

# **Sustainable energy policies by EU regions and cities: good practices and challenges**

**Report written by**

**Progress Consulting S.r.l. and Living Prospects Ltd.**

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# 1. Survey report

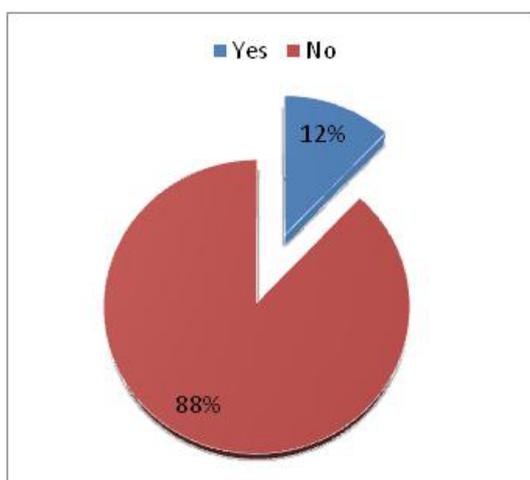
## 1.1 Introduction

The key objective of the survey on ‘Sustainable energy policies by EU regions and cities: good practices and challenges’ is to identify the opportunities and challenges of current energy saving and renewable energy policies and the role of different government levels in this area.

The survey was launched by the Committee of the Regions, through its Europe 2020 Monitoring Platform and in cooperation with the European Commission and the Covenant of Mayors, on 4 May 2010 with a final deadline on 20 July. In total, 204 valid questionnaires were completed and submitted by Local and Regional Authorities (LRAs) from 21 EU Member States.

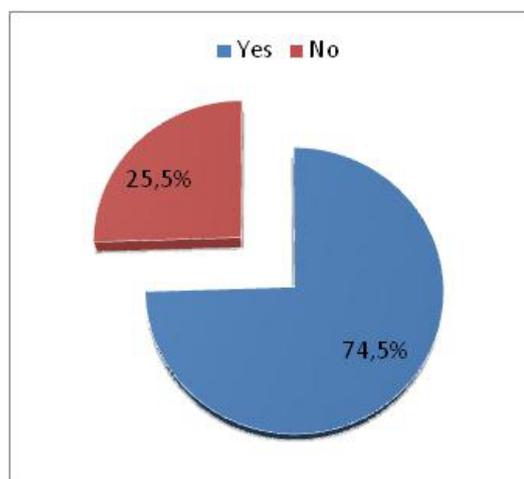
The results of the survey are intended to improve the understanding of the policy options being implemented, of the challenges facing LRAs, and of the main areas of success, as well as providing examples of good practices across European regions and cities.

### **Member of the Europe 2020 Monitoring Platform (formerly Lisbon Monitoring Platform)**



*Chart 1: Percentage of respondents that are members of the Europe 2020 Monitoring Platform.*

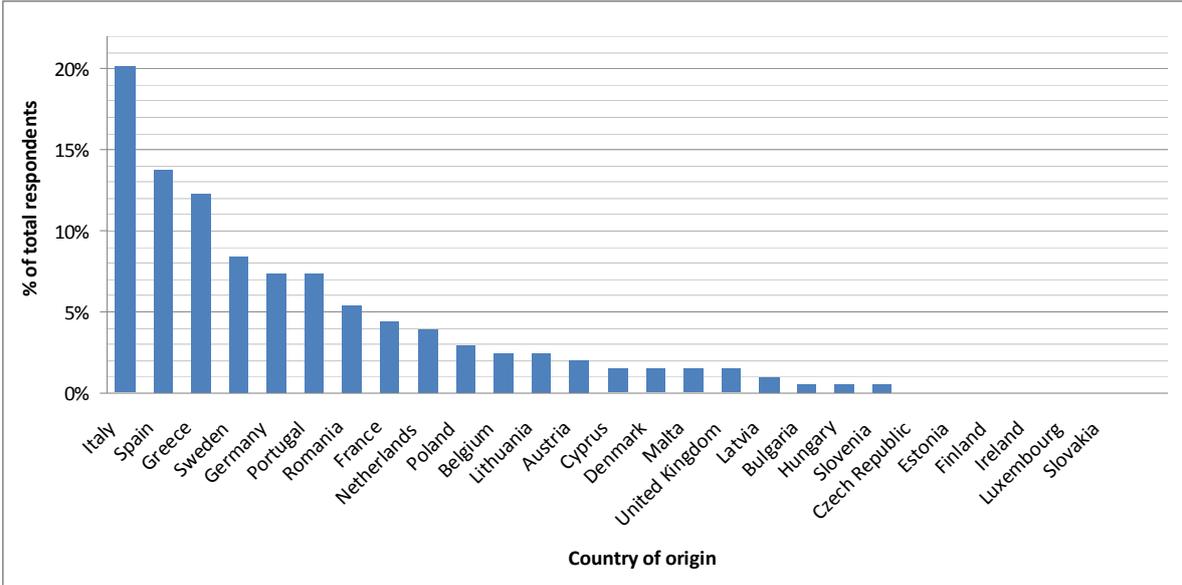
### **Signatory to the Covenant of Mayors**



*Chart 2: Percentage of respondents that are signatory to the Covenant of Mayors.*

Some of the contributors (12% of the total) are members of the Europe 2020 Monitoring Platform (formerly Lisbon Monitoring Platform) while almost three-quarters of them (74.5% of the total) have signed the Covenant of Mayors. Despite the fact that LRAs from six EU Member States have not participated in the survey, the geographical distribution of contributors is adequately balanced, covering regions and cities from Western (e.g. Grand Dole, Town of Annecy), Central (e.g. Carinthia, Brussels), Eastern (e.g. Vaslui, Slubice), Northern (e.g. city of Newcastle, Malmø) and Southern (e.g. region of Crete, Strovolos) Europe, including the new Member States.

**Geographical distribution of contributors**



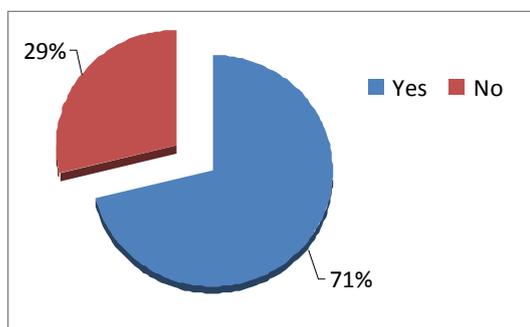
*Chart 3: Country of origin of contributors*

## 1.2 Survey results analysis

### 1.2.1 Basic Information

*Respondents' initiatives are more likely to be part of a larger programme or policy action plan; to have already started actions but still be ongoing; to be hosted in a website and to involve a cross-sectoral approach, mainly addressing energy supply and distribution, buildings (notably public premises) and other (non specified) sectors.*

#### **Dependence on larger programmes and broader policy action plans**



*Chart 4: Is this initiative part of a larger programme or action plan? (196 respondents).*

Over two-thirds of respondents presented an initiative that is part of a larger programme or policy action plan. The programmes and plans identified include the Local Agenda 21, Environmental and/or Sustainability Programmes and Plans, Local Development and/or Operational Plans, Local Climate Strategies, Local Energy Plans and the Covenant of Mayors initiative. EC programmes and instruments are also referred to, such as Interreg IVC, Intelligent Energy Europe, the 6<sup>th</sup>

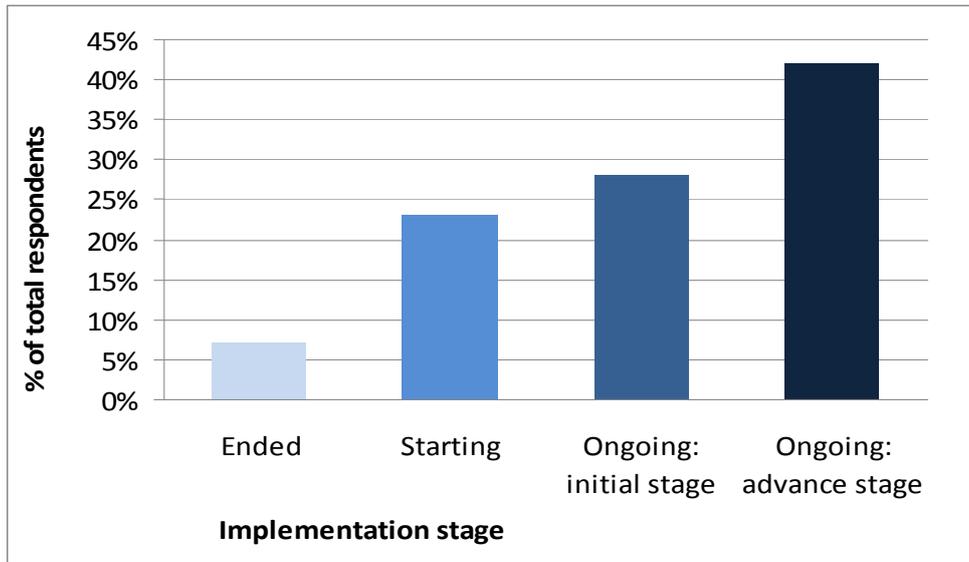
Framework Programme and the Instrument for Structural Policies for Pre-Accession (ISPA).

#### **The SESAC project as part of the EU 6<sup>th</sup> Framework Programme**

The European Sustainable Energy Systems in Advanced Cities (SESAC) project ([www.concerto-sesac.eu](http://www.concerto-sesac.eu)), implemented under the 6<sup>th</sup> Framework Programme, aims at showing how the local economy is able to thrive at the same time as less CO<sub>2</sub> is emitted. Delft (the Netherlands), Växjö Municipality (Sweden) and Grenoble (France) are all carrying out demonstration projects while Kaunas (Lithuania), Miskolc (Hungary) and Vastseliina (Estonia) are gaining knowledge and experience through the local energy studies they are performing. The project budget is 25 million euro, with 10.4 million euro of EU funds.

Less often, or even only once, references were made to local economic stability plans, waste management plans, district heating plans, municipal urban transport and air quality programmes.

### Status of implementation of the initiatives



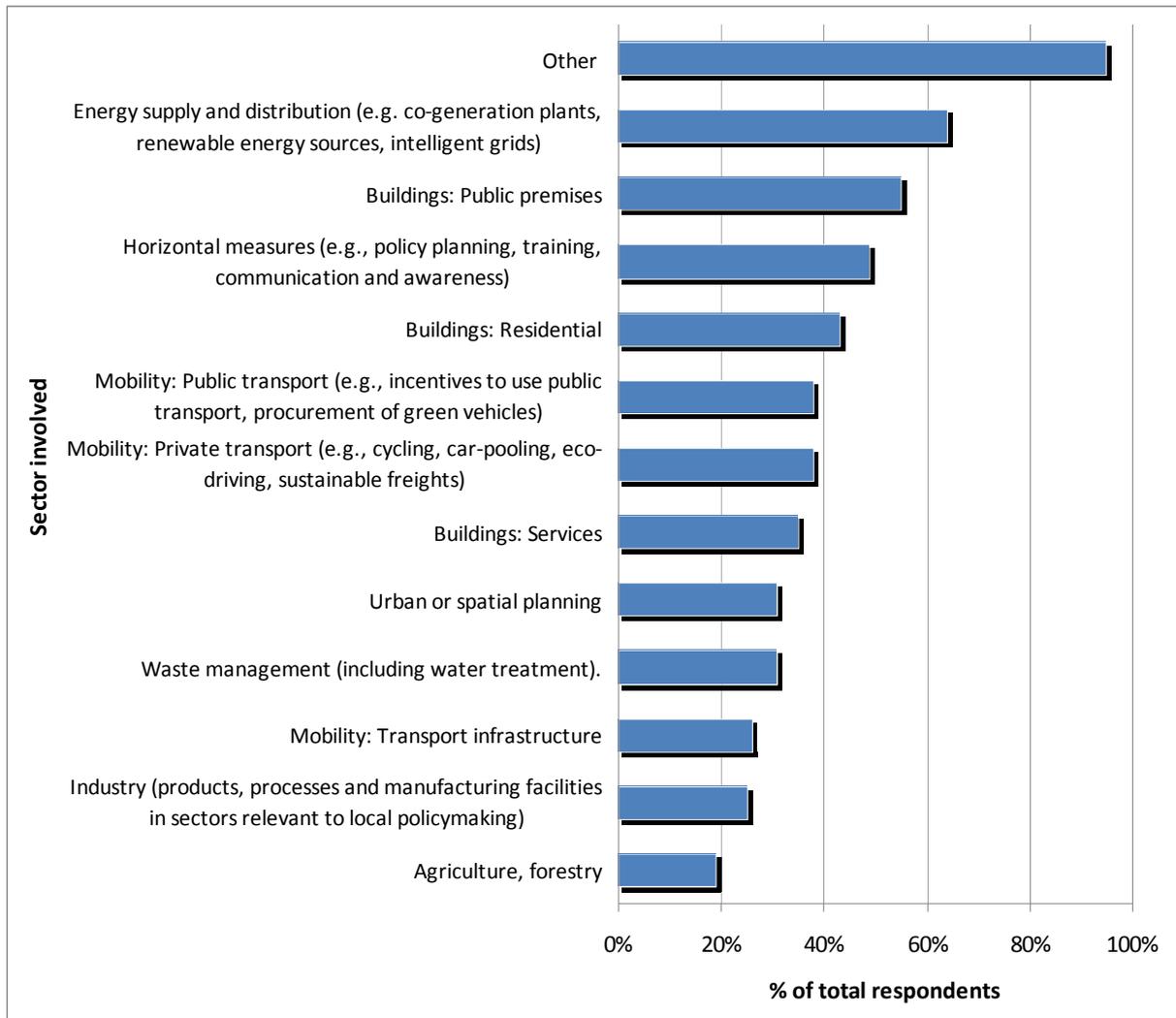
*Chart 5: Indicate the status of implementation (Possible answers: starting; ongoing, initial or advance stage; ended).*

More than two-thirds of respondents' initiatives are ongoing; in particular, 84 are in an advanced stage and 57 in their initial stage. A significant number of the described initiatives (48) are starting, while only 15 have been fully completed.

#### **Websites of initiatives**

131 respondents, i.e. 64% of the total, have provided a link to the website of their initiative. This figure may reflect the fact that initiatives that are only starting or are still at an initial stage are not yet likely to have developed a dedicated website.

## Sector of the initiatives



*Chart 6: Sector involved. Respondents were given a list of 13 sectors to choose from (9 sectors, 2 of which included 3 sub-sectors each) and were able to make multiple selections.*

Nearly nine out of ten respondents indicated that their initiative addresses more than one sector; in total 1,115 selections were made by the 204 contributors, averaging more than 5 selected sectors per initiative. This may indicate that the presented initiatives follow an integrated approach. It may also be correlated with the afore-mentioned fact that the majority of the initiatives are part of broader programmes and policy action plans.

### **The integrated approach of the environmental protection programme of Vienna**

The environmental protection programme of the city of Vienna (Austria) includes more than 100 measures in the areas of energy, mobility, and urban structure, procurement, waste management, land and forest management and conservation. According to the programme – on-going since 1999 – the overall outcome of the foreseen actions, by 2020, will save a total of 4.5 million tonnes of CO<sub>2</sub> equivalent in annual emissions, as compared with 1990 levels.

