



Strategic Project



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# Energy Sustainability Planning Recommendation and Guidelines



The Project is co-funded by the European Union, Instrument for Pre-Accession Assistance





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# Energy Sustainability Planning Recommendation and Guidelines

# D4.5 – ENERGY SUSTAINABILITY PLANNING RECOMMENDATION AND GUIDELINES

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# Contents

01.	INTRODUCTION	4
	Designing the 2020 local energy strategy	6
02.	DESIGNING THE PLAN	8
	Understanding the baseline: the energy and emissions balance	10
	Identifying suitable actions	10
	Mobilizing the local administration	10
	Building consensus and commitment	11
	Implementing the plan	12
03.	LOCAL ENERGY PLANS OVERVIEW	14
	The energy balance	16
	Planned actions	19
	Foreseen policy and financial instruments	21
04.	BUILDING CAPACITIES	22
	Activities overview	24
	Activities evaluation	25
05.	SUCCESS STORIES	26
06.	LOOKING AHEAD: THE LESSONS LEARNT	32
	Background of the SEAP development	34
	Baseline assessment	35
	Analysis of best practices	35
	Local energy strategy development and implementation	35
	Awareness raising, information and communication	37



## Introduction

This Report provides a comprehensive description and evaluation of experiences and activities implemented in the 63 ALTERENERGY target communities concerning:

- planning and development of integrated local sustainable energy policies within Covenant of Mayors initiative
- promotion and development of capacity building in energy sustainability

A structured questionnaire was submitted to all of them and the obtained data and information were elaborated accordingly, providing the conclusions outlined in this report. The document especially reports achieved results and main impact of actions developed, along with problems and obstacles faced and/or solved and lessons learnt.

The main aim of WP4 has been to enhance the role of local Communities in mitigating climate change by creating a common method able to:

- promote and facilitate local authorities in the adhesion to the Covenant of Mayors and preparation of SEAPs;
- promote and develop capacity building in energy sustainability and the adoption of intelligent local sustainable energy policies in target communities within 8 European countries;
- promote the integration and institutionalization of energy efficiency, saving and use of renewable energy sources within these communities, targeting all relevant stakeholders (public administration, businesses, citizens...).
- inform and counsel final users about energy matters, also based on the analysis/assessment of the local situation;
- organize and run several training, dissemination and awareness-raising activities tailored to different target beneficiaries (students, citizens, stakeholders, policy-makers) and supported by the creation of specific information and communication tools (i.e. website), materials (i.e. brochure, e-newsletter) and events involving also the media.

The choice of focusing all Alterenergy activities on small communities under 10.000 inhabitants has obviously affected work package WP4 tasks, from capacity building to energy assessment, energy planning and feasibility studies.

The general lack of experience, skills and resources from the selected municipalities has requested a special attention concerning above aspects and suitable ways to overcome possible difficulties. The adopted methodology can be summarised as follows:

- in most cases, the energy planning process has been managed through the appointment of external consultants and/or expert service companies;
- a great attention has been devoted to increase citizens awareness and involve the main local stakeholders in the planning process;
- the empowerment of local administrators has been considered as an important sub-goal of the planning activity;

- reaching a strong political commitment towards the energy plan implementation of the local administration has been also pursued.

Deliverable 4.5 provides a comprehensive description and evaluation of experiences and activities implemented in project target communities concerning:

- planning and development of integrated local sustainable energy policies within Covenant of Mayors initiative.
- promotion and development of capacity building in energy sustainability.

The document especially reports achieved results and main impact of actions developed, along with problems and obstacles faced and/or solved and lessons learnt.

In order to represent in an aggregated way results of the work carried out in all the target communities, a structured questionnaire was submitted to all of them and the obtained data and information were elaborated accordingly, providing the conclusions outlined in the next paragraphs. (see annex)

The questionnaire has been structured in several multiple-choice questions, organized in 4 main sections so as to collect information and data from each local administration, concerning:

- The Energy Plan/SEAP construction
  - Energy and Emissions baseline assessment
  - Local energy strategy construction and planning
  - Political commitment and process management
  - Stakeholders involvement and social acceptance
- The Energy Plan/SEAP implementation;
- Capacity building activities;
- Success experiences and best practices.

