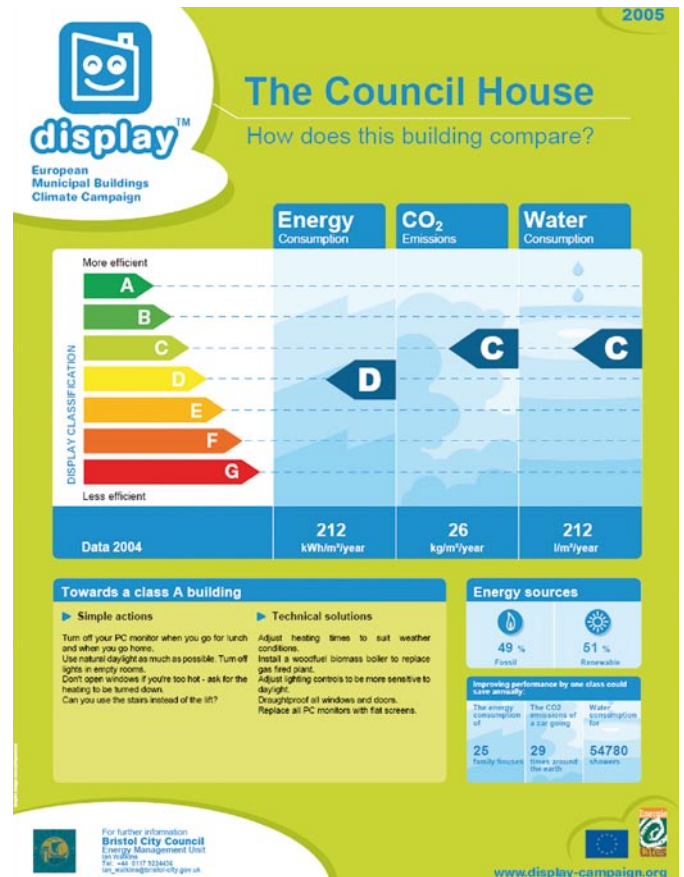


### 3. The local and regional government as advisor and motivator

Local and regional governments can help to inform and motivate residents, businesses, etc., on how they can use energy more efficiently. Apart from savings that consumers make on their energy bills, intelligent energy use will lead to an increase in the quality of life in terms of comfort and health through better indoor air quality.

Opening of the EU electricity markets has meant that each company or private customer can choose their energy supplier. Local and regional governments can give advice on how to choose electricity coming from renewable energy sources. In addition schemes for using renewable energy solutions locally, such as solar panels, geothermal and wind energy, can be encouraged and subsidised.

Awareness-raising is important to engage the whole community in supporting sustainable energy policies. Publications, events and campaigns can be useful tools to reach local citizens and organisations. Children are an important audience for energy saving and renewable projects; they will pass on the lessons learnt also outside of school.



#### Ideas for actions and measures

##### ADVICE AND EDUCATION

- ☐ Provide advice on energy, applications for building permits, waste management and mobility
- ☐ Promote school projects and other demonstration projects for energy saving and climate protection
- ☐ Provide information and training for planners, architects and other relevant professionals
- ☐ Provide incentives, for example by establishing grant programmes for energy savings, combined heat and power generation, renewable energy, etc.

##### AWARENESS-RAISING AND CAMPAIGNS

- ☐ Raise awareness through publications, news in the local newspapers and by organising special events

- ☐ Participate in and use attractive European level initiatives such as the Display™ Campaign and the European Mobility week to raise awareness on energy and transport issues in your community
- ☐ Make sure that successful local projects are published so that others can learn from them

##### COOPERATION AND PARTNERSHIPS

- ☐ Work in partnership with local people and organisations (citizens, housing associations, businesses, farmers, forest owners, etc.)
- ☐ Establish a strong partnership with local and regional energy agencies that are familiar with energy management
- ☐ Cooperate and exchange experiences with other local and regional governments, either in your country or in other countries

### Local examples

■ Based on the idea that work towards sustainable development has to be practical and successfully integrated into the everyday life of citizens the **City of Tampere (Finland)** (200 000 inhabitants) founded the Centre for Urban Environment - Moreenia. The new organisation was set up by the City of Tampere and a regional waste management company, and managed and financed together with the other municipal utilities and companies. The centre provides information services, organises training, seminars and events such as the European Mobility Week, Car Free Day and the Energy Saving Week.

Together with the city's education department, a special lecture and an exhibition on climate change and energy use has been developed targeted to all the 6th grade school children in Tampere. The centre also has a special kitchen where all schoolchildren are invited on their home economics lessons to learn how to save electricity and water. In addition a modest library has been established which includes Internet service providing information, games, quiz type programmes such as «Calculate your ecological footprint».

*The European Display™ Campaign encourages local governments to publicly display the energy and environmental performances of their buildings using the same energy label as for household appliances. The campaign is aimed at raising public interest in energy and climate issues in a communicative and educational way. The idea is to make citizens more conscious of their energy consumption; to reduce energy use and greenhouse gas emissions; and to achieve financial savings. Further information: [www.display-campaign.org](http://www.display-campaign.org)*

■ With the Display™ Campaign, the **municipality of Almada (Portugal)** (160 000 inhabitants) aims to anticipate the transposition of the European Buildings Directive (2002/91/EC) in Portugal. The objective of the city council is to raise awareness among building users by displaying information on their energy and water consumption. In June 2004, the local government put up the first Display poster in the Pragal primary school, presented the campaign at a national meeting of local energy agencies and published an article in the national magazine «Municipalities and Cities». Since then, many more buildings have been assessed and Display posters put up mainly in schools.