Almost all respondents (193 out of 204) linked their initiative with a sector other than those included in the selection list. In most cases the ‘other’ choice was not further specified but when specified, it often reflected a possible misunderstanding by the respondent of the choices provided in the selection list of the questionnaire.<sup>1</sup>

### **‘Lighting of public space’: a sector other than those listed in the questionnaire**

‘Improving the efficiency of the public lighting system’ is an initiative proposed by the Alcorcón Municipal Council (Spain). The lighting system in Alcorcón comprises areas featuring old and inefficient systems but also areas with new, recently upgraded infrastructure. The project is planned in three phases: (i) energy audit (in which the specific investments are identified); (ii) launch of a tender for the setting up and running of the system for a specified number of years (so that it can be amortised); and (iii) set up and operation of the lighting system.

The majority of respondents (about two out of three) indicated that their initiative addresses the ‘energy supply and distribution’ sector. Three other sectors (‘Buildings: public premises’; ‘Horizontal measures’; and ‘Buildings: residential’) were each selected by more than 40% of total contributors (55%, 49% and 43%, respectively). On the other hand, ‘Agriculture, forestry’, ‘Industry’ and ‘Mobility: Transport infrastructure’ were selected by only 19% - 26% of total respondents. The remaining sectors were selected in a range from 64 to 77 times (31% - 38% of the respondents). Most and least selected sectors are reported in table 1.

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<sup>1</sup> For instance, respondents chose to specify a title such as ‘education’ or ‘participatory approaches’ as ‘other’ sectors instead of selecting ‘Horizontal measures’, the term provided in the selection list. In other cases, respondents briefly described the key action of the initiative instead of specifying a sector, for example ‘local entrepreneurs providing energy installations in private homes’, that obviously addresses the ‘Buildings: Residential’ sector.

Sector involved	Respondents' selection
Other	193
Energy supply and distribution	129
Buildings: Public premises	112
Horizontal measures	99
Buildings: Residential	87
.....	.....
Mobility: Transport infrastructure	54
Industry	51
Agriculture, forestry	38

**Table 1** *Top five most selected and three least selected sectors*

**Examples of initiatives addressing a ‘most selected’ and a ‘least selected’ sector**

‘Energy supply and distribution’: Using the surplus heat from a garbage incinerator plant, a hybrid heating network is planned for the heating and cooling of 11,000 buildings (homes) in the new housing areas Waalsprong and Waalfront, in the City of Nijmegen, the Netherlands. The system uses low temperature remaining warmth from the incinerator for the heating of houses with low temperature heating systems. A heat pump in the house itself warms the water up to 70°C for warm water use and cooling of the building. This is why the system is called 'hybrid'.

‘Industry’ (and ‘horizontal measures’): The Region of Puglia ‘Regional Regulation 21 November 2008, no. 26’ initiative (Italy) identifies incentives for investments by regional SMEs in energy-saving, high-yield cogeneration and the use of renewable energy sources. Its overall aim is to support regional sustainable development by increasing the share of energy derived from renewable sources and by promoting energy saving. The initiative's specific goal is to encourage SMEs to invest in innovation in the field of energy supply technologies and in improving the quality of the environment by overcoming the obstacle of possible increases in the production costs connected to such investments. Criteria are currently being set for eligible costs and funding bodies. Specific initiatives are also being planned to train regional staff responsible for managing this initiative and for providing local-level information to promote SME participation.

## ***1.2.2 Policy Making Aspects***

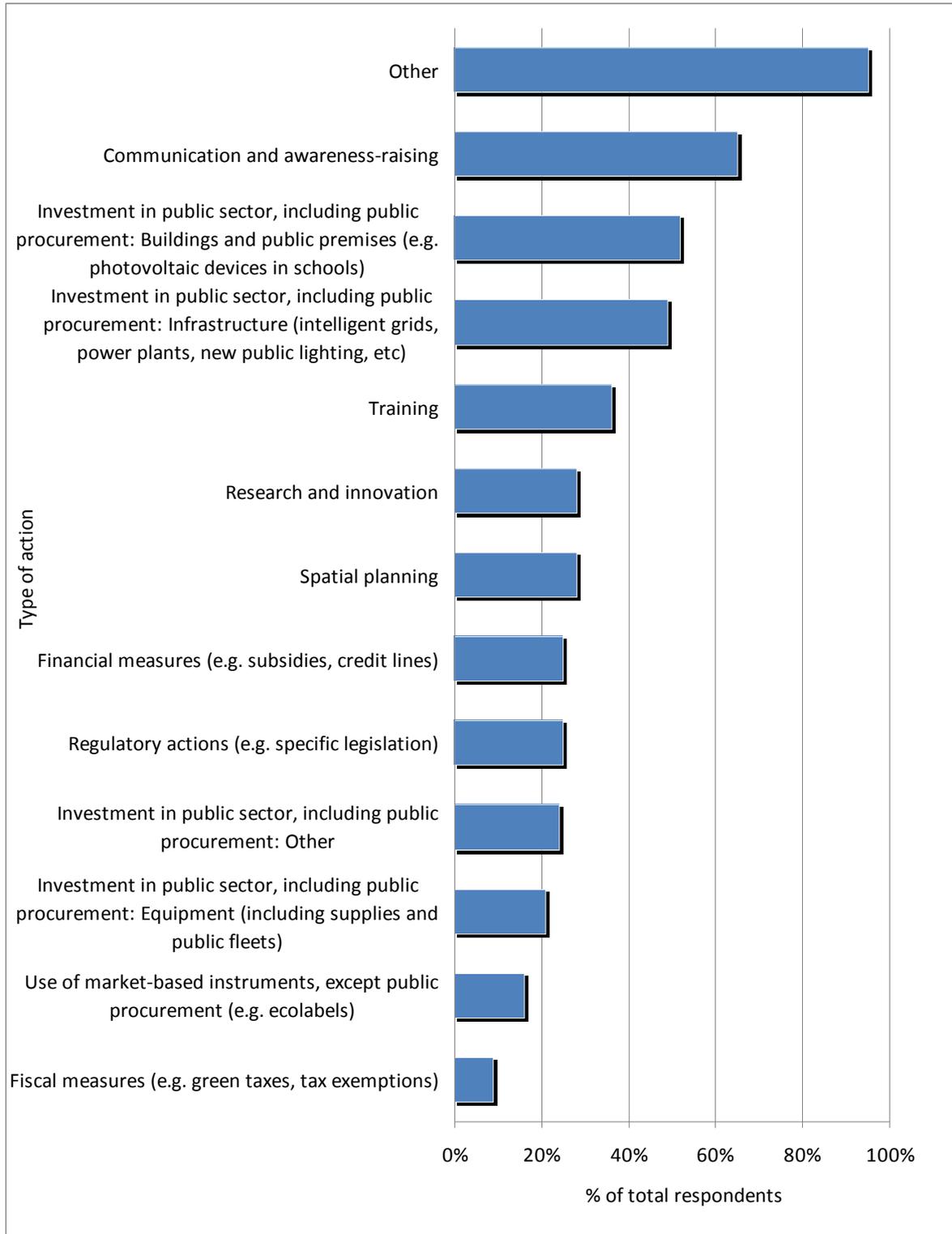
### ***1.2.2.1 Type of actions undertaken in the initiatives***

*The most striking element in the list of actions used by the respondents to reach the objectives of the described initiatives is the diversity of approaches, ranging from communication measures to investments in infrastructure and equipment and from regulatory and financial measures to training, research and innovation.*

The respondents indicated the use of both ‘soft’ and ‘hard’ measures in their initiatives. Almost two-thirds of the contributors mentioned that they used ‘Communication and awareness raising’ to reach the objectives of their initiatives. About half of the respondents included ‘Public investments in buildings and public premises’ as well as ‘Public investments in infrastructure’, among the key actions implemented in the described initiatives.

Most respondents indicated that actions other than those mentioned in the selection list were used. As with the question on sectors involved (see section 1.2.1), the ‘other’ choice was not further specified in most cases, although among the mentioned other types of action are: the exchange (or the making available) of expertise and the transfer of technology; the creation of groups of volunteers; and dialogue and negotiation with energy businesses, including partnerships with environmentally-friendly businesses and research institutes.

### Type of actions undertaken in the initiatives



*Chart 7: Tick the category of instruments used to reach the objectives. Respondents were given a list of 13 types of actions (10 main types, 1 of which included 4 subdivisions) and were able to make several choices.*

Further to the above, several other actions were used in a high number of initiatives, with ‘Training’ being implemented in 73 cases (36% of total respondents), ‘Research and Innovation’ and ‘Spatial planning’ in 55 and 57 cases respectively (28% of total respondents each) and three other types of action, i.e. ‘Regulatory actions’, ‘Financial measures’ and ‘Other investment in public sector, including public procurement’, in about one quarter of the described initiatives. On the other hand, ‘Fiscal measures’ and ‘Use of market-based instruments, except public procurement’ were selected by only 9% and 16% of respondents, respectively.

More than nine out of ten respondents used several types of actions to achieve the objectives of their initiative. In total, 957 selections were made by the 204 contributors, averaging almost 5 different types of action selected per initiative. The high number of instruments used in the described initiatives may indicate the existence of complementarities between the selected actions, but also a relatively high level of comprehensiveness in the approaches followed by the respondents.

### **Amsterdam, a comprehensive approach towards city electric transport**

The City of Amsterdam (the Netherlands) aims to encourage the transition to electric transport through a variety of measures, including the construction of charging stations, the provision of subsidies to companies wishing to buy electric cars, the facilitation of offers of electric cars by making agreements with car companies, the setting up of pilots for electric quick loading, etc. It is expected that in the near future, the City of Amsterdam and a large number of companies will be setting the example by making their car parks entirely electric.

### 1.2.2.2 Relationship between different administrative levels

The majority of the initiatives use complex management structures involving partners from several government levels; only in a few cases do such structures operate under cross-border agreements.

**Partnership with other levels of government**

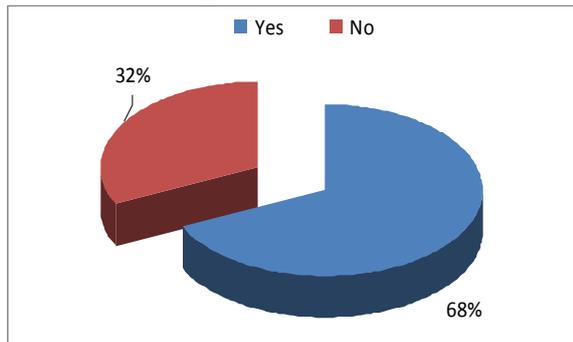


Chart 8: Is this initiative managed in partnership with other levels of government? (Yes/No). Out of the five respondents who skipped this question, four provided a reply to the subsequent question (chart 9). It would thus be safe to conclude that these responders only failed to tick 'yes' by mistake).

**Levels of government involved**

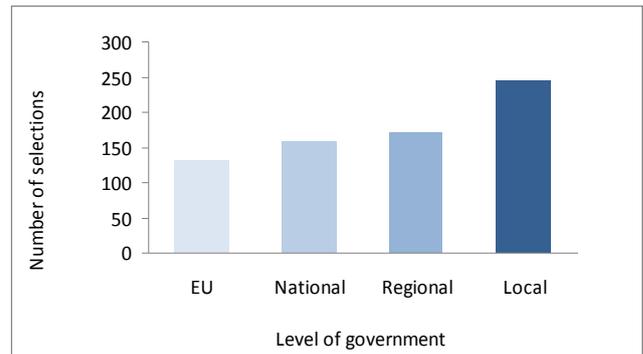


Chart 9: Which levels of government are involved? Tick the different governmental levels, including your own (Possible choices: EU; national; regional; local). Several choices allowed.

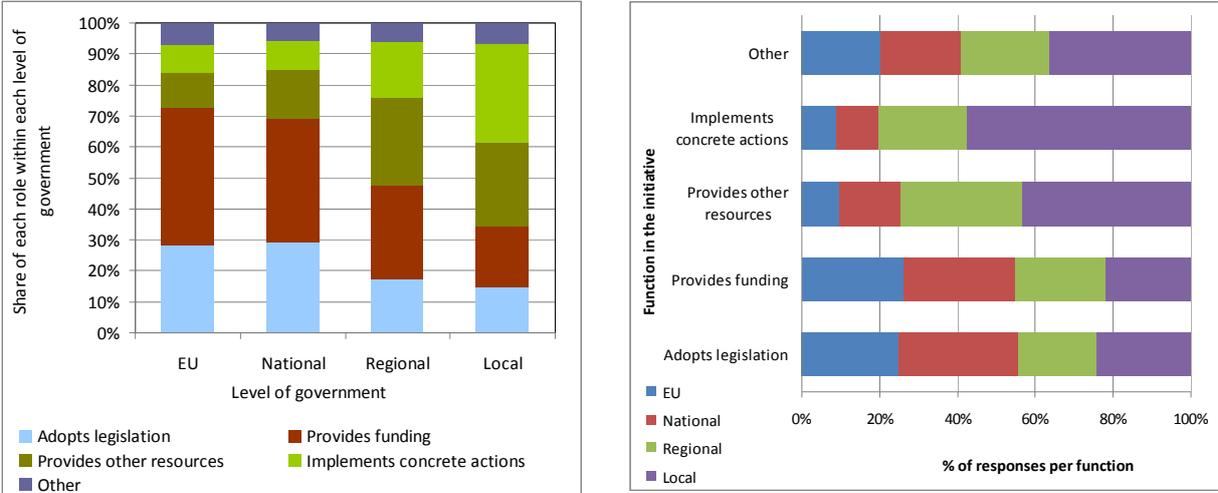
More than two-thirds of the respondents' initiatives are managed in partnership with other levels of governments. The local governmental level is most commonly engaged in the described initiatives, followed by the regional and the national levels, with the EU being mentioned in 131 cases (less than 20% of total selections).

#### **Multi-governmental level management structure for Wallonia initiative**

The 'Wood-Energy and Rural Development Plan for Wallonia' (Belgium) is a regional initiative which brings together several Ministries and their administrations in Wallonia, aiming at encouraging rural municipalities and other authorities to choose woodland by-products as fuel to heat their buildings. The Wallonia Region entrusted the Wallonia Rural Foundation with the task of coordinating this initiative and more specifically of: (i) informing and raising the awareness of rural municipalities and other local authorities as regards the advantages of wood-energy; (ii) organising feasibility studies; (iii) supervising local authorities in implementing their projects.

It should be noted that statistics need to be treated with caution as, on the one hand, some respondents did not include their organisation in their reply (neither the regional nor the local level were selected) and, on the other hand, the question was evidently not perceived the same way by all respondents; for example, there are cases attributing an implementing role to the EU level for EU funded projects.

**Role of different levels of government and their involvement in selected functions**



*Charts 10a and 10b: What is the role of the different levels of government involved? Tick the functions of the different governmental levels, including your own (Possible choices: adopts legislation; provides funding; provides other resources; implements concrete actions; other). Several choices allowed.*

*Chart 10a shows the role of the different government levels in the described initiatives. Chart 10b highlights the involvement of these government levels in each function as a percentage of total responses per function.*

In the described initiatives, as presented in chart 10a, the main role of the EU is to provide funding and adopt legislation (44% and 28% of total EU level-related selections, respectively).

The national level has a similar function, with funding and adoption of legislation counting for just above 40% and just below 30% of the total selections on that level, respectively. Less important, but still significant, is the role of the national level in the provision of other resources (just over 15% of total national level-related selections).

The regional level has a more balanced and comprehensive role, with an almost equal percentage of respondents highlighting its involvement in the provision of funding and other resources (30% and 28% of total regional level-related selections, respectively) and to a lower degree, in the adoption of legislation and the implementation of concrete actions (each of these latter functions receiving some 18% of total regional level-related selections).