## Designing the 2020 local energy strategy

In Deliverable D3.6, "Integrated Energy Management Guidelines" a comprehensive description of the energy planning process has been provided, from the start up of the planning management structure to the actual strategic and actions plan-



ning, consensus building, implementation and monitoring (see box below).

### Start-up

> Start the planning process, by creating an energy management and planning structure internal to the local administration (lead office and staff) and establishing partnerships with relevant local stakeholders and actors.

### Planning

> Assess the current situation concerning the energy needs and consumption levels of the different city sectors and activities and the levels of CO<sub>2</sub> emissions.

> Define and agree a "vision" underlying the plan (long-term goals and objectives, for example related to the EU 2020 CO<sub>2</sub> emission reduction goals).

> Elaborate the plan, establishing short and medium-term objectives (3-5 years) and defining the related measures and activities, expected results, measurable indicators, needed human and financial resources.

> Build internal and public consensus to the plan and formally approve it.

### Implementation

> To start the implementation of the planned measures/activities.

### Monitoring

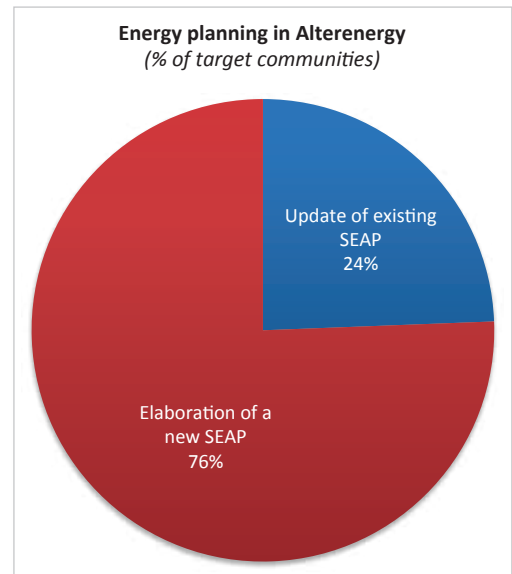
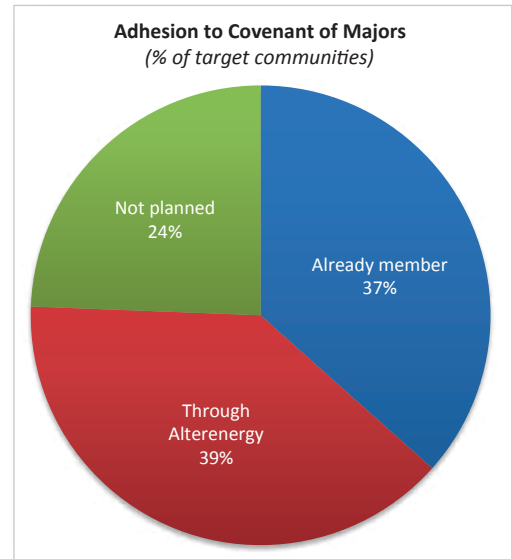
> Monitor and evaluate the plan implementation.

> Publicise and communicate the achieved results and benefits.

As a matter of fact, activities implemented in the selected target communities have followed almost all these steps, although in different ways, according to the preexisting local situation.

The two extremes were communities that already had an energy plan (maybe already signatories of the Covenant of Majors) and only needed an update of the energy balance and/or of the identified actions, and communities that never dealt with energy planning before.

The following two graphs show that 76% of the target communities developed a new SEAP thanks to the project, either because new to energy planning or because the existing SEAP was outdated. The rate of adhesion to the Covenant of Majors is quite high, interesting over 75% of the selected municipalities.