Displaying building performances on A2-size posters has led a number of citizens to reflect on their energy consumption, especially children, who also communicate at home what they have learnt at school. In addition the Campaign is also interesting for energy professionals. It provides a calculation tool, which can be used for monitoring the energy use of buildings and is therefore a useful tool for energy management. The Campaign has led to improvements in the organisation of technical data, a necessary step in any building assessment process.

Further information:

[http://www.display-campaign.org/page\\_142.html](http://www.display-campaign.org/page_142.html)

*The Climate Star Award, founded by the Climate Alliance awards exemplary activities in tackling climate change at local level and highlights the experiences gained and successes achieved across Europe. As well as rewarding excellence, it promotes exchange between local and regional governments.*

Further information: <http://www.climate-star.net>

### *4. The local and regional government as producer and supplier*

Local and regional governments can promote local energy production and the use of renewable energy sources in local energy production. Combined Heat and Power (CHP) district-heating systems using biomass instead of oil are good example. Locally produced energy will have both local employment and positive social and regional development effects. It will also help to reduce dependencies on energy resources from other parts of the world.

#### *Ideas for actions and measures*

##### **LOCAL ENERGY PRODUCTION AND SUPPLY**

- ☐ Increase the share of cogeneration and the use of renewable energy
  - Combined Heat and Power (CHP) district-heating systems
  - Small-scale heating systems for buildings and districts
- ☐ Extend the district-heating network where cost-effective
- ☐ Develop a simple metering and billing system (for electricity, gas and heat), which encourages to control and reduce consumption
- ☐ Monitor utilities and other energy companies in your area (where relevant)
- ☐ Promote the use of renewable energy

### Local examples

■ At the end of 1999, the **City of Stuttgart (Germany)** investigated how the waste wood produced within the city could be used to heat municipal buildings. Every year around 60,000 m<sup>3</sup> of waste material (cut trees and bushes) is collected from the parks and green areas in the city of Stuttgart (590 000 inhabitants). This waste is chopped and subsequently either disposed of or used in municipal parks. Approximately 30% of the wood fraction can be used for heating. Therefore by using the wood as an energy source, the costs of disposal are significantly reduced.

To find locations for the installation of wood chip boilers several criteria had to be taken into account. Because the investment costs for small plants are rather high, only boiler houses with an annual consumption of more than 1000 MWh were considered since wood boilers are significantly larger than standard gas boilers, several boundary conditions had to be taken into account: The buildings must allow large delivery trucks to reach the storage; the boiler house must be large enough for a wood chip boiler; and the chimney size needs to be right. After the necessary analyses three wood chip boilers were recommended for a vocational school, a municipal greenhouse with a 10,000 m<sup>2</sup> heated section and an indoor pool from which heat is also delivered to a school building and fire department.

The three wood-fired systems produce 7,000 MWh of thermal energy per year. The fraction covered by the wood boilers is approx. 80%, reducing the fossil fuel consumption by 75%. Compared to the former energy costs the bill is reduced by approximately €217,000 annually. Considering the additional expenses for ash disposal, operation, repairs and maintenance, the net savings are €200,000 per year. The overall investment cost is €2.1 million, which makes the pay-back period approximately ten years. This analysis shows that using wood as a fuel is not only limited to rural areas.

■ **The City of Wuppertal (Germany)** (360 000 inhabitants) is using the town's waterworks to produce electricity. In the future, the city will be able to produce around 1.3 million kWh/a of hydro electric power by using the two dams and the water pipes of the waterworks. In 2003 a feasibility study showed that it would be worthwhile to also make use of two nearby dams, which are used for the city's water supply, for electricity production. The incline of the pipes as well as the volume of water is sufficient for three new hydroelectric power plants. One plant is already delivering power and the others will be operational by 2006. This project demonstrates how alternative approaches can create new opportunities. Energy production has become an environmentally friendly sideline for the Wuppertal Valley's water suppliers.

■ **The City of Munich (Germany)** received the «Capital of energy efficiency» award in Germany in 2005. As part of a comprehensive climate protection programme, the city offers the roof surfaces of their public buildings for private photovoltaic investments. The city has developed a tendering scheme to select investors to use public roof surfaces. The scheme is also open to citizens' groups. If there are several applicants for one roof, the winner is selected through a draw. Users sign a contract allowing them to use the roof under certain conditions; they are required to pay a deposit over the contract period; they are responsible for checking the condition of the roof surface; and they are required to display the system to the public. The roofs are free of rent. The scheme has increased the possibilities of photovoltaic investments because to many public and private owners and administrators of roof surfaces, the procedure for selecting an investor has proven to be an obstacle to the use of roofs for solar energy generation.