The role of local administrations involved in the initiatives is also comprehensive; though the local level is primarily an implementation body it also provides resources other than funding (32% and 27% of total local government-related selections, respectively). The local level role in the provision of funding and in the adoption of legislation is less important, though by no means negligible (20% and 15% of total local government-related selections, respectively).

Very few respondents selected 'other' for any of the governmental levels ('other' responses ranging from 9 to 16 per governmental level, totalling 44 out of 703).

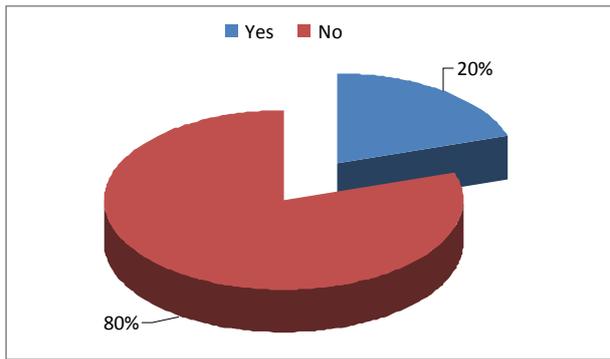
With regard to the functions listed in the questionnaire, as presented in chart 10b, legislation is adopted at all governmental levels, the national level leading with 31% of the total responses on that function, followed by the EU and the local administration (each with about 24% - 25% of selections related to that function).

When it comes to funding, the most common sources are those at national and EU level (29% and 26% of selections related to that function, respectively). The use of regional and local financial sources has been reported in fewer but still a significant number of cases (23% and 22%, respectively).

Resources other than funding are mainly provided by the regional and local levels (43% and 31% of selections related to that function, respectively) while the EU has a fairly limited role in this respect (less than 10% of selections related to that function).

Concrete actions in the described initiatives are mainly implemented by local administrations (about 58% of selections related to that function) and to a lower degree, by the regional administration (23% of selections related to that function). Also functions included in the 'other' category mostly involve local administration authorities (36% of selections related to that function).

## Cross-border agreements



*Chart 11: Does this initiative involve any cross-border agreement? (Yes/No) (195 responses)*

## The cross border partnership of the ISLE-PACT project

The ISLE-PACT project is linked to the development of Local Sustainable Energy Action Plans, with the aim of achieving the European 20/20/20 goals. Twelve partners representing European islands are taking part in the project. The project coordinator is the Outer Hebrides of Scotland (Comhairle nan Eilean Siar - CnES) and the project is co-funded by the European Commission, Directorate-General for Energy.

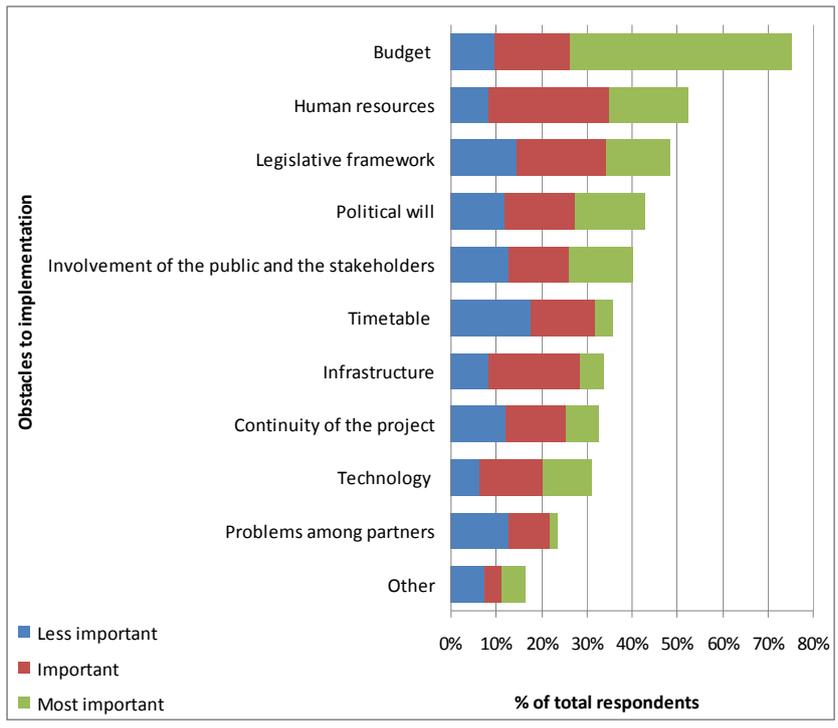
The vast majority of the respondents' initiatives do not involve cross-border agreements. On the other hand, 40 initiatives (20% of total responses) involve an international partnership.

### 1.2.2.3 Challenges addressed

*The availability of budget and of human resources top the list of the respondents' most profound concerns when it comes to the implementation of their initiatives, but views about the impact of the current economic crisis on the initiatives are mixed.*

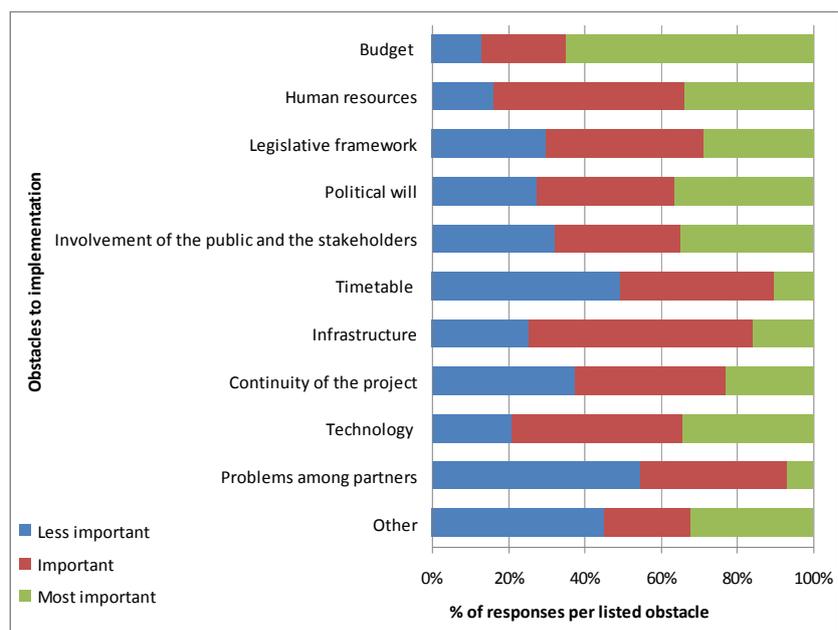
Chart 12a shows the total number of respondents who identified each listed potential problem as an obstacle to the implementation of their initiative. Chart 12b shows the proportional level of importance attributed by respondents to each listed obstacle.

Three quarters of the respondents indicated that 'budget' is an obstacle to implementation, with 65% of them (about half of total contributors) selecting it as their most important concern and another 22% as an important one. The next most selected obstacle (chosen by 53% of respondents) is 'human resources', coming second to budget in the list of 'most important' concerns and falling at the top of the 'important' barriers to implementation.



### Obstacles to implementation and their perceived level of importance

*Charts 12a and 12b: What are the main obstacles to implementation? Indicate a maximum of 3 obstacles that the initiative has met during its implementation. Rank them in order of increasing importance from 1 (less important) to 3 (most important). Maximum 3 choices allowed one choice per column. (List of potential problems includes: legislative framework; political will; timetable; budget; human resources; infrastructure; technology; involvement of the public and the stakeholders; problems among partners; continuity of the project; other).*



Between 43% and 48% of respondents included ‘political will’, ‘legislative framework’ and ‘involvement of the public and the stakeholders’ in the list of obstacles to the implementation of their initiatives. On the other hand, ‘problems among partners’ impeded the implementation of less than one quarter of the initiatives, in more than half of the cases as a less important issue. In addition,

'other' (not specified) obstacles were indicated by only 17% of the respondents, with 45% of them indicating it as less important.

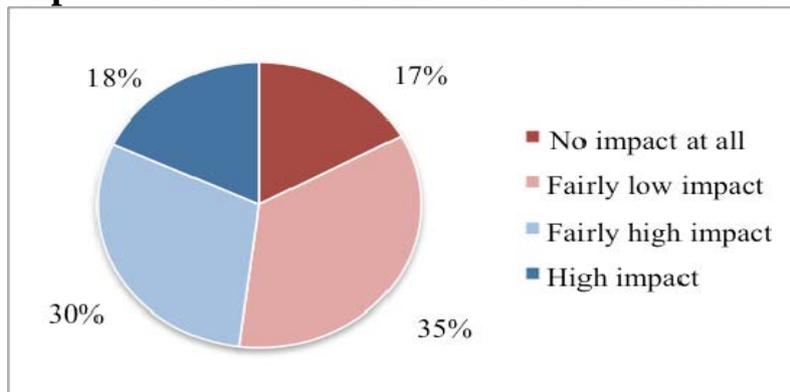
### **Example of initiative facing obstacles to implementation**

Over the next few years, the municipality of Falköping (Sweden) is about to invest in wind power, aiming at supporting the expansion of local Renewable Energy Sources while providing the municipality with environment-friendly electricity. For the municipality to be a shareholder in a wind-power company: (i) at least 50% of the shareholders must be private individuals or companies based in the municipality; (ii) local residents must be informed at an early stage of the project; and (iii) expropriation of land belonging to local residents should be appropriately arranged. Other challenges include keeping locally the revenue from wind power companies and increasing the buy-in of wind power by the local community.

All listed obstacles, except for 'problems among partners', 'timetable' and 'other', were identified as 'important' or 'most important' by at least 20% of the respondents, a fact indicating that the initiatives face multiple problems in implementation. Additionally, 'infrastructure', along with 'legislative framework', was reported as an 'important' obstacle by one fifth of the respondents. 'Problems among partners', 'timetable' and 'continuity of the project' are considered to be the least important obstacles. On the other hand, the perceived level of importance of 'involvement of the public and the stakeholders' and 'political will' is fairly balanced, with almost the same number of contributors marking all three levels.

It should be noted that statistics need to be treated with caution as several respondents made more than the three selections requested within the questionnaire (in several cases, all the listed obstacles were attributed a level of importance); in total 807 selections were made by 186 respondents giving an average of more than 4 obstacles per initiative.

### Impact of current economic crisis on the initiative



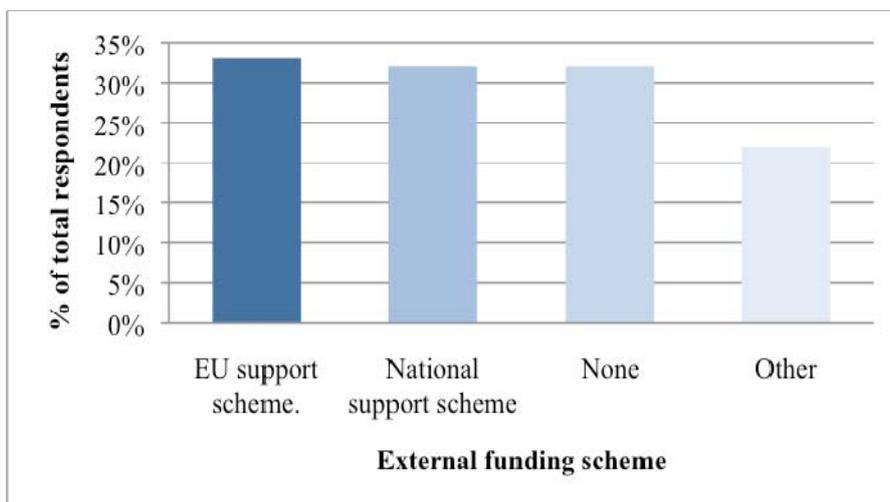
*Chart 13: What impact is the economic crisis having on the initiative? (Possible choices: no impact at all; fairly low impact; fairly high impact; high impact). Only one choice allowed. (194 responses)*

Insights on the impact of the economic crisis on the described initiatives are rather conflicting, with 52% of respondents indicating that the crisis had a ‘fairly low impact’ or ‘no impact at all’ on their initiatives and 48% believing the opposite, i.e. that the effect of the financial downturn was either ‘fairly high’ or ‘high’. However, a significant 83% of the respondents indicated that the economic crisis to some degree affected their initiatives.

#### 1.2.2.4 Financial support measures

*External funding support to the initiatives from EU, national or other schemes, is common practice; though, as several contributors have stated, gaps in financial support measures are also frequently experienced.*

## External funding support



*Chart 14: Is the initiative receiving external funding? (Possible choices: EU support scheme; national support scheme; other; none). Several choices allowed.*

One third of respondents (33%) indicated that their initiatives receive external funding from EU schemes. Mentioned schemes include, among others, LIFE+, INTERREG, Intelligent Energy Europe, the 6<sup>th</sup> FP and LEADER. An almost equal share (32%) mentioned receiving funding from national support schemes (e.g. Ministry of the Environment, National Resources Authority, National Climate Protection Campaign, etc.). Some 22% of contributors indicated that their initiatives are supported through other mechanisms, such as other government levels (e.g. regional or prefectural councils supporting municipal actions), the Covenant of Mayors and non-governmental sources (e.g. foundations) while 32% of contributors stated that they receive no external funding support<sup>2</sup>.

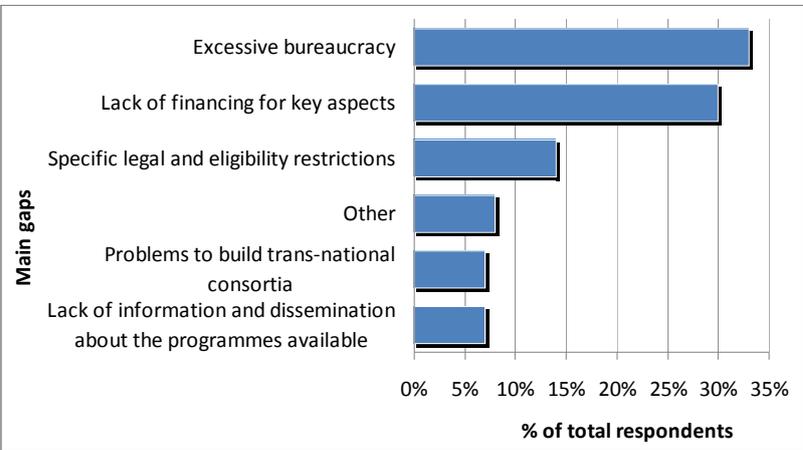
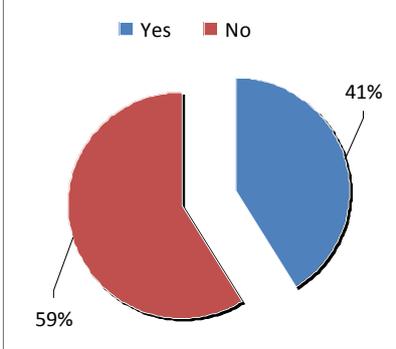
### **The EU and national supported ‘cross-border plan of exploitation and evaluation of smooth geothermy in the Municipalities of Moudros and Geroskipou’**

The plan was implemented in the framework of the EU Initiative INTERREG IIIA Greece-Cyprus 2000-2006 and specifically of Measure 3.2 ‘Protection, promotion and management of natural environment’. The project budget was 421,440 euro, financed from the European Fund of Regional Growth (75%) and from national resources (25%).

<sup>2</sup> A number of respondents selected both ‘none’ and ‘other’ support schemes, so statistics should be treated with caution.

A large number of respondents (47%) skipped the successive question requesting them to specify the source of funding if other than none.