Designing  
the plan

Access to availability of data seems to be the most critical issue for small municipalities in the assessment of the Baseline Emission Inventory (BEI).

Obstacles foreseen in implementing the energy plan were also investigated: the lack of financial support is considered as the main barrier to local energy strategy implementation, while the lack of social acceptance is scored as the lowest.

Even if in no target community stakeholders have been directly involved in energy sustainability plan designing, their level of involvement has been judged in more than 50% of cases as “direct and substantial”. As for the type of stakeholders involved during the planning process, it is quite evident a strong polarization towards the local administrators and politicians (around 80% of the interviewed target communities), followed by companies and citizens.

Finally, in 54% of the cases interviewed stated that the planning process impacted substantially the internal know-how/expertise of the municipalities.

## Understanding the baseline: the energy and emissions balance

The main issue of the first sub-section of questionnaire was understanding main difficulties faced by small municipalities for Baseline Emission Inventories (BEI) assessment. The results are reported in the graph below, from which it can be seen that there isn't a very strong polarization towards a specific source of difficulty.

However, **access to availability of data** seems to be the most critical issue; from this consideration, it appears that any public policy that eases the access to energy and emissions data would be welcomed by municipalities.

On the other side, the lack of technical expertise scores the lowest among the impeding factors, probably because all target communities had the opportunity, through the Alterenergy project budget, to hire external expertise for BEI assessment.

## Identifying suitable actions

As for difficulties faced by local communities in planning their actions for reducing CO2 emis-

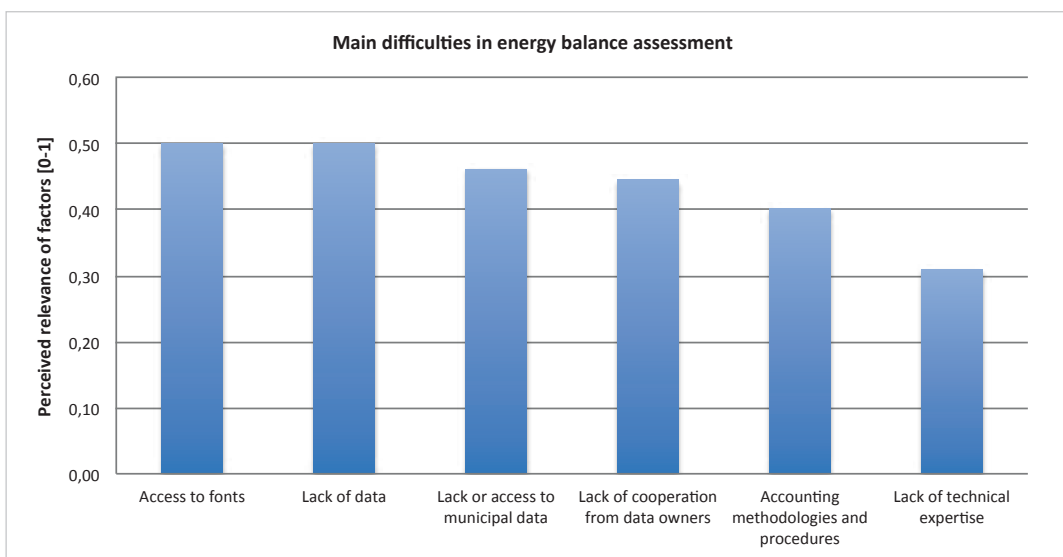
sions, about half of the interviewed identified the **lack of collaboration and contributions by the local stakeholders** as a key negative factor. Once more, the lack of technical expertise scores among the less critical issues.