■ **The Northern provinces of the Netherlands** are engaged in a project that is producing 22 different types of small wind turbines. The project is run together with three provinces (Groningen, Friesland and Drenthe) and six manufacturers of wind turbines. This pilot project is testing how to introduce small wind turbines in the Netherlands. Due to the various

locations of the turbines, the project has also provided a good opportunity to test in practice how to deal with building application procedures (permit procedures). On the basis of this experience the project can make policy recommendations on how to help to introduce new technology at local and regional levels.

### Monitoring progress

*It is useful to monitor - in quantitative terms - the progress made in energy management. Using a small set of indicators can allow local and regional governments to evaluate their achievements and decide on the further actions needed.*

#### ENERGY MANAGEMENT

- Energy consumption of municipal buildings (Average performance index, kWh/m<sup>2</sup>/building category)
- Total electricity consumption (m<sup>2</sup>/year)
- Share of electricity consumption in public buildings covered by certified Green Electricity (%)
- Budget of municipal energy management (euros/inhabitant/year)

#### LOCAL ENERGY PRODUCTION AND RENEWABLES

- Share of renewable energies in the energy production of municipal utilities (%)
- Share of CHP electricity in total electricity consumption (%)
- Installed area of solar collectors (m<sup>2</sup>/1000 inhabitants)
- Energy from biomass; capacity installed in a) CHP b) heat (kW/1000 inhabitants)

#### PLANNING

- Designated new development areas where the use of renewable sources of energy is a priority or an obligation (%)

#### TRANSPORT

- Proportion of all journeys undertaken by private car (%)
- Capacity use of local public transport systems

*Further information on monitoring and evaluating energy and climate protection plans and programmes:*

*Climate Alliance methodologies:*

<http://www.climatealliance.org>

*European Climate Menu:*

<http://www.climatemenu.com>

*Aim Solarcity (monitoring system on renewable energy):*

<http://www.aim-solarcity.net/basics/intro.html>



## [ 4. Climate protection ]

An increasing number of local and regional governments have started to develop comprehensive climate protection programmes or climate policies. They have signed commitments and plans of action that provide a comprehensive response to climate change including setting emission reduction targets and identifying local priorities and actions to reduce the impact of changing weather such as developing educational programmes on climate change and improving emergency plans.

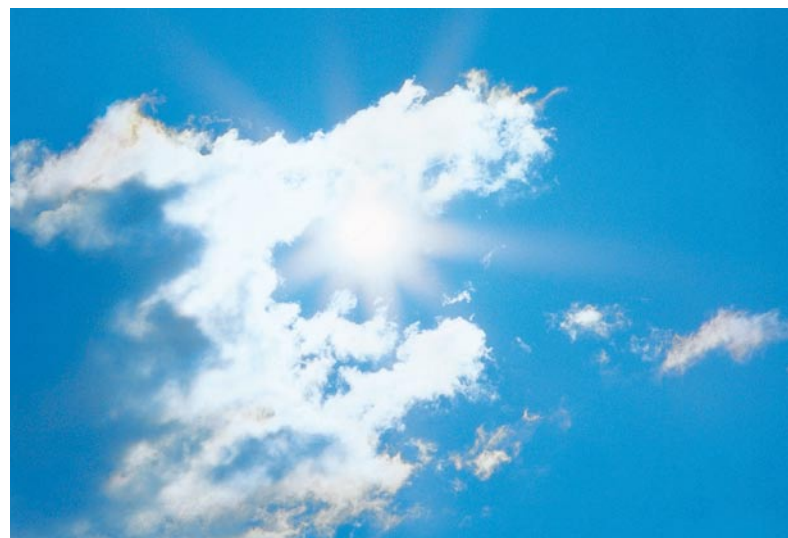
Energy related targets and actions are always an important part of these programmes and policies. Tackling sustainable energy issues is a concrete way to start climate protection at local level. The roles of local and regional government and the measures described in this guide also apply to climate policies.

However, a comprehensive climate policy should also consider the global impacts of local energy use and include actions on policy areas such as waste management and agriculture as well as raise awareness on climate related issues in land use planning, development and construction. Also the local and regional governments vulnerable for example to extreme weather conditions should assess how to adapt and increase their resilience to climate change.

Further information on how to tackle relevant sectors in local climate policy, and to initiate a process for climate change related policies and measures, please visit

<http://www.climate-compass.net>

<http://www.climatealliance.org>



## Assistance from national governments - The Dutch example

*National frameworks can be very valuable and provide both assistance and funding opportunities for local action. The Dutch Government has set up a mechanism to promote local climate policies.*

*Municipal climate policy in the Netherlands is based on a covenant between the central government and representative bodies from the municipalities and provinces. The Ministry of Housing, Spatial Planning and the Environment makes subsidies available so that municipalities have more capacity for implementing climate policies.*

*Due to the different sizes and circumstances of the municipalities, they can decide themselves the topics on which they will focus their climate policy. The main themes for the local climate programmes are: municipal buildings and installations, housing, businesses, agricultural sector, traffic and transport, sustainable energy and international activities. The municipalities will also define the ambition of their policy; distinctions are made between active*

*policy, leading policy and innovative policy. The national framework defines goals for each ambition level, which encourages municipalities to have similar projects and allow them to exchange experiences and learn from each other.*