**Gaps in financial support measures**



*Charts 15a and 15b: Have you experienced any gap in financial support measures? (Yes/No) (181 respondents) If yes what is the main gap in financial support measures? (Possible choices: excessive bureaucracy; lack of information and dissemination about the programming available; problems to build trans-national consortia; specific legal and eligibility restrictions; lack of financing for key aspects; other). Only one choice allowed. (82 respondents)<sup>3</sup>.*

About four out of ten contributors (41% of total responses) indicated that they experienced gaps in financial support measures.<sup>4</sup> The majority of the respondents (33% and 30%, respectively) pointed to ‘excessive bureaucracy’ and ‘lack of financing for key aspects’ (namely: progress reporting; impact assessment; access to cheap capital; selected types of infrastructure; design stages of the initiatives; networking), as the main missing elements in financial support measures, while another 14% mentioned ‘specific legal and eligibility restrictions’ (namely: investments in equipment/infrastructure not being fully eligible for funding; renewable energy sources quotas; non-eligibility for funding of private actors; small-scale investments not exceeding the minimum size eligible for funding; very strict rules for the eligibility of unit rates).

On the other hand, ‘problems to build transnational consortia’ and ‘lack of information and dissemination about the programmes available’ were less significantly marked. The ‘other’ gaps specified in the replies include: terms of financing not in line with planning of project actions, limited budget allocation, (lack of) investment support, financing not addressing small scale projects

<sup>3</sup> Consistency of responses seems weak, given that 73 respondents mentioned experiencing gaps in financial support measures, while 82 respondents, in the subsequent (if yes type) question, specified the main gap.

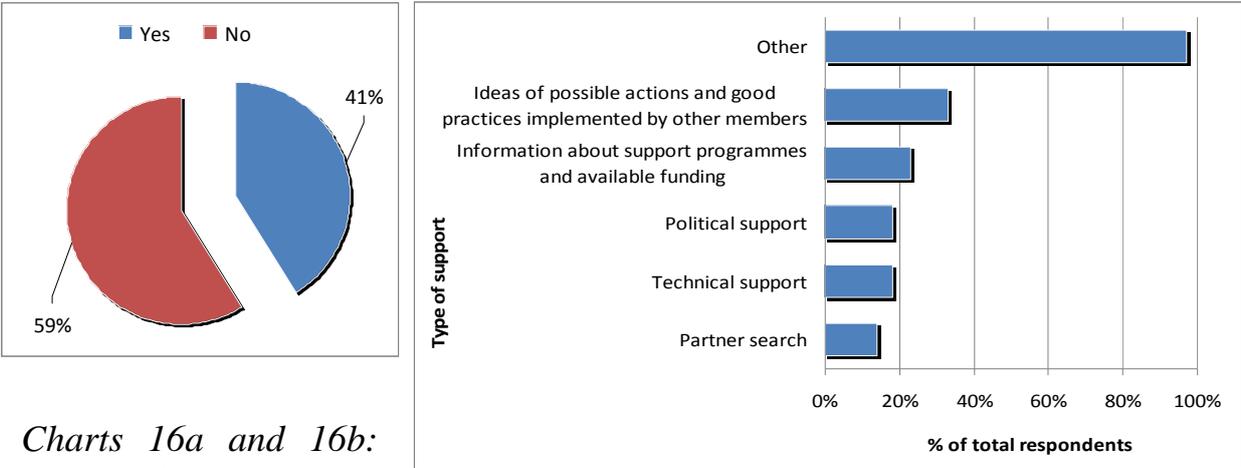
<sup>4</sup> It is duly noted that 11% of respondents skipped the question.

(usually the type of projects that local authorities implement) and lack of state/government guarantee for funding to LRAs.

1.2.2.5 Network support

Support to initiatives from a network, though not a common practice, is frequent; it focuses on ideas for action and good practices, information about programmes and funding opportunities, as well as on visibility and on organisational aspects.

**Support from a Network**



Charts 16a and 16b: Does this initiative receive support from a network? (Yes/No) (198 respondents) If yes, what kind of support has the network provided to the initiative? (Possible choices: information about support programmes and available funding; ideas of possible actions and good practices implemented by other members; partner search; dissemination and visibility for the initiative; technical support; political support; other). Several choices allowed.

The majority of initiatives (59%) do not receive any kind of support from a network; however, about four out of ten initiatives gain from inputs coming from local associations, professional groups and other networks. More precisely, the networks providing support to the initiatives, as specified by the respondents, include: associations of Local Councils, Municipalities and/or Communities, the Covenant of Mayors, various cross-border projects, thematic regional associations (e.g. related to the environment), thematic networks (e.g. the Eco-profit network), industry groups, professional associations and networks of cities, islands, etc.

Almost all (97%) respondents who stated that their initiative has received support from a network marked ‘other’ next to the kind of support provided to their initiative and then specified one or more of the following: dissemination

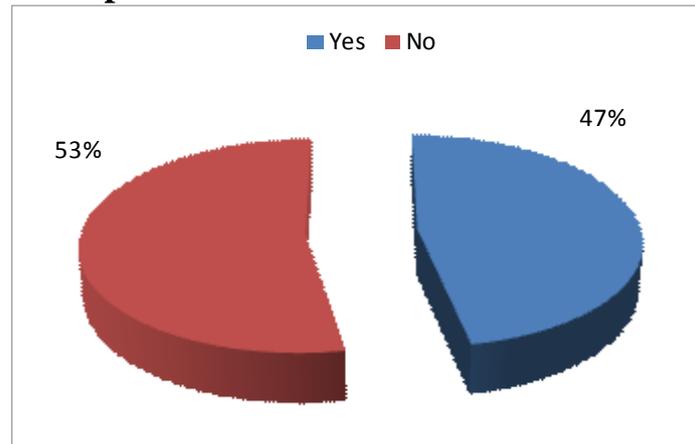
and promotion, visibility, exchange of experiences, financial and organisational support, benchmarking and access to a network of colleagues in other municipalities.

Moreover, one third of contributors mentioned support in the form of ‘ideas of possible actions and good practices implemented by other members’, while a smaller but still significant number indicated they had received ‘information about support programmes and funding opportunities’ (23%), ‘technical support’ and ‘political support’ (each marked by 18% of respondents) and ‘partner search assistance’ (14%).

### **The Prefecture of Iraklion and the European Network of Education Centres programme**

The Prefecture of Iraklion (Greece) is taking part in the 50/50 European Network of Education Centres programme in partnership with eight other European countries. The aim of the programme is to implement the 50/50 methodology in 50 educational establishments forming a European network of schools for saving energy and combating climate change. The basic idea behind the programme is that 50% of the energy savings achieved by the measures taken are returned to the school, with the result that it benefits the school, the local authority that pays for its expenses and society in general through the reduced impact on the environment.

## Initiatives developed in the framework of the Covenant of Mayors



*Chart 17: Is this initiative being developed in the framework of the Covenant of Mayors? (Yes/No) (188 responses)*

Almost half of the respondents (47% of total responses) stated that their initiative was developed in the framework of the Covenant of Mayors. This may indicate that the Covenant of Mayors, as a relatively new initiative, has rapidly become a significant driving force for EU local authorities towards the design and implementation of climate change and energy-related initiatives.

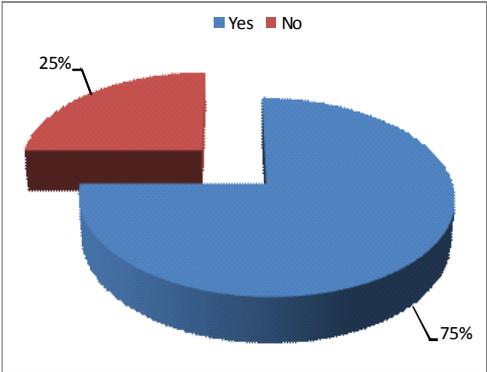
### *1.2.2.6 Expected outcome*

*In addition to their impact on energy and climate change policies – considered fundamental to reaching the 20-20-20 targets – the described initiatives are in general expected to generate new jobs and income, as well as to provide support to SMEs, serving as examples of good practice and a benchmark of excellence of the Covenant of Mayors.*

Three quarters of the respondents' initiatives have foreseen the use of quantitative and/or qualitative indicators to monitor implementation and/or measure the results of the described initiatives; a relatively small yet significant number of them (22%) have specified these indicators.

Indicators such as CO<sub>2</sub> emissions and energy consumption levels are the most commonly used, in various forms, e.g. tons of CO<sub>2</sub> eq/year, reduction of CO<sub>2</sub> emissions compared to a specific year (base year), KWh/year, etc. In some cases, more complex forms of these indicators are utilised, such as an energy saving cost indicator (euro/MWh per annum) and a CO<sub>2</sub> emission reduction cost indicator (euro/CO<sub>2</sub>kg per annum). Other indicators used in the initiatives are usually sector or action specific and include: number of flats with zero emissions ('Buildings' sector), annual economic benefit (in euro) from sale of electricity ('Energy supply and distribution' sector), number of LRAs reached ('Horizontal measures: awareness' sector) and investment cost (Investment in public sector). Other (mainly qualitative) indicators were mentioned by the respondents, such as the 'Improvement of the quality of people's life', the 'improvement of the living standards', etc.; however contributors do not explain how these indicators will be assessed and/or measured.

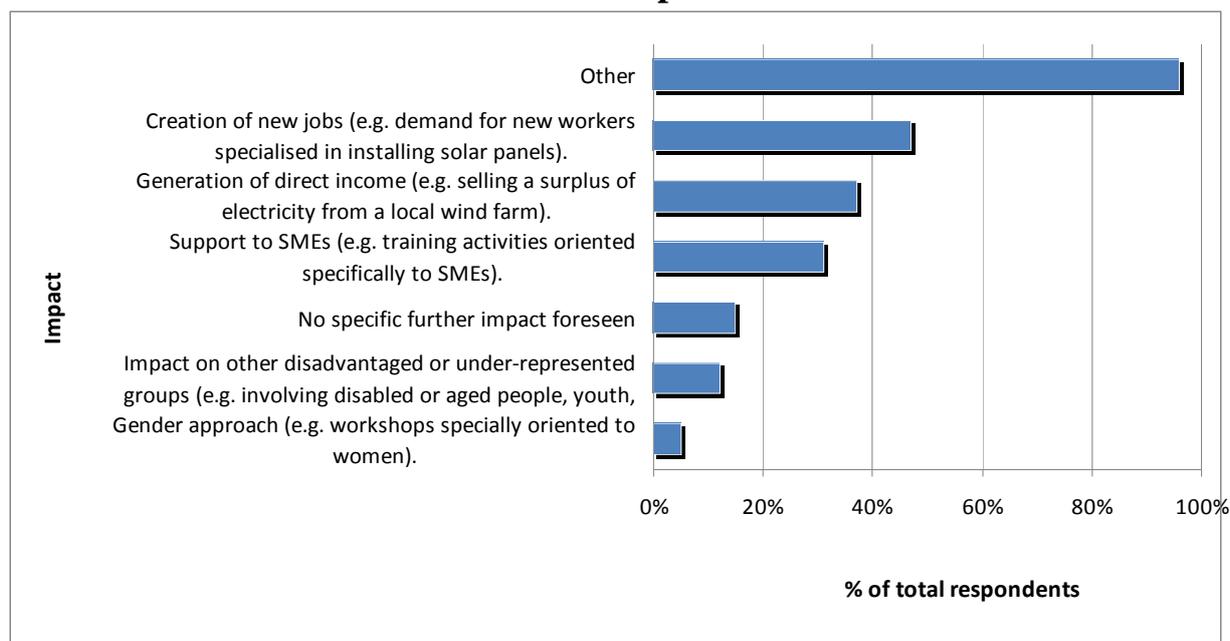
**Use of indicators**



*Chart 18: Have quantitative and qualitative indicators being foreseen? (Yes/No) (196 responses)*

Approximately half of the respondents (47%) stated that they expect their initiative to create new jobs and nearly four out of ten (37%) believe their initiative will generate direct income. About one third of the contributors (31%) indicated that their initiative will provide support to SMEs. On the other hand, respondents expecting an impact on gender approach or on disadvantaged or under-represented groups are rather limited (5% and 12% of total respondents, respectively). Moreover, 15% of the respondents do not foresee any specific further impact from their initiatives.

## Further impacts



*Chart 19: Do you expect any further impacts? Contributors were asked to indicate if the initiative foresees other specific impacts on the economy and society (Possible choices: generation of direct impact; creation of new jobs; support to SMEs; gender approach; impact on other disadvantaged or under-represented groups; other, specify). Several choices allowed.*

Almost all contributors indicated that the expected further impacts from their initiatives are other than those listed in the questionnaire, namely: environmental awareness-raising and specifically increasing public awareness on energy efficiency practices; energy saving and efficiency; facilitation of the development of energy infrastructure by local authorities; development of new knowledge within local authorities regarding energy issues; renewable energy development; support to the local economy; a cleaner and healthier environment; improvement of public health; reduction in electricity costs; creation of innovative exporting production companies in the field of energy efficiency and renewable energy sources; stronger policies on Renewable Energy Sources and Energy Efficiency in the regions; concrete exchange of best practices; better quality of life; reduction of light pollution in the cities; reduction of traffic congestion; air pollutants emissions reduction.

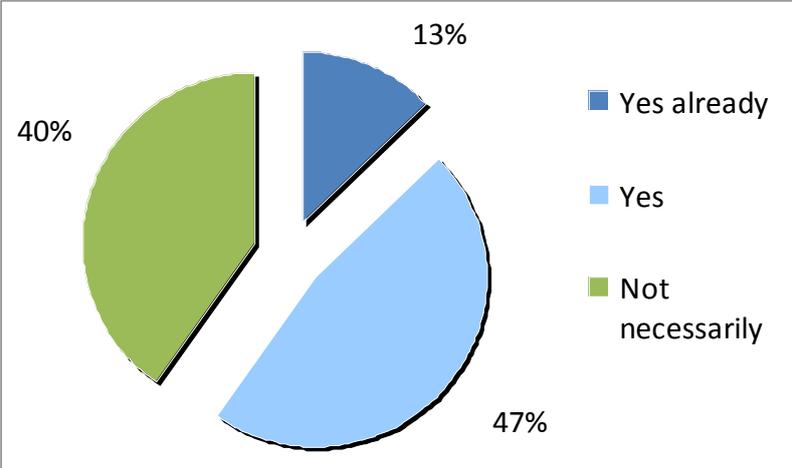
Some 77% of respondents specified the aspects that qualify their initiative as an example of good practice, either in quantitative or qualitative terms. The majority of responses focused on the expected outcome of the initiative, providing a description of key objectives and results; several others made a brief reference to the (expected) positive impact of their actions, with few backing their arguments with quantitative and/or qualitative indicators.

Some respondents explained why their initiatives should be considered valuable for other LRAs, putting the emphasis on solutions to potential obstacles in energy-related projects; in some cases, the demonstration potential of the initiative was highlighted. Others outlined the ‘strong’ points of their initiative, or linked it to the aims of the Covenant of Mayors or to the targets set by the EU and/or international agreements (e.g. Kyoto Protocol).

It is noted that for several of the ‘good quality’ initiatives selected under section 2 below, respondents did not provide a description of the aspects qualifying their initiative as an example of good practice.

Over seven out of ten respondents believe that their initiative is fundamental to reaching the 20-20-20 targets. Moreover, six out of ten respondents state that their initiative has already or is intended to become a benchmark of excellence of the Covenant of Mayors. Given the total number of contributors, these statistics indicate the availability of a broad pool of good practices in the energy policy sector.