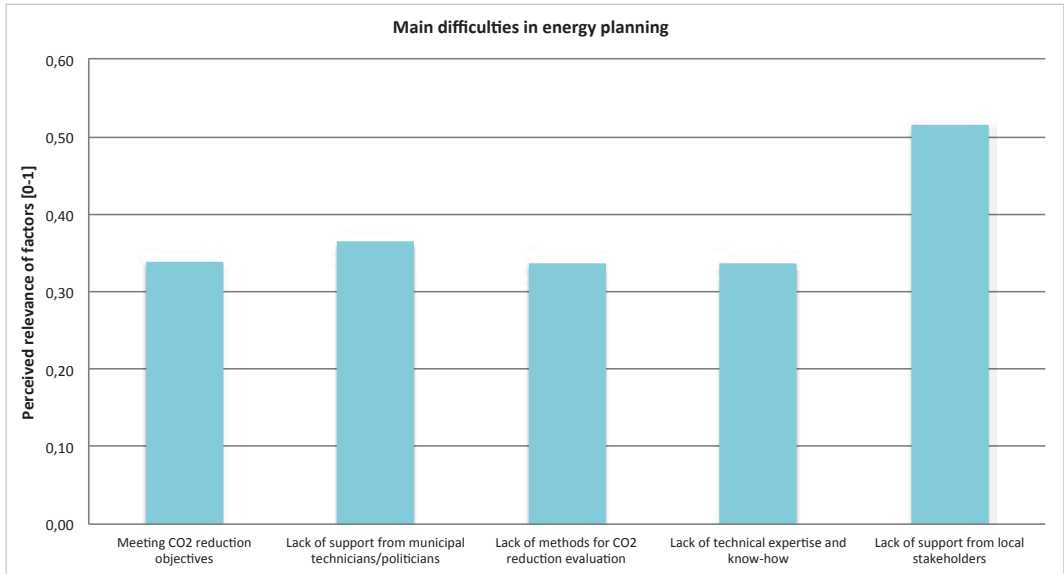
## Mobilizing the local administration

One of the questions inserted in the questionnaire was about the kind of **commitment provided by the Municipality** during strategy planning.

In about 48% of the cases this commitment has been judged as "limited" (providing information, facilitating in-situ visits and data collection, appointing one or more people to follow the planning process, etc.), while in the remaining 46% it was labelled as "strong" (pro-active participation to all planning phases, actively promoting the dialogue with the local stakeholders and mediating consensus with the opposition political forces).

Another issue concerned how the process of Energy Planning **impacted on the Municipality internal organization**. The result of the survey is that in about 65% of the municipalities the impact has been "limited" (i.e. some internal staff from the Municipality formally appointed to take care of the





planning process) and in about 28% of the municipalities “substantial”, meaning that the management of the whole planning process was provided by the internal staff of the Municipality.

Finally, regarding how the planning process **impacted the internal know-how/expertise of the municipalities**:

- no big impact in 13% of the cases (the needed expertise was already available);
- limited impact in 33% of the cases (the project allowed an informal transfer of competences from the appointed external experts and the internal staff of the Municipality);
- substantial impact in 54% of the cases (formal training has been provided to the internal staff of the Municipality).