*When it comes to the implementation of the climate policy, numerous departments are involved. Municipalities are also forming partnerships and implementing climate policies jointly. The Netherlands Agency for Energy and the Environment (SenterNovem) advises municipalities in implementing the climate programme. Support is available in the form of an advisor who often works with the municipality for some time. Policy and planning tools, best practices and a helpdesk are also available. All this is possible because SenterNovem is paid by the national government and therefore the services are free of charge to local governments.*

*Further information:*

[www.senternovem.nl/english](http://www.senternovem.nl/english)

[www.vrom.nl/international](http://www.vrom.nl/international)

## Local examples

■ In 1996, the **Swedish Municipality of Växjö** unanimously adopted a programme with an objective to stop using fossil fuels. One of the measures set, is to convert its energy system to be fuelled by biomass. The municipal energy company has gradually increased the share of biomass in the district heating system and started buying eco-labelled electricity for part of their electricity use. Since 2003, 100% of the electricity consumed by all seven municipal companies is certified with the

Swedish green energy label «Bra Miljöval» (Good Environmental Choice). In 2004, the level of fossil CO<sub>2</sub> emissions for Växjö has decreased by 25% per person compared to 1993. In addition to the environmental benefits, new jobs have been created in the bio-energy sector. Furthermore, the sustainable energy system attracts environmental tourism and brings technical visits to town. *Further information:*

[http://www.vaxjo.se/english/fossil\\_fuel\\_free.html](http://www.vaxjo.se/english/fossil_fuel_free.html)

■ **The City of Vienna (Austria)** initiated its climate protection programme (Klip) in 1999. Between 1990 and 2002 annual CO<sub>2</sub> emissions in Vienna were reduced by 3% to approximately 6.3 million tons. The most successful measures of the programme include district heating development, increasing efficiency in power stations, thermal insulation of buildings and development of public transport. The Klip covers five areas of action: district heating and power generation, housing, enterprises, mobility, and city administration (procurement and environmental management). In the future priority will be given to energy saving measures. The City of Vienna launched a process in 2004 to prepare an «Energy Saving Concept» for the city. Private households, businesses, services, industry, public institutions, agriculture and traffic will be assessed as to their saving potential and subsequently a framework for conditions and implementation measures will be developed.

■ Together with a variety of local and national partners the City of **Chalon sur Saône (France)** (52 000 inhabitants) is implementing a project referred to as «Privileges» to combat climate change and reduce greenhouse gas emissions. The project is made up of a series of actions; in particular three different action plans aimed at the local industry, the local authority and the public. The industry action plan includes measures on energy and waste management and aims to encourage local businesses to change their practices and engage in environmental management. To prepare the local authority action plan, innovative local actions throughout Europe were collected and assessed to identify the necessary conditions to implement these best practices in Chalon-sur-Saône. The action plan defining targets in all local competences has been adopted. A special action plan is also directed at the public, encouraging citizens to contribute to the climate protection policies. The plan includes for example energy efficiency measures for public and activities for school children.

Further information: <http://www.programme-privileges.org/>

■ **Venice City Council (Italy)** passed an energy strategy in October 2003 aimed at creating a tool to reduce greenhouse emissions and promote a more responsible approach to the use of energy. Local government, industrial representatives, service providers and citizens developed the strategy jointly. The strategy introduced so-called Action Cards: activities that are either already ongoing or being planned are recorded on these cards and are regularly assessed with regard to their relevance to the city's climate protection goals.

The City Energy Strategy contains a series of guidelines, describing ways to encourage the adoption of best available energy techniques, support the integration of energy into City Government plans and regulations, and inform consumers and retailers about energy-efficient products. Moreover, the strategy identifies key actions that can change current trends of energy supply and demand, and define quantitative targets for energy consumption and transport. For example in residential areas improvements such as double-glazed windows, better insulation, high efficiency natural gas burners and solar water heaters, should reduce residential energy use by 39% by 2010. In the service sector innovative construction and energy management techniques could reduce energy use by 11% by 2010.

## 5. European Dimension

### *The main European funding mechanisms*

In addition to national and regional funding possibilities, local and regional governments can apply for funding for their activities from European funding schemes. In this section some of the existing funding options are presented. The European funding schemes usually require co-funding of approximately 50% of the eligible costs of the projects. This means that the 50% of funding needs to derive from other sources.

The **EU Structural and Cohesion Funds** are the EU's main funding source for regional development and economic and social cohesion. They make up more than one third of the EU's total budget and play an important role in fostering local and regional restructuring across the Union. In addition to the cohesion fund, which supports large infrastructure projects in the field of environment and transport, there are four structural funds: the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Financial Instrument for Fisheries Guidance (FIFG) and the guidance section of the European Agricultural Guidance and Guarantee Fund (EAGGF).

The structural funds finance multi-annual programmes, which are part of development strategies drawn up in partnership with local and regional government, the Member States and the European Commission. Contrary to the EU programmes described later (e.g. the Intelligent Energy Programme), the structural funds are not directly allocated to projects chosen by

the Commission. The overall strategic priorities and the general implementation framework are agreed at European level. The choice of projects, however, and their management are the responsibility of the national and regional authorities.

In the current funding period (2000-2006), the Commission has encouraged sustainable regional development projects that take into account energy efficiency and the creation of a diversified energy sector. The new structural funds programmes will run from 2007 to 2013. Although the regulatory framework has not yet been finalised, a clear focus on measures promoting energy efficiency and renewable energy sources is apparent. In principle, renewable energy and energy efficiency projects will be eligible under each of the three new structural funds objectives – convergence; regional competitiveness and employment; and territorial cooperation.