**Benchmark of excellence of the Covenant of Mayors**



*Chart 20: Is this practice intended to become a benchmark of excellence of the Covenant of Mayors? (Possible choices: yes already; yes; not necessarily). (186 respondents)*

## 1.3 Conclusions

A relatively large number of LRAs responded to the survey on ‘Sustainable energy policies by EU regions and cities: good practices and challenges’, providing valuable input and examples of good practices regarding opportunities and challenges of current energy saving and renewable energy policy initiatives.

Large programmes and policy action plans seem to play a decisive role for the development of most local and regional initiatives. Currently there are several on-going projects on energy and climate change policies, addressing a wide range of sectors, notably energy supply and distribution, buildings and horizontal measures.

The majority of the respondents’ initiatives have a cross-sectoral focus and use a wide diversity of actions to reach their objectives: from communication measures to investments in infrastructure and equipment and from regulatory and financial measures to training, research and innovation.

Collaboration among the different governmental levels (EU, National, regional and local) is key in the implementation of the initiatives, while cross-border agreements are less common. The allocation of responsibilities within such multi-level partnerships varies, although each level of government seems to play a more decisive role in the execution of specific functions, namely:

- the role of the EU level administration is mainly to provide funding and adopt legislation;
- the national level has a similar role, but is also likely to provide other resources;
- the regional level has a more balanced and comprehensive role, with a relatively strong involvement in most key functions of the initiatives (as listed in the questionnaire), including the provision of funding and other resources, the adoption of legislation and the implementation of concrete actions;
- the local administration is primarily an implementation body, also providing resources other than funds.

Budget and human resources availability appear to be the key barriers to implementation but these constraints do not seem to be necessarily linked to the current economic crisis. Budget restrictions seem to depend on the availability of funds from external sources and may be also linked with other commonly highlighted obstacles such as ‘political will’ (with an impact on the allocation of available funds to other sectors) and ‘infrastructure’ (usually requiring a long-term commitment of resources). Implementation problems due to the ‘legislative

framework' are apparently linked to the lack of political will for structural changes and in some countries to the existence of centralised policy-making mechanisms and the (lack of) 'involvement of the public and the stakeholders' (though respondents made no specific references to systematic weaknesses in that sector). 'Problems among partners', the 'timetable' and 'continuity of the project' are not very common concerns, a fact that may indicate that LRAs have gained sufficient experience and developed adequate capacities in project management.

EU, national and other schemes provide external funding support to numerous initiatives. However, several gaps are identified in financial support measures: schemes are still considered too demanding in terms of accessibility ('excessive bureaucracy' and 'specific legal and eligibility restrictions') and not always focussing on priority issues ('lack of financing for key aspects'). By contrast, 'problems to build transnational consortia' and 'lack of information and dissemination about the programmes available' are rarely considered an issue, a fact that may indicate the effectiveness of existing networking and information mechanisms targeting LRAs (e.g. insular, urban or other thematic/sectoral networks of LRAs, partner search tools of various EC funded programmes), as well as the increasing importance given to communication and transparency by the EU and national funding schemes (e.g. funding opportunities uploaded to relevant websites, national level administration announcements to LRAs of upcoming calls for proposals regarding EU or national programmes).

More than half of the initiatives do not receive any kind of support from a network; given the existence of several networks of LRAs, this may indicate that energy and climate policy related projects are relatively new for LRAs and that more action should therefore be expected in the near future regarding the exchange of relevant knowledge, experiences and other resources.

Most initiatives are considered fundamental to reaching the 20-20-20 targets, apparently indicating that LRAs are sufficiently aware of their important role in the implementation of European energy and climate change policies. Moreover, the majority of initiatives look favourably on their serving as examples of good practice and becoming a benchmark of excellence of the Covenant of Mayors, indicating, on the one hand, the significant potential of the respondents' projects, further justified by the expected additional impact and, on the other hand, the magnitude that the Covenant of Mayors initiative has on LRAs.



## 2. Selection of good practices

### 2.1 Selection methodology

#### 2.1.1 Criteria

Three main criteria have been used for the selection of best examples: geographical balance; thematic representativeness; and quality.

Furthermore, the quality of the initiatives has been characterised according to the following yes/no criteria:<sup>5</sup>

- (a) clear description of initiative (well explained project);
- (b) relevance to the aims of the survey;
- (c) explicit impact on/significant importance for climate change and/or sustainable energy policies;
- (d) evidently reliable and easy to implement methodology/approach;
- (e) innovative character; and
- (f) replication potential.

‘Poor quality’ characterises projects that are not sufficiently explained or/and are not relevant to the aims of the survey, i.e. *‘... to identify the opportunities and challenges of current energy saving and renewable energy policies and the role of different government levels in this area’*.

‘Adequate quality’ characterises projects that are sufficiently explained and are relevant to the aims of the survey, but do not include any of the following: an explicit impact on/significant importance for climate change and/or sustainable energy policies (quality criteria (c) above); an evidently reliable and easy to implement methodology/approach (quality criteria (d) above).

‘Good quality’ characterises projects that are sufficiently explained and are relevant to the aims of the survey and at the same time include at least one of the following: an explicit impact on/significant importance for climate change and/or sustainable energy policies (quality criteria (c) above); an evidently reliable and easy to implement methodology / approach (quality criteria (d) above).

Moreover, ‘good quality’ initiatives receive a preference when: they include an innovative element (quality criteria (e) above) and/or they include tools that

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<sup>5</sup> The criteria used for the characterisation of the quality of the initiatives build on the relevant discussions on best practices that took place at the 3<sup>rd</sup> workshop on ‘Preparatory actions to reduce uncertainty and expand the knowledge base in adaptation to a changing climate’ of the Interreg IVC project ‘REGIOCLIMA - Regional Cooperation towards Adaptation to Climate Change’.



### 2.1.2 Selection process

Firstly, 73 ‘good quality’ initiatives (36% of the total) were selected following the application of the afore-mentioned criteria. Tables 3 and 4 report the thematic sector and geographic breakdown of these ‘good quality’ projects.

<b>Thematic Sector</b>	<b>Number of initiatives</b>
Energy supply and distribution	42
Mobility: Private transport	33
Mobility: Public transport	31
Mobility: Transport infrastructure	23
Buildings: Residential	33
Buildings: Services	25
Buildings: Public premises	38
Industry	25
Agriculture, forestry	17
Waste management	18
Urban or spatial planning	24
Horizontal measures	21
Other	31

*Table 3 Number of ‘good quality’ initiatives per thematic sector*

<b>Country</b>	<b>Number of initiatives</b>
Austria	1
Belgium	4
Cyprus	1
Denmark	2
France	5
Germany	10
Greece	8
Italy	10
Latvia	1
Lithuania	1
Netherlands	6
Poland	3
Portugal	1
Romania	2
Spain	12
Sweden	4
United Kingdom	2

*Table 4 Number of ‘good quality’ initiatives per country*

Subsequently, 25 cases were selected from the good quality projects to satisfy both the geographical balance and the thematic representativeness criteria. The final list of best examples selected is presented in table 5.

Ref number	Title
505	Energy-efficient Eskilstuna
514	Assistance in managing the energy consumption of local authority assets: Shared Energy Consultancy
527	Jokkmokk Municipality Sustainable Energy Action Plan and Climate Protection Strategy
555	Newcastle Climate Change Strategy & Action Plan
562	millepedibus
585	New wood-fired boiler
621	New ways of getting around
623	Improving the efficiency of the public lighting system
649	Corporate mobility plan
673	MODEL – ‘Management of Domains Related to Energy in Local Authorities’
694	Clean energy in Reggio Emilia
696	Rural Advice and Support Units for RES in Heat Systems and Integrated Energy Management in Buildings
708	Energy efficiency network Karlsruhe (‘EnergieEffizienz-Netzwerk Karlsruhe’)
713	‘By Car Together’ carpooling project of the Province of Ancona
726	Pyrenean Climate Change Observatory
728	City of Frankfurt - Europe’s Capital City of Passive Houses
730	Demonstration of the application of sustainable and efficient second generation biofuels in an urban environment
746	E3SoHo - ICT services for Energy Efficiency in European Social Housing
768	Improving energy efficiency in school buildings in the municipality of Jelgava
777	Pipeline connection between the Kardia power station and the Ptolemaida district heating network
804	Gotland - a 100 RES Island
806	Badalona Aprofita el Sol (Badalona takes advantage of the Sun)
819	Progetto RACES: comunicare il cambiamento climatico. (RACES: Raising Awareness on Climate and Energy Saving)
822	SIENA CARBON FREE 2015
833	Amsterdam Electric

**Table 5 List of selected ‘good quality’ initiatives according to established selection criteria**

## 2.2 Selected good practices



**Eskilstuna kommun**



<b>Reference number</b>	505
<b>Title of the initiative</b>	<b>Energy-efficient Eskilstuna</b>
<b>Authority (Location)</b>	Municipality of Eskilstuna (Sweden)
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Industry
<b>Origin of funding</b>	County administrative board, Saving Bank Foundation
<b>Broader programme/policy plan</b>	The initiative is part of Eskilstuna's efforts under the Swedish Energy Agency's Sustainable Municipality programme.
<b>Network Support</b>	No
<b>Objectives</b>	To make Eskilstuna an energy-efficiency hub.

The initiative comprises the following three strands:

1. Reducing energy use in industry and business, with two main projects: i) 'Enlightened design in commerce', a school project carried out in 2009 in a shop called Blomsterpralinen that developed a students' proposal resulting, when implemented, in a nearly 50% reduction in lighting-based electricity use. The experience gained was so positive that it was used as a basis for the development and launch of a course at Mälardalen University, in Eskilstuna, in Spring 2010. ii) 'Energy-efficient companies', a pilot project carried out in 2009, involving nine companies that managed to reduce their energy consumption by an average of 33%. A further round of similar projects is being implemented in 2010.

2. Long-term skills creation, with two main projects: i) 'University education': in September 2009, Kunsapscompaniet, a private education and training provider, began providing university training for 'energy efficiency specialists'. The first class of students took their exams in summer 2010; a second group started their studies in April 2010. So far, the Swedish National Agency for Higher Vocational Education has granted approval for four such courses. ii) 'Course components': since 2010, components on energy efficiency, planning and strategy are being developed in the field of maintenance technology at Mälardalen University, in Eskilstuna.

3. Local research and product development, with three main projects: i) ‘Green production system’, a project aimed at establishing the framework and prerequisites for green production and identifying current best practice, with the participation of Haldex AB, Allemballage AB, Volvo Technology, Volvo Construction Equipment and Saab Automobile. ii) ‘IndustryWise’, a device indicating in real time to staff how much electricity is being used in the company where they work; it has been developed together with staff of the companies participating in the ‘Energy-efficient companies’ project. In Spring 2010, prototypes were put into use, in the companies concerned. iii) ‘Watt-lite’, an offshoot of IndustryWise intended primarily for service companies.

***(Expected) Results***

72 of the 136 identified actions have already been implemented. As a tangible outcome, the implemented actions in nine companies have achieved an average reduction in energy use of 33%. Applied on a larger scale, this approach is expected to make a significant contribution to the 20-20-20 targets.

***For further information***

[http://eskilstuna.se/templates/Page\\_182278.aspx](http://eskilstuna.se/templates/Page_182278.aspx)

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<b>Reference number</b>	514
<b>Title of the initiative</b>	<b>Assistance in managing the energy consumption of local authority assets: Shared Energy Consultancy</b>
<b>Authority (Location)</b>	Communauté d'agglomération Grand Dole (France)
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Buildings: Public premises
<b>Origin of funding</b>	ADEME and Franche-Comté Regional Council
<b>Broader programme/policy plan</b>	Grand Dole Territorial Climate/Energy Plan
<b>Network Support</b>	Ideas of possible actions and good practices implemented by other members, as well as political support, from the 'Energy Cities' network.
<b>Objectives</b>	To assist communes to more effectively identify the energy (and water) consumption of their facilities and to optimise supply contracts.
<p>Shared Energy Consultancy is a local service provided free of charge to the communes in the Grand Dole agglomeration, to help them manage their energy consumption and to support them in their renewable energy projects. The consultancy's task is to find tailored solutions for each commune by: i) providing an initial assessment and regular monitoring of energy (and water) consumption; ii) performing a supplementary thermographic analysis using an infrared camera; iii) providing a prioritised list of proposed actions (taking into account both implementation costs and energy efficiency) to reduce consumption; iv) organising campaigns to raise awareness among technical and administrative staff and developing an inter-communal network of energy management stakeholders; v) publishing the energy performance of buildings and providing the communes with operational support with their projects; vi) supporting communes in opening up energy markets to competition. For the first three years the service is subject to a collective agreement with the participating communes (so as to guarantee their involvement in the activities).</p>	
<b>(Expected) Results</b>	The project is expected to provide municipal representatives and technical services with consultancy, decision-making assistance and support with their energy saving and renewable energy projects on public property and in the public sphere.
<b>For further information</b>	<a href="http://www.grand-dole.fr">www.grand-dole.fr</a>



JOKKMOKKS  
KOMMUN



<b>Reference number</b>	527
<b>Title of the initiative</b>	<b>Jokkmokk Municipality Sustainable Energy Action Plan and Climate Protection Strategy</b>
<b>Authority (Location)</b>	Municipality of Jokkmokk (Sweden)
<b>Status of implementation</b>	Initial stage
<b>Main sector</b>	Horizontal measures
<b>Origin of funding</b>	EU support scheme, national support scheme, other
<b>Broader programme/policy plan</b>	Attractive Jokkmokk 2015
<b>Network Support</b>	Sveriges Ekokommuner; CoM
<b>Objectives</b>	To reduce energy consumption within the municipal sector and among citizens; to increase the number of connections to the local biomass district heating system; and to increase the use of renewable energy sources within the municipal sector.

Jokkmokk aims to become an internationally known model for energy efficiency and renewable energy sources by developing a project in these fields based on small-scale regional energy production within a sustainable recycling society. The municipality is a centre of climate-friendly energy production: almost 70% of households are connected to the biomass district heating and roughly 15% of Sweden's hydropower (ca 7% of total electricity) is produced within the municipal borders. As a consequence, the region features a high concentration of expertise and specialised companies, mainly SMEs, in the energy sector. Action focuses on three aspects: i) the sustainable use of resources and nature; ii) the provision of a sustainable, secure and environment-friendly energy supply for the municipality; and iii) network activities with other municipalities and the regional economy. The key drivers and success factors of the initiative are: strong and comprehensive political support at the local level, given that the Sustainable Energy Action Plan and the Climate Protection Strategy will be integrated in the local development strategy; the legally binding commitment of the municipality, due to existing Swedish legislation that has made local energy plans mandatory; the intensive stakeholder dialogue during both planning and implementation stages; the Covenant of Mayors initiative, highlighting the importance of the local level for reaching the 20-20-20 targets; cooperation with the regional energy agency

within a project supporting municipalities in the region to develop local energy plans; the establishment of an inter-departmental working group on environmental issues, involving local politicians; the establishment of a project management unit; and the use of qualified and committed staff, both on project management and on technical issues.

***(Expected) Results***

15% reduction of energy consumption per capita to the year 2015, 20% until 2020; 3% reduction of energy consumption within the municipal sector per year; 1% per year increase of connections to the local biomass district heating system; increased use of renewable energy sources within the municipal sector at a minimum of 10% until 2020. Results will be regularly evaluated at the political level (city council).

***For further information***

[www.jokkmokk.se/ext/templates/extPage.aspx?id=9718&epslanguage=SV](http://www.jokkmokk.se/ext/templates/extPage.aspx?id=9718&epslanguage=SV)

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<b>Reference number</b>	555
<b>Title of the initiative</b>	<b>Newcastle Climate Change Strategy &amp; Action Plan</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Horizontal measures
<b>Authority (Location)</b>	Newcastle City Council (United Kingdom)
<b>Origin of funding</b>	National support scheme, other
<b>Broader programme/ policy plan</b>	No
<b>Network Support</b>	Unspecified
<b>Objectives</b>	To fulfil the commitment under the Covenant of Mayors on Sustainable Energy with regard to the development of a Sustainable Energy Action Plan in line with the 2020 targets.