### Building consensus and commitment

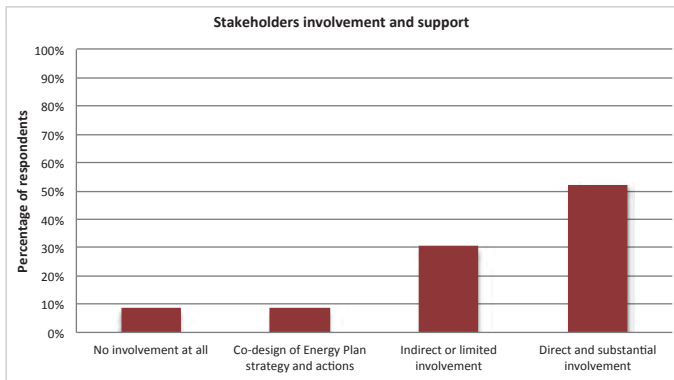
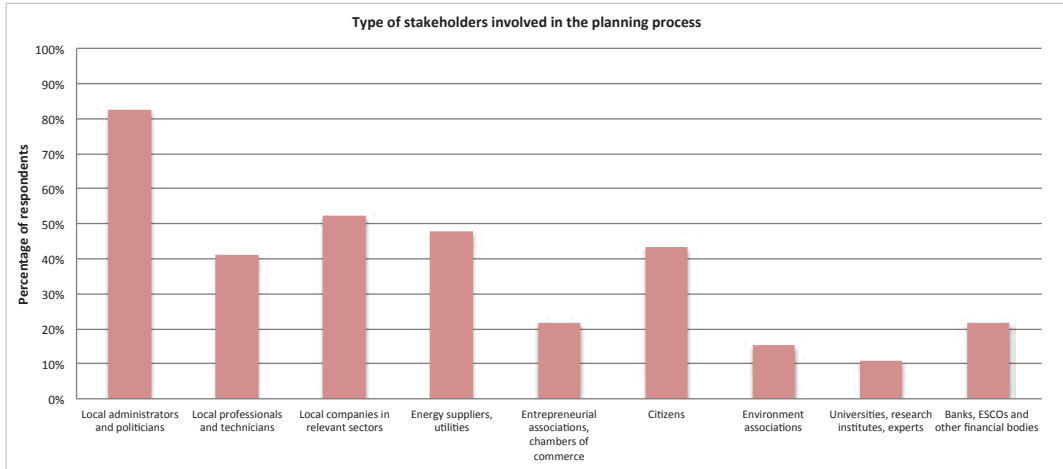
Even if no target community stakeholders have been directly involved in energy sustainability plan designing, their level of involvement has been judged in more than 50% of cases as “direct and substantial” (organization of working groups, public

meetings and discussions, public consultations, etc.).

Where the involvement of stakeholders has been more substantial, its impact on the planning process is frequently judged as **valuable**.

This could be seen as in contradiction with the complaint of the lack of collaboration from the local stakeholders, as commented in the previous paragraph, but one should keep in mind that in that case the “local” stakeholders are subjects external to the local administrations, while the most frequently involved stakeholders come from the public administration itself.

If we indeed analyse the type of stakeholders involved during the planning process, it is quite evident a strong polarization towards the **local administrators and politicians** (around 80% of the interviewed target communities), followed by companies and citizens. In decreasing order of importance, interviewed have also selected: the financial sector, the entrepreneurial associations, the environmental associations and university and research.



## Implementing the plan

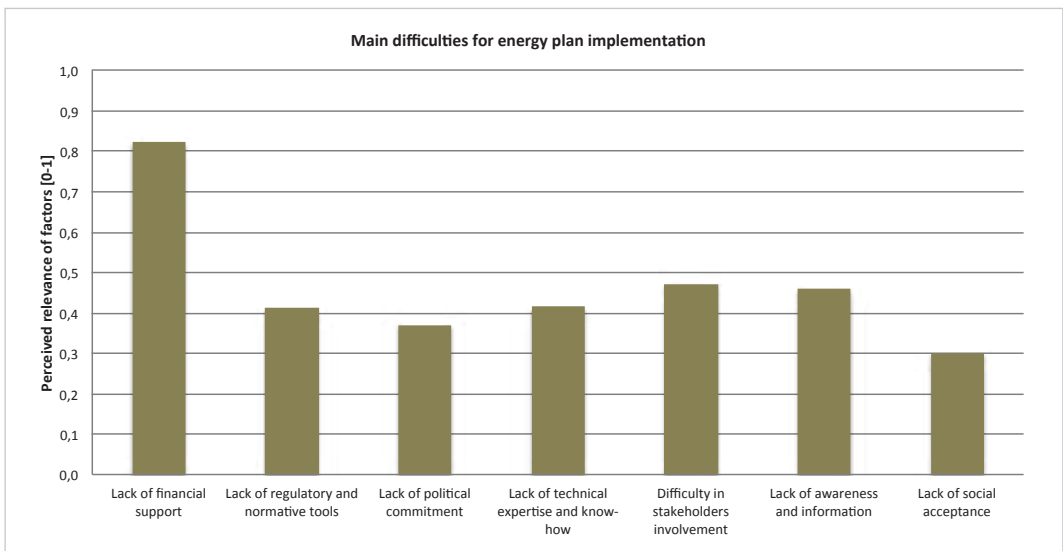
Besides the difficulties faced in defining the sustainable energy plan, the obstacles foreseen in implementing the energy plan were also investigated and the outcome is reported in the graph below.