Structural funds can co-finance a broad variety of initiatives, from environmentally sound public procurement to improving energy performance of buildings; from sustainable urban transport systems to awareness-raising and support activities for businesses or public authorities. The level of co-financing varies, depending on regions and objectives, from 50% under the regional competitiveness objective to a maximum of 85% of cohesion fund support to the EU's outermost regions and islands.

EU Funding for the Environment: A handbook for the 2007-2013 programming period: <http://assets.panda.org/downloads/eufundingforenvironmentweb.pdf>

RUSE project on improving energy efficiency through structural funds:  
[www.ruse-europe.org](http://www.ruse-europe.org)

Sustainable energy and the structural funds - guidelines:  
<http://www.bacchus.aeidl.be/guidelines.htm>

*The energy experts of the **Szeged's (Hungary)** hospital made skilful use of Hungary's EU pre-accession funding opportunities. They put forward a convincing plan of action for the hospital's new energy system. The old steam boilers were replaced as was all piping, and new radiators were installed. A computer system guarantees highly efficient control of the new system. As a part of the project a total area of 2,800 m<sup>2</sup> of solar panels will be installed on the roof of the hospital. The clever application for subsidies now leaves the town with one fourth of the project's cost - the rest will be divided between the national government and the EU.*

«**Intelligent Energy - Europe**» (IEE) is the EU's support programme for non-technological actions in the field of energy. The duration of the programme is from 2003-2006. A new Intelligent Energy - Europe programme is foreseen for the period 2007-2013 as a part of the Competitiveness and Innovation Framework programme, (CIP).

The IEE programme is structured in four fields:

SAVE - improvement of energy efficiency and rational use of energy, in particular in the building and industry sectors

ALTENER - promotion of new and renewable energy sources for centralised and decentralised production of electricity and heat and their integration into the local environment and the energy systems

STEER - support for initiatives relating to all energy aspects of transport, the diversification of fuels, such as through new developing and renewable energy sources, and the promotion of renewable fuels (biofuels) and energy efficiency in transport  
COOPENER - support for initiatives relating to the promotion of renewable energy sources and energy efficiency in the developing countries, in particular in the framework of the Community cooperation with developing countries in Africa, Asia, Latin America and the Pacific. (Not foreseen in the future IEE programme)

For further information please visit:

[http://europa.eu.int/comm/energy/intelligent/index\\_en.html](http://europa.eu.int/comm/energy/intelligent/index_en.html)

*The **Municipality of Brasov (Romania)** created a local energy and environment agency - Agenția pentru Managementul Energiei și Protecția Mediului Brasov (ABMEE) - with the support of the SAVE programme. ABMEE has developed very efficient and pragmatic energy management software, which was adapted to the Romanian situation. By using this software the energy consumption of all municipal buildings is monitored and updated. The monitoring also facilitates other activities such as educational and sports activities in schools around energy efficiency issues.*

*ABMEE also manages an Energy Info Point located in the city centre (supported by the PHARE programme). The Info Point provides information to the public and professionals on indoor lighting, energy requirements of buildings, etc. As a next step ABMEE is planning to implement municipal energy planning that will cover all the functions of the city. Further information: <http://www.abmee.ro/site/main.php>*



**The Framework Programmes for Research and Development** provide funding for large-scale research and pilot projects.

- CONCERTO is a major European Union Initiative, which supports local communities - urban, suburban, or rural - in developing sustainable and highly energy-efficient policies. CONCERTO is part of the **Sixth Framework Programme for Research and Development** (2002-2006), technological development and demonstration (RTD), funded under the «Sustainable Energy Systems» thematic sub-priority.
- CIVITAS supports local communities wishing to test and demonstrate the effectiveness of integrated actions towards sustainable mobility.

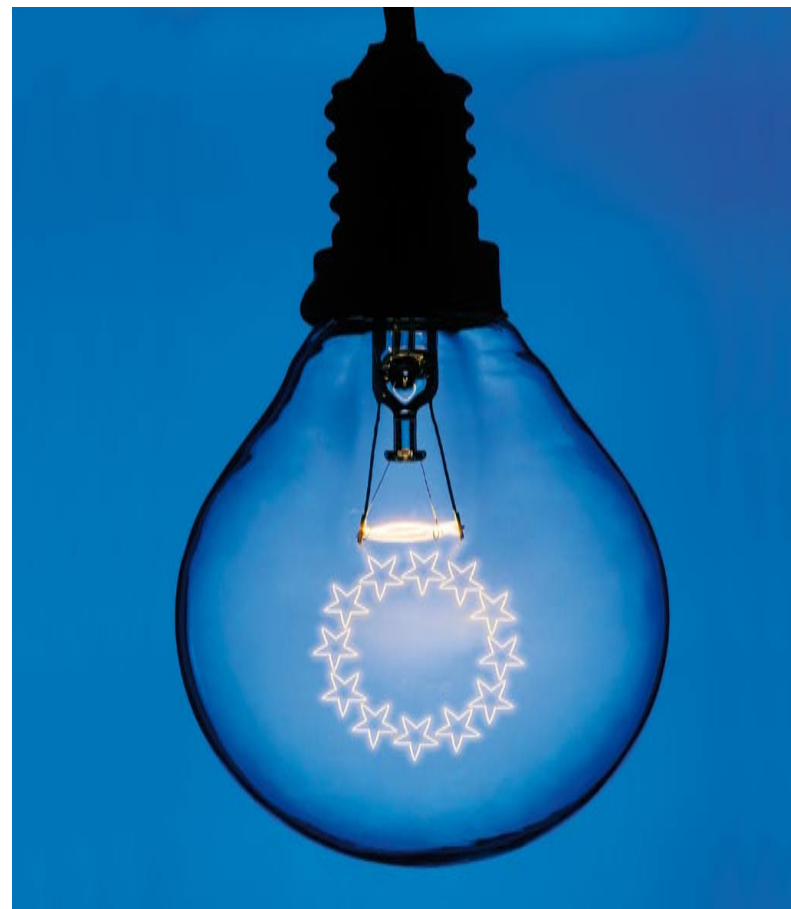
Calls for Proposals for both initiatives can be found at:  
<http://fp6.cordis.lu>