The City Council is committed to tackle climate change and work with residents and partners to reduce the city’s carbon emissions by 34% (from 1990 levels) by 2020, while providing significant employment opportunities for residents, reducing energy bills and boosting the local economy. Through this initiative, the Council will provide leadership by: i) reducing the municipality’s own carbon emissions from its buildings, services, transport fleet and staff travel; ii) meeting 20% of its electricity demands by low carbon energy sources by 2020; iii) facilitating new ways of working that avoid the need to bring a private car to work; iv) using low carbon technologies across its fleet of vehicles; v) giving children the opportunity to learn about the causes and impacts of climate change and encouraging them to take positive action to reduce carbon emissions and help create sustainable local communities; vi) seeking to reduce domestic waste by 15% and increasing domestic waste recycling to 55% by 2020; vii) ensuring all new Council homes are built to the zero carbon standard as from 2016; viii) ensuring that the Council’s housing stock has adequate heating and insulation and supporting residents to reduce their energy use. The municipality is partnering with leading-edge universities, strong private sector partners and national leaders in the delivery of sustainability projects. Along with its partners, the Council will also aim to: i) ensure that every home that can benefit from cavity and loft insulation has done so by 2015; ii) deliver low carbon energy solutions across the city including community-based energy schemes, solid wall insulation and renewable energy generation; iii) support the city’s businesses in reducing their carbon emissions by 34% by 2020; iv) support ‘green collar’ jobs in sectors such as marine and offshore technology; v) develop the Science

Central site as the focal point for applied research and practice by the public and private sectors across the whole sustainability field; vi) eradicate fuel poverty as far as is practicable by 2016 by both improving energy efficiency and increasing household incomes; vii) support work with residents to reduce their energy consumption by 10% through behavioural change and other low-cost measures; viii) support the development and introduction of electric vehicles across the North East, including the expansion of charging points powered by renewable energy where practicable; ix) promote lower carbon methods of travel, aiming for a 4% reduction in fuel use through walking, cycling and better use of public transport by 2020; x) stimulate and encourage the production and consumption of locally grown products and services.

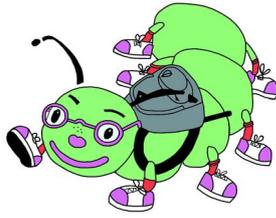
***(Expected) Results***

***For further information***

A 20% reduction in carbon emissions from 2005 to 2020 and a 34% reduction by 2020 from a 1990 level.

[www.newcastle.gov.uk/climatechange](http://www.newcastle.gov.uk/climatechange)

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<b>Reference number</b>	<b>562</b>
<b>Title of the initiative</b>	<b>millepedibus</b>
<b>Status of implementation</b>	Initial stage
<b>Main sector</b>	Mobility: Private transport and Public transport
<b>Authority (Location)</b>	Municipality of Robbiate (Italy)
<b>Origin of funding</b>	Municipality of Robbiate
<b>Broader programme/policy plan</b>	None
<b>Network Support</b>	No
<b>Objectives</b>	To reduce car traffic in areas around schools; to help improve the well-being of children, giving them the opportunity to take a short walk each day; and to show how the public may actively contribute to making the town a nicer place to live in.

The millepedibus is an initiative developed to raise awareness on sustainable lifestyles and to convince people that their choices and actions can influence and change the quality of life of the whole community. The purpose of the initiative is to enable children to discover a different way to travel within their town, so that they obtain a degree of independence of movement, making the most of their daily journey to school. The project empowers children to go out on their own and meet others, walk to school, play and discover the environment in which they live, and to understand the importance of living well in their town, starting with their own neighbourhood. Millepedibus sets up safe routes between home and school, by implementing the following actions: i) identification of groups of parents, grandparents and adults who volunteer to accompany children to school, make sure they are safe and show them how to move independently among other road-users; ii) encouragement of socialising between children living in the same area and making the same journey; iii) offer of support to families taking and collecting children to/from primary school; iv) education of road-users about the presence of children walking to school; v) helping children to get to know the local area by experiencing it; vi) encouragement of self-confidence and of the sense of security. The project began in October 2009 with the establishment of two routes; it will be extended in October 2010 with four routes.

***(Expected) Results***

Using the walking bus is expected to significantly reduce the number of private vehicles on the school run, thus cutting traffic within the town, greenhouse gas emissions and other harmful elements in the atmosphere.

***For further information***

[www.comune.robiate.lc.it](http://www.comune.robiate.lc.it)

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<b>Reference number</b>	585
<b>Title of the initiative</b>	<b>New wood-fired boiler</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Energy supply and distribution
<b>Authority (Location)</b>	Town of Colmar – Alsace region (France)
<b>Origin of funding</b>	ADEME, SCCU
<b>Broader programme/policy plan</b>	Local Agenda 21/Climate Plan
<b>Network Support</b>	Unspecified
<b>Objectives</b>	To achieve 28% reduction in emissions, i.e. more than 7,000 tonnes of CO <sub>2</sub> and 45 tonnes of sulphur.
<p>The Colmar thermal power station was built in 1961; it initially ran on fuel oil, was converted to coal in 1981, and returned to fuel oil in 2003. It currently consumes 7,500 tonnes of fuel oil a year. The district heating system has a 15 km network serving the equivalent of 16,000 households. In 2007, with a view to promoting the use of renewable energy, the Société Colmarienne de Chauffage Urbain (Colmar District Heating Company), of which the town council is the majority shareholder, commissioned a study on the possibility of using renewable energy to fuel the power station. After two years of deliberations and technical studies, the company decided to construct a new wood-fired boiler on the site of the thermal power station. Work commenced in May 2010 and construction is expected to last for one year, followed by a test period, so that the system can be brought into service for the 2011 heating season. The system features 8 MW output, a floor area of 1,800 m<sup>2</sup> and saves 2,300 tonnes of heavy fuel oil. The total cost of the new unit is estimated at 6,500,000 euro, before tax.</p>	
<b>(Expected) Results</b>	The new wood-fired boiler is expected to reduce emissions by around 30% compared to the old fuel-oil-fired boiler (emissions reduced by 7,000 tonnes of CO <sub>2</sub> and 45 tonnes of sulphur). Also, more than 75% of energy generation will come from renewable sources (use of woodchips as fuel).
<b>For further information</b>	<a href="http://www.colmar.fr">http://www.colmar.fr</a>

<b>Reference number</b>	621
<b>Title of the initiative</b>	<b>New ways of getting around</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Mobility: Private transport, Public transport and Transport infrastructure
<b>Authority (Location)</b>	Gothenburg City (Sweden)
<b>Origin of funding</b>	National support scheme
<b>Broader programme/ policy plan</b>	Gothenburg City's guidelines for employees travelling to work; 'active traffic support'; municipal environmental programme; 'K2020'; 'On your own feet'; decision to introduce a congestion charge in 2013; municipal system for climate levies on business trips of municipal employees.
<b>Network Support</b>	Trafikverk (national transport authority), Västtrafik (transport authority of western Sweden), neighbouring municipalities and regional authorities.
<b>Objectives</b>	To increase the number of people who walk or cycle to work.

The municipality of Gothenburg and the region are working together with employers and the general public with a view to substantially increasing the number of people who walk or cycle to work, through a combination of infrastructure measures, policy decisions, information campaigns, financial incentives and promotion of behavioural change. More specifically, Gothenburg is providing: i) more cycle parking; ii) a new cycle network; iii) cycle maps published annually; iv) internet route-planning for cyclists; v) information on pump stations or service stations for cyclists; vi) a public bike-sharing system; vii) projects in congested areas (information, infrastructure); viii) annual public cycling campaigns; ix) bike days with cycle repair, information and token awards; x) support for schools on safe cycling; xi) municipal bicycle pools; xii) subsidies for bicycles for municipal employees; xiii) a 'Getting to work without the car' campaign (in which 222 organisations with 167,000 employees took part in 2009); xiv) advice, seminars and courses for employers (surveys, policy tools, measures to promote cycling and walking); xv) travel coaching project with employers; xvi) collaboration with Volvo IT's 'Commute Greener' campaign; xvii) collaboration with the transport authority on road restructuring, e.g. to encourage cycling to work; xviii) support for 'cycle challenges' with employers.

***(Expected) Results***

A new cycling network and parking in operation; cycle maps renewed each year; a public bike-sharing system in operation; bicycle awareness and promotion campaigns; capacity built through seminars and training.

***For further information***

[www.nyavagvanor.se](http://www.nyavagvanor.se)

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<b>Reference number</b>	623
<b>Title of the initiative</b>	<b>Improving the efficiency of the public lighting system</b>
<b>Status of implementation</b>	Initial stage
<b>Main sector</b>	Public space infrastructure
<b>Authority (Location)</b>	The Alcorcón Municipal Council (Spain)
<b>Origin of funding</b>	The Alcorcón Municipal Council (own funds) under agreement with the Energy Diversification Institute
<b>Broader programme/policy plan</b>	Plan de Ahorro Energético Municipal
<b>Network Support</b>	No
<b>Objectives</b>	To improve the efficiency of the public lighting system in Alcorcón.

The lighting system in Alcorcón is mixed, with areas that use old and inefficient systems existing alongside others that have been recently upgraded. The project will be carried out in three phases: the first involves an energy audit in which the specific investments have been identified; the second phase includes the tender procedures for the setting up and running of the system for a specified number of years so that it can be amortised; the third phase involves long-term establishment and operation of the lighting system. The scheme is considered to be innovative in terms of partnership, involving the following three stakeholders: the Alcorcón municipal council that will make the short-term investment, expected to be recovered through the resulting energy savings; the Energy Diversification Institute (Insitituto de Diversificación de la Energía) that will make available its experience and will contribute to the financing of the investment as well as covering the cost of the energy audit carried out by the Spanish Lighting Committee; and the energy service companies (ESCOs), with funding from the IDAE, which are making the investment and operating the system.

<b>(Expected) Results</b>	The work, carried out jointly with a number of administrations, will make it possible to create jobs and achieve high economic profitability and major environmental efficiency.
<b>For further information</b>	<a href="http://www.ayto-alcorcon.es">www.ayto-alcorcon.es</a>

<b>Reference number</b>	649
<b>Title of the initiative</b>	<b>Corporate mobility plan</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Mobility: Private transport & Public transport
<b>Authority (Location)</b>	Brussels Environment - IBGE (Brussels Capital Region, Belgium)
<b>Origin of funding</b>	Brussels Environment - IBGE/Brussels Capital Region (own funds)
<b>Broader programme/policy plan</b>	Plan to improve air quality
<b>Network Support</b>	No
<b>Objectives</b>	To improve air quality and promote the switch to more sustainable forms of transport.

Since 2004, in the Brussels region, all bodies under public or private law employing over 200 people on one site are legally obliged to draw up a corporate mobility plan. The project is managed by a special unit composed of the environment and mobility administrations. It covers 280 sites, 230,000 employees, i.e. one third of Brussels-based jobs, and several sectors of the economy (banks, hospitals, administrations, hotels, etc.). The mobility plan is implemented in two phases and then updated. The mobility plan unit delivers a personalised opinion to the company on each phase of its mobility plan, providing support and pin-pointing priority measures. This support is supplemented by training sessions, e-news and awareness-raising campaigns, such as 'Friday Bikeday' and 'Commuting without a car', enabling employees to participate. In 2011, the requirement will be extended to companies employing over 100 people on one site. Additionally, the administrative procedure will be made easier and certain measures will become compulsory.

<b>(Expected) Results</b>	Corporate mobility plans help reduce the use of cars in Brussels. In companies that have adopted these plans, car-use fell by 4.8% between 2005 and 2008, with people using public transport and bikes instead. In companies with 100-200 employees – those with no obligation to implement a mobility plan – it fell by only 2.3%
<b>For further information</b>	<a href="http://www.bruxellesenvironnement.be/Templates/Professionnels/niveau2.aspx?id=1558&amp;langtype=2060">www.bruxellesenvironnement.be/Templates/Professionnels/niveau2.aspx?id=1558&amp;langtype=2060</a>

<b>Reference number</b>	673
<b>Title of the initiative</b>	<b>MODEL – ‘Management of Domains Related to Energy in Local Authorities’</b>
<b>Status of implementation</b>	Initial stage
<b>Main sector</b>	Horizontal measures
<b>Authority (Location)</b>	Baia Mare Municipality (Romania)
<b>Origin of funding</b>	Baia Mare Municipality (own funds)
<b>Broader programme/policy plan</b>	Municipal Energy Planning
<b>Network Support</b>	Orase Energie Romania (the Romanian Energy-Cities Network)
<b>Objectives</b>	To become a model for citizens and other municipalities in the field of rational use of energy.

MODEL is a European project focusing on a sustainable energy use in municipalities from the new Member States and Croatia. Baia Mare is a pilot city in the MODEL initiative, driven by its desire to become a model for citizens and other municipalities in the area of the rational use of energy. To tackle this goal, Baia Mare municipality: i) appointed a municipal energy manager; ii) organised an energy unit within its administration; iii) developed a local energy action plan and energy information systems; iv) obtained financing for concrete investments; and v) improved the communication of energy issues to its citizens. Through this initiative, Baia Mare became one of the few municipalities in Romania to have an energy strategy at municipal level. Moreover, the achievement and impact of the measures defined in the strategy will be permanently monitored. This is considered to be a first step towards the development of a sustainable energy community, opening the door to other energy projects.

***(Expected) Results***

Increased awareness on the importance of energy efficiency and the rational use of natural resources, both at the institutional level and among the citizens (through the Intelligent Energy Municipal Days, connections between local decision-makers, businesses, and citizens of all ages were created, with a view to jointly contributing to the reduction of energy consumption and impact of energy use on the environment); and the opportunity to enhance knowledge in the municipality and learn from the experience of other European cities with regards to the development of an energy sustainable community and of methods of achieving the objectives of the Covenant of Mayors.

***For further information***

[www.energymodels.eu](http://www.energymodels.eu)

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<b>Reference number</b>	694
<b>Title of the initiative</b>	<b>Clean energy in Reggio Emilia</b>
<b>Status of implementation</b>	Starting
<b>Main sector</b>	Energy supply and distribution
<b>Authority (Location)</b>	municipality of Reggio Emilia (Italy)
<b>Origin of funding</b>	Energy management agency 'Gestore Servizi Energetici' (GSE), under the so-called 'Conto Energia' for the production of photovoltaic energy
<b>Broader programme/policy plan</b>	Covenant of Mayors
<b>Network Support</b>	No
<b>Objectives</b>	To step up and extend the production of clean energy and to save energy.

The municipality of Reggio Emilia is launching its first-ever solar energy project with a view to stepping up and extending the production of clean energy. The first phase of the initiative will involve the installation of solar panels on 10 municipal buildings (schools, sports halls, municipal warehouses and a court house). The plan, which involves a municipal investment of over 3 million euro, provides for photovoltaic installations covering approximately 6,000 m<sup>2</sup>, with panels generating 1 MW of energy, thus reducing oil consumption and CO<sub>2</sub> emissions and at the same time meeting the average needs of approximately 1,000 families. The environmental benefits are expected to be accompanied by major financial savings. Indeed, the incentive tariffs provided for through the 'Conto Energia' granted by GSE (energy management agency), will not only cover the costs of the investment but will also generate an annual income. It will, moreover, provide development and innovation opportunities to companies expressing an interest in participating in the initiative. By opting for a new way of managing public works, involving the leasing of public property, public control over the ownership and management of the plants will be maintained.