The **lack of financial support** is considered as the main barrier to local energy strategies implementation, while the lack of social acceptance is scored as the lowest.

This perception could not exactly as with the reality and could, at least partially, be determined by cultural or political biases.

As an example, the social acceptance factor could be scored low because of a lack of interest and commitment by the local administrators in listening to the complaints and arguments raised by civil society. On the other hand, the high ranking of

the financial barrier could as well reflect a lack of attitude in exploring funding opportunities coming from the EU, the regional structural funds and the public-private partnerships. As a matter of fact, if we go back to the stakeholders involvement, we see that the environmental associations, banks, ESCOs and other financial bodies were the less involved among the stakeholders categories.





## Local energy plans overview



A total of 774 actions is foreseen in the 42 SEAPs realized by the ALTERENERGY target communities. About 60% of the planned actions concerns the buildings sector, followed by sustainable transport (18,5%). Local energy production, other urban systems and public lighting follow at some distance, covering on the whole another 21,4%. Interventions in the industry and agriculture sectors only weight less than 1%.

In this chapter we will give a short overview of the main data emerging from the analysis of the **Sustainability Energy Plans** produced by the target communities selected from the project partners.

## The energy balance

The data collected from the basic inventories of consumptions and emissions (BEI) produced by the target communities refer to:

- energy consumption per sector and per energy source
- CO<sub>2</sub> emissions per sector and per energy source
- local energy production (electrical and thermal)

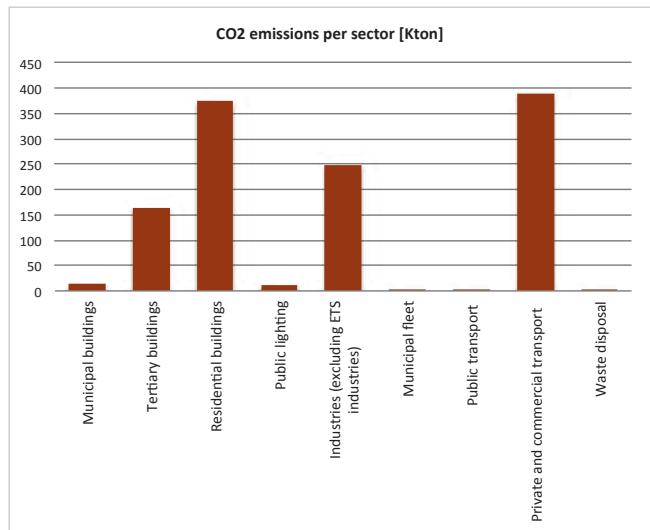
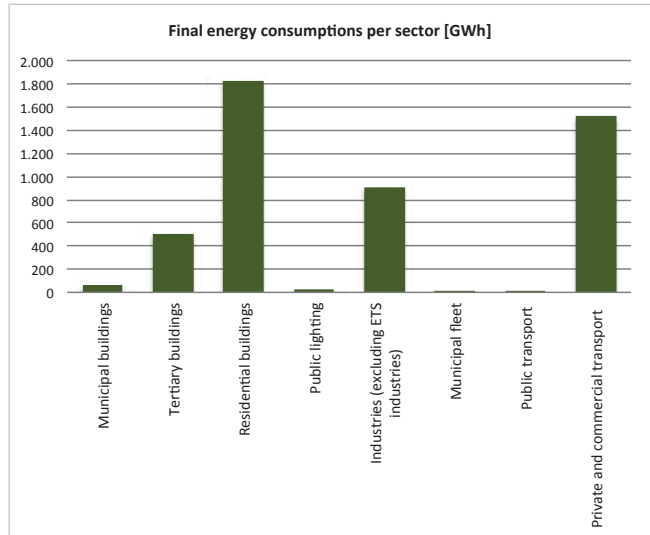
It should be noted that not all BEIs included all the said data, particularly referring to the energy consumption and CO<sub>2</sub> emissions per energy source and local energy production.