The Commission has also presented its official proposal for the **7<sup>th</sup> Framework Programme for Research and Development (FP7)** for the period of 2007-2013. FP7 focuses on innovation and knowledge for growth and is implemented via four specific programmes: cooperation, ideas, people and capacity. The cooperation programme is divided into nine sub-programmes and supports cooperation between universities, industry, research centres and public governments across the EU and with the rest of the world. Under each thematic area, four different types of funding schemes are available: collaborative research projects, networks of excellence, coordination/support actions and dissemination of knowledge.

One of the nine sub-programmes is dedicated to energy. A clear emphasis is placed on research on renewables and on low CO<sub>2</sub> emitting power generation as well as smart energy networks, energy efficiency and knowledge of energy policy

making («development of tools, methods and models to assess the main economic and social issues related to energy technologies and to provide quantifiable targets and scenarios for medium and long-term horizons»).

Further information: <http://www.cordis.lu/fp7/guidance.htm>



European Commission

## **Relevant recent legislative measures**

### ***Directive on Renewable Electricity (2001/77/EC)***

The directive on renewable electricity establishes a framework to increase the share of green electricity (from 14% to 22% by 2010) and to double the share of renewable energy (from 6% to 12% by 2010). The Directive

- Sets quantitative (indicative) national targets for renewable electricity
- Establishes national support schemes for renewable energy
- Simplifies national administrative procedures for installations producing green energy
- Guarantees access to transmission and distribution of electricity from renewable energy sources.

Further information: [http://europa.eu.int/comm/energy/res/legislation/electricity\\_en.htm](http://europa.eu.int/comm/energy/res/legislation/electricity_en.htm)

### ***Directive on Energy Performance of Buildings (2002/91/EC)***

The directive on the energy performance of buildings aims to increase the energy performance of public, commercial and private buildings in Member States. The Directive sets

- A general framework for a methodology to calculate the energy performance of buildings;
- Minimum standards for the energy performance (determined by Member States), being applied both to new and existing large buildings that are subject to major renovation;
- A system of energy certification of buildings, which makes energy consumption visible to users;
- A system for regular inspection and assessment of heating and cooling installations.

Further information: [http://europa.eu.int/comm/energy/demand/legislation/buildings\\_en.htm](http://europa.eu.int/comm/energy/demand/legislation/buildings_en.htm)

### ***Directive on biofuels (2003/30/EC)***

The directive on biofuels requires an increasing proportion of diesel and gasoline sold in the Member States to be biofuel. Targets will have to be set for the market share of biofuels based on challenging benchmarks: 2% market share by December 2005; and 5.75% market share by December 2010.

Further information: [http://europa.eu.int/comm/energy/res/legislation/biofuels\\_en.htm](http://europa.eu.int/comm/energy/res/legislation/biofuels_en.htm)

### ***Directive on the promotion of cogeneration (2004/8/EC)***

The directive on the promotion of cogeneration sets a framework for supporting and facilitating the construction and operation of cogeneration installations' to overcome existing barriers, to increase the market share of cogeneration and to help mobilising un used potentials.

Further information: [http://europa.eu.int/comm/energy/demand/legislation/heat\\_power\\_en.htm](http://europa.eu.int/comm/energy/demand/legislation/heat_power_en.htm)

### ***Directive on Energy End-Use Efficiency and Energy Services (COM (2003) 739)***

This directive aims to encourage energy efficiency measures and to promote a market for energy services. It sets an indicative energy saving target of 9% in 9 years. The target should be reached through obligatory national energy efficiency action plans and a benchmarking system.

Further information: [http://europa.eu.int/comm/energy/demand/legislation/end\\_use\\_en.html](http://europa.eu.int/comm/energy/demand/legislation/end_use_en.html)

## **Legislation in progress**

In 2005 the European Commission published a **Green Paper on Energy Efficiency**, in which it proposes to reverse the trend of increasing energy use and to reach a 20% energy saving target by 2020 in a cost-effective way. Examples of how the target could be achieved include: annual energy efficiency action plans at national level; improved energy pricing and taxation; using public procurement to kick-start new technologies; extending the scope of the European "Buildings Directive" to all renovations; and finding new and improved ways for financing.