<b>(Expected) Results</b>	Production of clean energy, massively reducing CO <sub>2</sub> emissions; income for public finances over 20 years; creation of new jobs; dissemination of innovative skills throughout the region; awareness on renewable energy sources in the target schools.
<b>For further information</b>	<a href="http://www.municipio.re.it/energia">www.municipio.re.it/energia</a>



<b>Reference number</b>	696
<b>Title of the initiative</b>	<b>Rural Advice and Support Units for RES in Heat Systems and Integrated Energy Management in Buildings</b>
<b>Status of implementation</b>	Ended
<b>Main sector</b>	Horizontal measures
<b>Authority (Location)</b>	Prefecture of Pieria (Greece)
<b>Origin of funding</b>	Prefecture of Pieria (own funds) and EC funds (IEE)
<b>Broader programme/policy plan</b>	RURASU
<b>Network Support</b>	No
<b>Objectives</b>	To provide energy management, energy conservation consultancy and services in rural areas.

The main problem that the RURASU project tackled was the lack of information on renewable energy sources (RES) and energy efficiency issues in selected rural and remote areas of Europe (Allgäu in Germany, Pieria in Greece, South Ayr in Scotland, and Cordillera Subbetica in Spain). Professionals, system providers, consumers, public authorities, local actors and other individuals of the target areas had no contact with academic institutions and consultancy firms experienced in RES and energy efficiency. Through the establishment and operation of rural Design and Advice Support Units (DASUs), providing energy management and energy conservation consultancy and services, the project bridged this knowledge gap. The continuous support provided to local actors resulted in the broader use and implementation of RES and energy efficiency techniques. The methodology developed within the project and the actions undertaken may be helpful tools for all those interested in establishing or further developing a Rural Advice and Support Unit (or rural-based DASU). Moreover, the project itself was a successful replication example since the already-established DASUs in Greece and Germany produced the necessary methodology documentation for the establishment of a DASU in a rural area, and this was then adopted as good practice by partners in Spain and in Scotland. Important steps in implementation were: i) the development of educational materials (Information Acquisition Tool, leaflets etc.); ii) analysis, training and consultations with regards to the European Buildings Directive (2002/91/EC); iii) networking and training of the involved

professionals and support of local energy management in general; and iv) wide dissemination of the results. DASUs offer a highly cost-effective means of improving energy efficiency and increasing the uptake of low carbon technologies at a local level.

***(Expected) Results***

Operation of DASUs in the four areas; creation of methodological tools for supporting the establishment or further development of rural-based DASUs; creation and implementation of public relation strategies for the involved areas, including cooperation with the local media; set up of partners' networks in each DASU and training of the professionals involved; world-wide dissemination of deliverables and production of educational material in local languages.

***For further information***

<http://www.rurasu.info/>

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<b>Reference number</b>	708
<b>Title of the initiative</b>	<b>Energy efficiency network Karlsruhe ('EnergieEffizienz-Netzwerk Karlsruhe')</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Industry
<b>Authority (Location)</b>	The city of Karlsruhe (Germany)
<b>Origin of funding</b>	National support scheme: 30 pilot networks; also sponsored by the Stadtwerke Karlsruhe.
<b>Broader programme/policy plan</b>	Climate protection concept Karlsruhe 2009 – framework of action for municipal climate protection ('Klimaschutzkonzept Karlsruhe 2009 - Handlungsrahmen für den kommunalen Klimaschutz').
<b>Network Support</b>	It is part of a federal project involving 30 pilot networks, local support through Karlsruhe public services, local network of supporters from business development agencies, Chamber of Commerce and Industry and scientific institutions ('Fraunhofer Institut').
<b>Objectives</b>	To set up an energy efficiency network involving the major energy consumers in the city of Karlsruhe.

Under the leadership of the city's department for environmental protection and safety at work, the city of Karlsruhe was able to establish, for the first time in Germany, an energy efficiency network at local level. The Energy Efficiency Network Karlsruhe (EEN-KA) is considered to be both an opportunity for cooperation as well as a networking platform for the Karlsruhe economy. Its work is based on energy efficiency meetings that have been introduced in several regions, especially Baden Württemberg, and each involves 10 to 15 companies. Besides comprehensive on-the-spot advice, the initiative's success formula consists of practical exchanges of experience and regular expert presentations on relevant technology topics. In addition, the companies involved have set out a joint energy reduction goal, which they hope to achieve by the end of the four-year project period (2009-2013). Progress is assessed annually, based on reliable, scientific monitoring methods. Ten companies are taking part in the network. The EEN-KA is the first network in Germany to be run in and

managed by a city administration. The city of Karlsruhe has developed a special relationship of trust with major energy consumers based there.

***(Expected) Results***

Energy conservation in the involved industries; energy efficiency increase of at least 2% per year (the German average is currently around 1%); CO<sub>2</sub> reduction: each company is expected to gain on average 10-20 euro per tonne of saved CO<sub>2</sub>.

***For  
information***

***further***

<http://www.karlsruhe.de/rathaus/buergerdienste/umwelt/klimaschutz/Klimaprojekte/een-ka.de>

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<b>Reference number</b>	713
<b>Title of the initiative</b>	<b>'By Car Together' carpooling project of the Province of Ancona</b>
<b>Status of implementation</b>	Advanced stage
<b>Main sector</b>	Mobility: Private transport
<b>Authority (Location)</b>	Province of Ancona (Italy)
<b>Origin of funding</b>	Province of Ancona (own funds) & Regional funds
<b>Broader programme/ policy plan</b>	Agenda 21 Local Action Plan
<b>Network Support</b>	Partnerships with other public bodies (Municipality of Ancona, National Institute for Insurance (INPS), Regional Public Housing body (ERAP), Public-Sector Employees' Social Security organisation (INPDAP), Regional Environmental Protection Agency (ARPAM), Regional and Provincial Employment Departments and conventions with private bodies (Ecological Gas for Transport Consortium, National Association of LPG companies, and the Italian Commission of Electric Road Vehicles).
<b>Objectives</b>	The 'By Car Together' project seeks to ensure improved, more rational use of private cars by commuters, by means of car-sharing between three or more commuters who live and work in the same area or take the same route to their workplace.

This trial project arose from the need to reduce congestion in a busy commuter area through the improved, more rational use of private cars by commuters. The idea is for three or more commuters who live and work in the same area to go to work together using a single car. 'By Car Together' has some innovative elements as compared to other carpooling schemes, as it encourages car-sharing by offering free reserved parking places in front of workplaces, and issues fuel coupons as well as other benefits. There is a plan to extend the project to other busy commuter areas where there are large numbers of workers travelling at the same time and often along routes not adequately served by public transport.

***(Expected) Results***

***For further  
information***

The expected results (on the basis of trials already carried out in other locations) are: reduced consumer traffic, and lower transport costs.

[www.provincia.ancona.it/ecologia/Engine/RAServePG.php/P/258710090303/T/Carpooling-InAutoInsieme](http://www.provincia.ancona.it/ecologia/Engine/RAServePG.php/P/258710090303/T/Carpooling-InAutoInsieme)

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<b>Reference number</b>	726
<b>Title of the initiative</b>	<b>Pyrenean Climate Change Observatory (PCCO)</b>
<b>Status of implementation</b>	Starting
<b>Main sector</b>	Horizontal measures
<b>Authority ( Location)</b>	Midi-Pyrenees Region, CTP Presidency (Spain)
<b>Origin of funding</b>	EU and National support schemes
<b>Broader programme/ policy plan</b>	None
<b>Network Support</b>	None at the moment but the PCCO will seek support in the future from European networks.
<b>Objectives</b>	To improve the understanding of climate change and its effects on the Pyrenees and to define strategies for adapting the most vulnerable socio-economic areas and sectors by acting as a positive tool in the decision-making process.

The multidisciplinary Pyrenean Climate Change Observatory (PCCO) was set up in January 2010 by the CTP (Communauté de Travail de Pyrénées) with the encouragement of the Midi-Pyrenees Region Presidency. The task of the French, Spanish and Andorran experts making up its Scientific Council is to improve understanding of climate change and its effects on the Pyrenees and to define strategies for adapting the most vulnerable socio-economic areas and sectors, by acting as a positive tool in the decision-making process. The PCCO will also disseminate its results in order to make civil society more aware of the challenges of climate change and will seek to take part in European networks on this topic. The innovative aspect of this approach is that it is focused on adaptation, whilst most other joint initiatives on climate change deal more with the question of reducing its impact. Finally, the cross-border dimension of this project, which affects an entire bio-geographical region (the Pyrenees), is another innovative feature.

<b>(Expected) Results</b>	Improved understanding of climate change and its effects on the Pyrenees; strategies for adapting the most vulnerable socio-economic areas and sectors to climate change.
<b>For further information</b>	<a href="http://www.ctp.org">www.ctp.org</a>

<b>Reference number</b>	728
<b>Title of the initiative</b>	<b>City of Frankfurt - Europe's Capital City of Passive Houses</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Buildings: Residential and Public premises
<b>Authority ( Location)</b>	City of Frankfurt am Main, Dpt. Environment and Health, Municipal Energy Agency (Energierreferat) (Germany)
<b>Origin of funding</b>	City of Frankfurt am Main (own funds) & KfW-Bank low interest rate credits for passive houses
<b>Broader programme/ policy plan</b>	Sustainable Energy and Climate Action plan
<b>Network Support</b>	Passive House Institute and association (www.passiv.de)
<b>Objectives</b>	To become Europe's Capital City of Passive Houses (PHs) and to show that in the buildings sector very low energy demand and high levels of comfort can be achieved with affordable costs and a short pay-back period.

The City of Frankfurt has the highest number of passive houses (over 100,000 m<sup>2</sup>, and over 1,000 dwellings). Additionally, several municipal buildings and new residential buildings from the local housing company ABG, have been built as PHs. In 2007 and 2008, with a view to becoming 'Europe's Capital City of Passive Houses', Frankfurt's city council and city parliament have taken the following decisions, so as to firmly embed the passive-house approach to design and construction in all areas of the city: i) when purchasing municipally-owned land, the purchaser must agree to construct to passive-house standards (or, if not possible, should provide satisfactory justification); ii) when leasing office buildings, these should meet PH standards, failing which an agreement should be reached with the landlord regarding modernisation with a view to improving energy efficiency; iii) the total primary energy consumption of new high-rise buildings in Frankfurt should be below 150 kWh/m<sup>2</sup>, of which half of the energy should be drawn from renewable sources. At least one high-rise building should be built specifically as a passive house; iv) new support programmes promoting new buildings and modernisation of residential buildings in Frankfurt are to receive additional funding from the City if the PH standard is met. Since June

2008, the City parliament has developed a system whereby all passive houses in Frankfurt can be visited virtually. The initiative has been presented to delegations from the Netherlands, Belgium, France, China and Spain, as well as to many cities in Europe. The initiative shows that very low energy demand and a high level of comfort can be achieved with affordable costs and a pay-back period of less than 15 years. The initiative is innovative and replicable in all other cities in Europe as well as creating local employment.

***(Expected) Results***

More than 60 additional municipal buildings and more than 3,000 new dwellings built or modernised to PH standards.

***For further information***

[www.energiereferat.stadt-frankfurt.de](http://www.energiereferat.stadt-frankfurt.de), [www.abg-fh.de](http://www.abg-fh.de), [www.stadt-frankfurt.de/energiemanagement](http://www.stadt-frankfurt.de/energiemanagement)

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<b>Reference number</b>	730
<b>Title of the initiative</b>	<b>Demonstration of the application of sustainable and efficient second generation biofuels in an urban environment</b>
<b>Status of implementation</b>	Initial stage
<b>Main sector</b>	Waste management
<b>Authority ( Location)</b>	Municipality of Thessaloniki (Greece)
<b>Origin of funding</b>	Municipality of Thessaloniki (own funds) & EC, DG ENVIRONMENT, LIFE+ 2010 PROGRAMME
<b>Broader programme/ policy plan</b>	None
<b>Network Support</b>	No
<b>Objectives</b>	To study, develop and demonstrate new technology for the production of second-generation biofuel from used cooking oil.

The initiative includes the following actions: i) development of a network for the collection of used cooking oil (Municipality of Thessaloniki and Union of Thessaloniki restaurant owners); ii) production of biofuel from cooking oil, using hydrogen produced from energy generated by photovoltaic systems (National Centre for Research and Technological Development); iii) carrying out of tests on the fuel produced (Aristotle University of Thessaloniki); iv) demonstration of the use of biofuel in the running of a municipal refuse collection vehicle and the cataloguing of results and measurements. The project is expected to have concrete environmental benefits and to promote public-private partnerships. It is considered innovative at a European level and shows good potential for transfer and replication in other EU areas.

***(Expected) Results***

Reduction in the volume of waste with the collection of used cooking oil; production of environment-friendly biofuels from used cooking oil; reduction in CO<sub>2</sub> emissions, through the sustainable production of biofuels using solar generated hydrogen; demonstration of the environmental benefits of biofuels through the use of the new refuse collection vehicle; study of plans for public-private partnerships with a view to extending the environmental benefits and continuing the activity beyond the completion of the project.

***For further  
information***

[www.biofuels2g.gr](http://www.biofuels2g.gr)

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<b>Reference number</b>	746
<b>Title of the initiative</b>	<b>E3SoHo - ICT services for Energy Efficiency in European Social Housing</b>
<b>Status of implementation</b>	Initial stage
<b>Main sector</b>	Buildings: Residential
<b>Authority (Location)</b>	Capital City of Warsaw – Office of the Capital City of Warsaw (Poland)
<b>Origin of funding</b>	Competitiveness and Innovation Programme (CIP) Information & Communication Technologies (ICT) Policy Support Programme (PSP)
<b>Broader programme/ policy plan</b>	None
<b>Network Support</b>	No
<b>Objectives</b>	To introduce and demonstrate, in three pilot local authority houses, an integrated and reproducible ICT-based solution, designed to secure a significant reduction in energy consumption.

The E3SoHo project includes the following activities: i) provision to residents of feedback on energy use and personalised advice on improving energy efficiency; ii) provision of information and support in decision-making on the most appropriate behaviour concerning energy efficiency, costs, comfort and environmental impact, aiming at a reduction of energy use and an increase in the proportion of renewable energy sources; iii) monitoring and passing on of data on energy use to energy service supplier companies that may initiate energy audits in real time, aimed at remedial action as well as conservation activities. The initiative will propose holistic solutions, providing advice on ways of reducing energy use, appropriate system installation, and monitoring and adaptation of energy use. The service will include the installation and adaptation of ICT-based systems, significantly reducing energy use and making it possible to optimise the management of legacy energy production systems. As the E3SoHo service is modular, it can be individually customised. Specifically, the following actions will be undertaken: i) audit of the building in order to identify energy-saving potential; ii) provision to the owner of an ICT-based project aimed at energy-use reduction; iii) installation of a system consistent with the project; iv) adjustment of energy use through monitoring; and v) retention of the legacy system. The approach will be applied in local authority housing but it can be easily replicated to other urban premises. The service will be made available on the open market so that it may be used as a single package by a consortium and/or other organisations such as small and medium-sized businesses and consultancies specialising in energy efficiency.

*(Expected) Results*

*For further  
information*

A 25% of total energy consumption reduction in the pilot local authority houses.