Further information: [http://europa.eu.int/comm/energy/efficiency/index\\_en.htm](http://europa.eu.int/comm/energy/efficiency/index_en.htm)

In 2005, the European Commission adopted a **Biomass Action Plan (COM (2005) 628)**, which announces new measures to boost the use of biofuels as well as prospective actions on cooling and heating from renewable energy sources. It also encourages the development of national action plans on biomass.

Further information: [http://europa.eu.int/comm/energy/res/biomass\\_action\\_plan/green\\_electricity\\_en.htm](http://europa.eu.int/comm/energy/res/biomass_action_plan/green_electricity_en.htm)

## 6. European Partnership - networking towards sustainable energy policies

### *Local government networks engaged in sustainable energy policies*

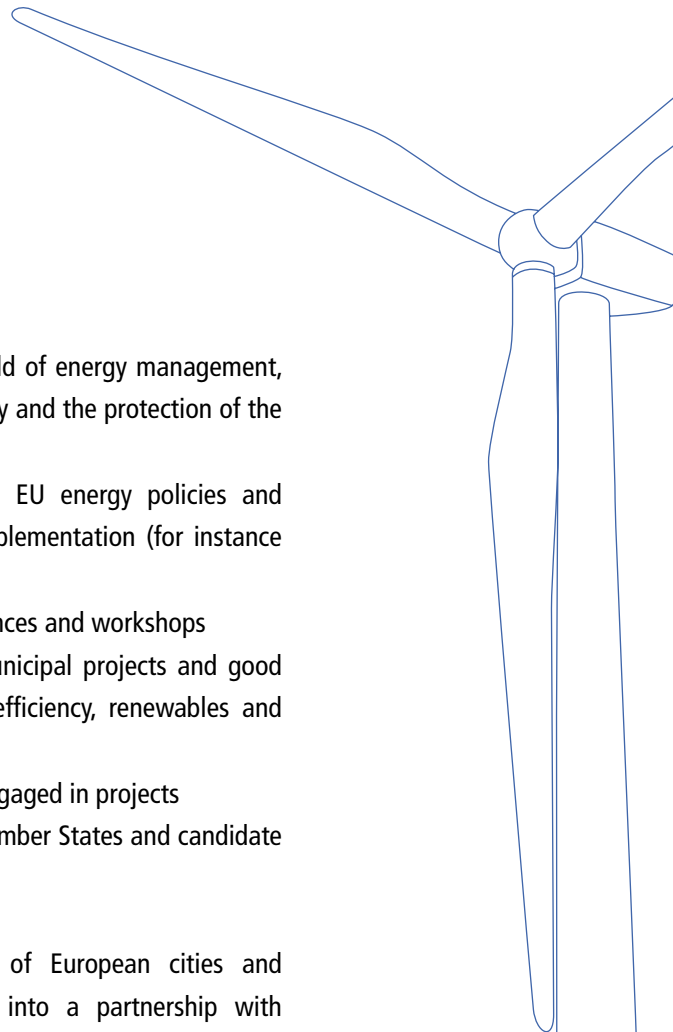
At European level there are a number of committed local government networks and associations working in the field of energy, transport and climate protection policies. These networks and associations work towards promoting good practice and facilitate the exchange of experience at European level. By joining these networks and participating in various European Campaigns, the local and regional governments can establish partnerships, exchange experiences and make further commitments to sustainable energy.

In order to facilitate the local and regional energy action, CEMR together with its member associations and their members, and in collaboration with the European Commission, has initiated a network of energy advisors and experts. The members of the **CEMR network on energy issues** are local and regional government representatives dedicated to reduce the energy and water consumption in their municipalities and regions.

The aims of the network are to:

- provide timely input from local and regional governments to the formulation of Community legislation, programmes, actions and initiatives;
- collect and disseminate information relevant for local and regional governments throughout Europe;
- facilitate the exchange of experience between its members;
- contribute to the move towards a low carbon economy through developing a shared vision for the future of energy usage;
- promote the wide implementation of the Aalborg Commitments in relation to the energy, transport and climate protection objectives [www.aalborgplus10.dk](http://www.aalborgplus10.dk).

**Energie-Cités** is a non-profit association of European municipalities committed to sustainable energy policies and willing to share their experience and know-how. There are more than 120 member cities (including collective members), hence a total of more than 400 European cities from 25 countries are involved in the activities of the association.



The main activities are:

- Exchange of experience in the field of energy management, the promotion of renewable energy and the protection of the environment
- Dissemination of information on EU energy policies and launch of campaigns for their implementation (for instance for the directive on buildings)
- Organisation of meetings, conferences and workshops
- Analysis and dissemination of municipal projects and good practices in the field of energy efficiency, renewables and decentralised production
- Networking with municipalities engaged in projects
- Strong priority is given to new Member States and candidate countries

**Climate Alliance** is a network of European cities and municipalities that have entered into a partnership with indigenous rainforest peoples to pursue the common objective of preserving the global climate. The Climate Alliance strives for a comprehensive approach to climate change policy, based on the commitment and the diversity of approaches at the local level. This initiative is a part of the efforts towards sustainable development and North-South equity. The Climate Alliance has some 1,300 members in 14 European countries. The Climate Alliance helps members to develop comprehensive climate protection strategies and to take a broad range of measures for their implementation, notably in the energy and transport sectors. Moreover, the Climate Alliance represents the interests of local governments committed to climate protection at national and international levels. Its Secretariat coordinates the activities, prepares recommendations and guidelines, disseminates good practice, initiates projects and campaigns, and evaluates the activities.

## European Campaigns

The **European Display™ Campaign** encourages local governments to publicly display the energy and environmental performance of their buildings, using the same energy label as for household appliances. The campaign intends to raise public interest in energy and climate issues in a communicative and educational way.

Further information: [www.display-campaign.org](http://www.display-campaign.org)

The **European Mobility week** is a European initiative directed to local authorities. Every year local authorities are encouraged to organise a full week of events dedicated to sustainable mobility. The objective is to facilitate widespread debate on the need for changes in behaviour in relation to mobility and in particular the use of the private car. The Car Free Day is the highlight of the Week.

For more information on mobility week or a car free day, please visit <http://www.mobilityweek-europe.org>

The **Cities for Climate Protection (CCP)™ Europe** is the European branch of a worldwide movement, which aims to slow down the earth's warming trend and to improve local air quality and urban liveability by empowering local authorities to reduce greenhouse gas emissions. The Campaign aims to strengthen local commitment to reduce emissions; develop and disseminate tools that increase local capacity and enhance strategies for energy efficiency; promote best practices to reduce energy use in buildings and transport and provide a collective voice for local governments vis-à-vis national governments and the United Nations Framework Convention on Climate Change (UNFCCC). For further information visit:

<http://www.iclei-europe.org/index.php?id=ccpeurope>

**ManagEnergy** is a European Commission initiative to support local actors working on energy efficiency and renewable energies. ManagEnergy organises training workshops and European energy events, which are also provided online in video recordings [www.managenergy.tv](http://www.managenergy.tv). Information is provided on concrete examples showing what works and what does not

work at local level. Information on European legislation and programmes is updated on a daily basis and the ManagEnergy portal offers an online partner search engine with thousands of organisations searching for project partners.

An electronic monthly bulletin allows local actors to be updated on major European and local energy events and news. Local and regional governments are also invited to send their own project results to ManagEnergy for publication or to organise energy events in collaboration with ManagEnergy. To register for the monthly bulleting or to participate in other ManagEnergy activities contact [www.managenergy.net](http://www.managenergy.net)

**Sustainable Energy Europe 2005-2008** is a public awareness Campaign launched by the European Commission to facilitate the achievement of EU energy policy goals and targets in the fields of renewable energy sources, energy efficiency, clean transport and alternative fuels. The initiative aims to increase intelligent energy production and consumption by means of raising awareness, ensuring public understanding and support, sharing best practice and stimulating necessary trends towards investments in sustainable energy technologies.

The Sustainable Energy Partnership is the main instrument of the Campaign and is designed to actively involve and promote projects, programmes or products, which make a significant contribution to sustainable energy production or use. Becoming a Partner is an expression of commitment to the objectives of the Campaign and vice-versa, a strong signal of support and acknowledgement from the European Commission of activities undertaken by local, regional and national energy stakeholders.

The Campaign aims to support and promote actions related to the following areas: communities (regions, cities, islands, rural areas and communities aiming at 100% renewable energy supply), transport, buildings, lighting systems and appliances, cooperation with developing countries, and promotion and communication.

Further information: [www.sustenergy.org](http://www.sustenergy.org)

## More information sources

### Tools and methods

Methodologies for local climate policy

<http://www.climatealliance.org>

Climate compass

<http://www.climate-compass.net>

European Climate Menu

<http://www.climatemenu.com>

Aim Solarcity - monitoring and information system for local governments

<http://www.aim-solarcity.net/basics/intro.html>

Local, regional and national energy agencies (EU25)

<http://www.managenergy.net/emap/maphone.html>

DG Regio - database of good examples funded through structural funds

[http://europa.eu.int/comm/regional\\_policy/projects/stories/index\\_en.cfm](http://europa.eu.int/comm/regional_policy/projects/stories/index_en.cfm)

European platform for Mobility Management: case studies on mobility issues

[http://www.epomm.org/epomm\\_examples\\_all.phtml?sprache=en](http://www.epomm.org/epomm_examples_all.phtml?sprache=en)

### Best practice and guidance

Energie-Cités - extensive collection of local examples

<http://www.energie-cites.org>

ELTIS - European Local Transport Information Service: case studies on mobility and transport

<http://www.eltis.org/en/indexcse.htm>

IntellEbase - database of EU funded Altener and Save projects

<http://europa.eu.int/comm/energy/iebase/introduction.cfm>

UK, The Energy Savings Trust - guidance, case studies and publications

<http://www.est.org.uk>

Sustainable mobility initiatives for local environment

<http://www.smile-europe.org>

DG TREN - database of Technology demonstration projects (renewable energy sources)

[http://europa.eu.int/comm/energy/res/sectors/bioenergy\\_successful\\_projects\\_en.htm](http://europa.eu.int/comm/energy/res/sectors/bioenergy_successful_projects_en.htm)

Cleaner and better transport in cities

<http://www.civitas-initiative.org>

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