[www.e3soho.eu](http://www.e3soho.eu)

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<b>Reference number</b>	768
<b>Title of the initiative</b>	<b>Improving energy efficiency in school buildings in the municipality of Jelgava</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Buildings: Public premises
<b>Authority ( Location)</b>	Jelgava municipal council (Latvia)
<b>Origin of funding</b>	The Latvian state budget under the heading 'Financial instrument for combating climate change.'
<b>Broader programme/ policy plan</b>	2007-2013 integrated development programme for the town of Jelgava.
<b>Network Support</b>	No
<b>Objectives</b>	To reduce CO <sub>2</sub> emissions by introducing measures to increase energy efficiency in the municipality's schools and to reduce thermal energy consumption in buildings used for municipal purposes.

The main measures foreseen in the project are: i) insulation of outside walls; ii) replacement of windows and outside doors; iii) roof insulation; iv) insulation of cellars; v) installation of thermostats; vi) balancing of the heating system; vii) cleaning and repair of the ventilation system; and viii) lagging of pipes. Requirements concerning green procurement have been added to the technical specifications of the calls for tender, notably regarding energy efficiency and construction materials. The project will reduce thermal energy consumption in the buildings concerned by an overall 43%, thereby reducing CO<sub>2</sub> emissions (efficiency index of 0.26 kgCO<sub>2</sub>/Ls per year) and building maintenance costs.

***(Expected) Results***

Reduction of CO<sub>2</sub> emissions (efficiency index of 0.26 kgCO<sub>2</sub>/Ls per year) by introducing measures to improve the energy efficiency of local schools, which will cut thermal energy consumption overall by 43%; inclusion of green procurement requirements in the technical specifications of calls for tender, notably as regards energy efficiency and construction materials; inclusion of green procurement requirements in the criteria for selecting potential contractors, notably as regards waste management; reduction of CO<sub>2</sub> emissions by around 391,869 kg, enabling the state to continue to draw revenue from unused CO<sub>2</sub> emission quotas.

***For further information***

Information on the project can be found on the home pages of Jelgava municipal council ([www.jelgava.lv](http://www.jelgava.lv)) and of the Zemgale region energy agency enterprise ([www.zrea.lv](http://www.zrea.lv)). Also on [www.jelgava.lv/pasvaldiba/projekti/2010--gads/klimata-parmainu-finansu-instruments0/energoefektivitates-paaugstinasana-jelgavas-p2/](http://www.jelgava.lv/pasvaldiba/projekti/2010--gads/klimata-parmainu-finansu-instruments0/energoefektivitates-paaugstinasana-jelgavas-p2/)

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<b>Reference number</b>	777
<b>Title of the initiative</b>	<b>Pipeline connection between the Kardia power station and the Ptolemaida district heating network</b>
<b>Status of implementation</b>	Initial stage
<b>Main sector</b>	Energy supply and distribution
<b>Authority (Location)</b>	Municipality of Ptolemaida (Greece)
<b>Origin of funding</b>	NSRF Operational Programme 'Environment and Sustainable Development' for the 2007-2013 period.
<b>Broader programme/ policy plan</b>	Municipality of Ptolemaida Operational Programme
<b>Network Support</b>	No
<b>Objectives</b>	To provide clean and cheap district heating with co-generation for the entire town; to develop entrepreneurship.

This initiative aims to complete a particularly important project for the development of the district heating network across the broader region of West Macedonia, i.e. a pipeline connection with the Kardia thermoelectric power station (units III and IV), for a total cost of 35,000,000 euro. The main areas of development, coinciding with the strategic objectives of the Municipal District Heating Company of Ptolemaida, are to provide clean and cheap district heating with co-generation for the entire town and to develop entrepreneurship. The initiative addresses both these objectives. The first objective will be addressed through the connection of the Ptolemaida district heating network with the Kardia thermoelectric power station (transmission and pumping pipeline) and through the extension of the Ptolemaida District Heating Network – Phase 4 (complete urban network). The second objective will be addressed through the installation of greenhouses in an area of 156,000 m<sup>2</sup> of land belonging to the former fertiliser producer AEVAL, as well as through the use of an additional area of 400,000 m<sup>2</sup> of limestone lying within the municipality alongside the pipeline, for the same purpose. The installation of this greenhouse zone represents a comparative advantage in terms of a significant reduction in operating costs, helping to make this investment viable. This project will also broaden the range of activities undertaken by the Municipal District Heating Company of Ptolemaida, by extending their focus to the sector of district heating for companies. Additionally, the pipeline project encourages innovative companies in the agricultural and other sectors to use renewable energy sources.

***(Expected) Results***

A district heating system harnessing the heat co-generated with electric energy by the Public Energy Enterprise's thermoelectric power station; gradual replacement of oil as the town's heating fuel; greenhouses in operation covering a total area of 556,000 m<sup>2</sup>.

***For further information***

[www.tpt.gr](http://www.tpt.gr)

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MUNICIPALITY OF  
GOTLAND

www.gotland.se



Ekokommun Gotland  
på väg mot det hållbara samhället

<b>Reference number</b>	804
<b>Title of the initiative</b>	<b>Gotland - a 100 RES Island</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Horizontal measures
<b>Authority ( Location)</b>	Municipality of Gotland (Sweden)
<b>Origin of funding</b>	Municipality of Gotland (own funds), Interreg IVC, Energiefektiviseringsstöd
<b>Broader programme/ policy plan</b>	None
<b>Network Support</b>	Islenet, Sweden's eco municipalities, Uthållig kommun.
<b>Objectives</b>	To achieve a Renewable Energy Sources (RES) supply equivalent to 100% of the Gotland island's energy needs – becoming a sustainable society by 2025.

The municipality of Gotland has declared its ambition to achieve a RES supply equivalent to 100% of the island's energy needs. This will contribute to achieving the municipality's goal of the island becoming a sustainable society by 2025. As early as 1992, Gotland declared itself an eco-municipality; in October 1996, the Municipal Council passed the eco-programme for Gotland, which identifies the municipal goal to become an ecologically sustainable society within the course of a generation; in 2000, Gotland joined the Campaign for Take-Off and has since then participated in a number of EU projects aiming to implement RES in the local society. Today, wind power meets 25% of the annual electricity consumption from around 100 MW installed capacity; its potential exceeds 1,000 MW of installed capacity, so 'exporting' wind-power is a major part of the sustainable energy scenario for the island. Local forestry provides fuel for district heating and a majority of boilers in private homes are fuelled with clean energy. The construction sector in recent years has provided some interesting examples of low energy buildings, designed in such a way that the need for energy supply for heat and light is minimised. Work towards the realisation of Gotland as a renewable energy island is thus already underway but in order to achieve a RES supply equivalent to 100% of the island's energy needs, participation is required from every level of society. At the policy level, the overall aim to develop an ecologically sustainable society has been reflected

in many of the municipal plans such as Vision Gotland 2025 (the regional development programme), Bygg Gotland (the municipal comprehensive plan and Energy 2010) and the municipality's energy plan. Sustainability at the environmental, social and economic level has recently played a growing role in the development of the island, for example by fostering the reduction of consumption of natural resources. The municipality of Gotland plans to show everyday examples of ecological sustainability.

***(Expected) Results***

1000 MW of installed wind power capacity; new buildings designed with minimal energy supply needs for heat and light; boilers in private homes fuelled with clean energy; consumption of natural resources reduced to a level that is compatible with the ability to regenerate them.

***For further information***

[www.gotland.se/eco](http://www.gotland.se/eco)

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<b>Reference number</b>	806
<b>Title of the initiative</b>	<b>Badalona Aprofita el Sol (Badalona takes advantage of the Sun)</b>
<b>Status of implementation</b>	Ended
<b>Main sector</b>	Energy supply and distribution
<b>Authority (Location)</b>	Badalona Municipal Authority (Spain)
<b>Origin of funding</b>	National support scheme
<b>Broader programme / policy plan</b>	Take the sun home
<b>Network Support</b>	No
<b>Objectives</b>	To cut emissions of CO <sub>2</sub> through own energy production; to demonstrate the viability of photovoltaic and thermal solar installations in council buildings; to promote the use of renewables.

The initiative involves building a photovoltaic and thermal solar installation on the façade of a new council building. The project is part of the campaign entitled ‘Badalona takes advantage of the Sun’, aimed at promoting the use of renewables. The installation produces 31,195 kWh of electricity and some 18,165 euro in revenue each year. Moreover, the thermal part covers 60% of the building's hot water requirement for sanitation. It cuts a total of 17.5 tonnes of CO<sub>2</sub> emissions every year. Since its start, awareness of the initiative has been promoted through activities such as guided tours, the creation of an information platform with real time data about the energy produced and the emissions avoided, and the setting up of an online monitoring system. The installation has also been used as a learning tool to promote the knowledge of these technologies and their dissemination to the private sector.

<b>(Expected) Results</b>	Construction of a fairly large photovoltaic and thermal solar installation, saving 17.5 tonnes of CO <sub>2</sub> emissions and generating an income of 18,165 euro per year.
<b>For further information</b>	<a href="http://www.xarxasolar.net/n_caract3.php?var=0164&amp;xar=3&amp;id=1">www.xarxasolar.net/n_caract3.php?var=0164&amp;xar=3&amp;id=1</a>



<b>Reference number</b>	819
<b>Title of the initiative</b>	<b>RACES: Raising Awareness on Climate and Energy Saving (Progetto RACES: comunicare il cambiamento climatico)</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Horizontal measures
<b>Authority (Location)</b>	Municipality of Modena- Environmental office (Italy)
<b>Origin of funding</b>	Municipality of Modena (own funds) & EC DG Environment LIFE+.
<b>Broader programme / policy plan</b>	Agenda 21 Local Action Plan, Energy Plan action.
<b>Network Support</b>	Coordinamento nazionale Agenda 21 locali italiane.
<b>Objectives</b>	To raise awareness on climate change reaching the highest possible number of people in the cities concerned.

The project RACES is mainly aimed at addressing the issues of climate change (CC) and sustainability, with a particular focus on urban climate and mitigation and adaptation strategies. Increasing summer average temperatures (above 40°C), decreasing precipitation, heat wave phenomena - all these effects are aggravated in densely populated areas by the ‘heat island effect’ caused by heavy traffic, heating and air conditioning systems, building expansion, asphalt capturing solar radiation, blocking soil transpiration and making urban areas hotter. So climate is, in fact, changing faster in cities, as the effects are more evident. Alongside the communication campaign on CC based on accurate and scientific information, the focus of the project on mitigation and adaptation in the urban environments is also with a view to promote target groups’ change of their lifestyle behaviour and their participation to local environmental policy shaping. The project is based on the assumption that cities are perfect labs for testing CC adaptation policies, and this for two main reasons: firstly, they provide citizens with adequate measures/tools – such as eco-building and green urban areas expansion – to fight the impact of CC; secondly, municipalities are important actors in promoting mitigation actions, the use of renewable energies, the spreading of energy efficiency measures in building and the making of environmentally sustainable urban mobility. In order to achieve significant results at the national level and to be replicable in Europe, RACES involves five Italian sites representing different urban environments and potential ways to adapt to CC. The information and communication campaign on CC focuses on

teachers and families, given their high potential as strategic information multipliers; the campaign is supported by a family tutoring scheme and a participation model of the environment-related decision-making process that is open to the public. The part of the campaign dedicated to local adaptation strategies to CC targets other stakeholders.

***(Expected) Results***

To reach: nearly 400 school-teachers (potentially reaching almost 8,000 students) and at least 245 families through the information and communication campaign in the five cities involved; 5,000-10,000 visitors through the organisation of 4-day exhibitions and other events; 50,000 listeners through national and local radio campaigns; 20,000-30,000 people through local media; and nearly 50,000 people in Europe through the dissemination action of the Europe Direct network.

***For further information***

<http://www.liferaces.eu/>

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<b>Reference number</b>	822
<b>Title of the initiative</b>	<b>SIENA CARBON FREE 2015</b>
<b>Status of implementation</b>	Initial stage
<b>Main sector</b>	Horizontal measures
<b>Authority (Location)</b>	Siena Province (Italy)
<b>Origin of funding</b>	Fondazione Monte dei Paschi di Siena
<b>Broader programme / policy plan</b>	Provincial Committee mandate
<b>Network Support</b>	No
<b>Objectives</b>	To make Siena carbon free by 2015; to study and analyse the sources of emissions, as well as gas absorption, and thus to identify critical issues and take appropriate counter-measures in terms of reduction.
<p>The province of Siena has launched a project aimed at drawing up a certified balance sheet (inventory) of greenhouse gas emissions and gas absorption, with a view to studying and analysing the sources, identifying critical issues and taking appropriate measures in terms of reduction. The project is based on IPCC inventory methodology. The following activities are planned or have already been implemented: i) inventory of emissions; ii) identification of the main emitting sectors; iii) preparation of an emissions' reduction plan; iv) identification of measures to reduce greenhouse gas emissions. The sectors assessed are: energy (electricity, petroleum products, incinerator); industry (industrial processes); waste (landfill, compost, waste water); AFOLU: Agriculture, Forestry and Other Land Uses (land use, agriculture, livestock farming, forest sinks). The inventory is based on the collection of a large quantity of data from a variety of sources, which will serve as a control panel to monitor the flow of gas and plan environmental policies to achieve the Kyoto target. This voluntary initiative undertaken by the province of Siena is aimed at making Siena carbon-free by 2015. Measures being taken to achieve this objective include: the increase of renewable sources, energy efficiency in buildings, the reduction of fossil fuels in transport, a study of suitable crops for bio-fuel development, the exploitation of biomass, an improvement in waste management practices and the protection of the forestry environment. Siena currently is ISO 14064/1 certified for its greenhouse gas inventory.</p>	
<b>(Expected) Results</b>	Siena a carbon free city by 2015.
<b>For further information</b>	<a href="http://www.provincia.siena.it">www.provincia.siena.it</a>

<b>Reference number</b>	833
<b>Title of the initiative</b>	<b>Amsterdam Electric</b>
<b>Status of implementation</b>	Advanced
<b>Main sector</b>	Mobility: Private transport & Public Transport
<b>Authority (Location)</b>	City of Amsterdam (the Netherlands)
<b>Origin of funding</b>	National support scheme
<b>Broader programme / policy plan</b>	Air Quality Programme
<b>Network Support</b>	No
<b>Objectives</b>	To encourage the transition to electric transport.
<p>The City of Amsterdam wants to encourage a transition to electric transport. It has therefore decided to facilitate this through the construction of charging stations and by implementing measures to make it more attractive for the city's residents and businesses to switch to electric vehicles. The City and a large number of companies will be setting the example by making their car parks entirely electric. By 2015, Amsterdam is expected to have 10,000 electric vehicles on the roads. An increasing number of electric cars are being produced, and although they are currently more expensive than traditional vehicles, their prices will fall as the market for them increases, as will the overall cost of electric transport. By 2040, the City of Amsterdam expects that almost all kilometres driven within the city will be made by electric vehicles, powered by green electricity generated by windmills, solar panels and biomass plants. The canals will be filled with silent electric boats. Cargo will be transported over the road and on water using electric power. Fossil fuels will be unnecessary and harmful emissions will be dramatically reduced. All of this will make Amsterdam an attractive city to live in or to start a business in. 'Amsterdam electric' is a project of the municipality of Amsterdam and a number of partners, giving electric transport a strong stimulus. After all, electric transport is cleaner, quieter and more economical.</p>	
<b>(Expected) Results</b>	10,000 electric vehicles on the roads of Amsterdam by 2015; the City car parks and the car parks of a large number of companies entirely electric.
<b>For further information</b>	<a href="http://www.amsterdamelectric.nl">www.amsterdamelectric.nl</a>