As shown in the following graph, the residential buildings and the private and commercial transport are the **most energy-consuming sectors**, respectively scoring the 37,6% and the 31,2% of total consumptions.

They are followed by industry (18,6%) and tertiary buildings (10,5%). It shall be noted that the agricultural sector was not considered in the analysis by most of the target communities, so it is not included in the graphs.

As for CO<sub>2</sub> emissions, the residential buildings and the private and commercial transport have the same weight, around 30% of total. The industrial sector and then the tertiary buildings sector follow, weighting around 20% and 14% respectively. All other sectors contribute with less than 2% each.

Looking at the **energy consumptions per energy source**, we see that natural gas has the biggest share (32,6%), fol-

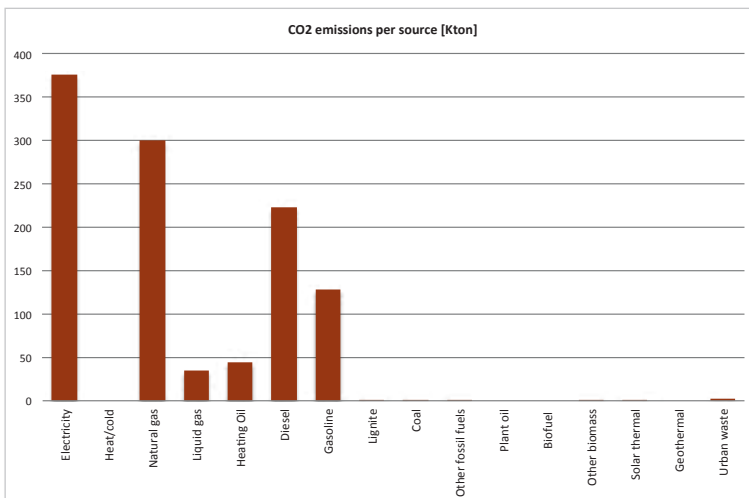
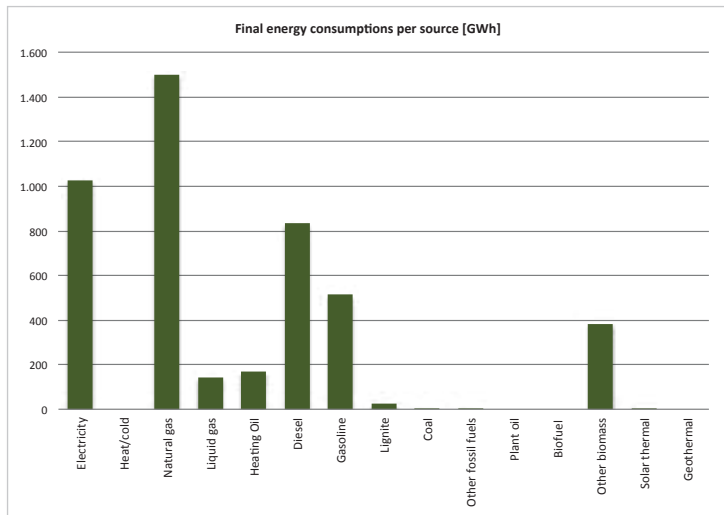


lowed by electricity (22,4%), (17,1%), diesel (18,1%), gasoline (11,2%), biomasses (8,4%), heating oil (3,7%), liquid gas (3,1%) and lignite (0,5%). The contribution of all other sources is negligible or null.

The relatively high role of biomasses and natural gas can be explained taking into consideration the wide availability of forestry and agricultural by-products in the Adriatic area and the large diffusion of natural gas heating in Italy.

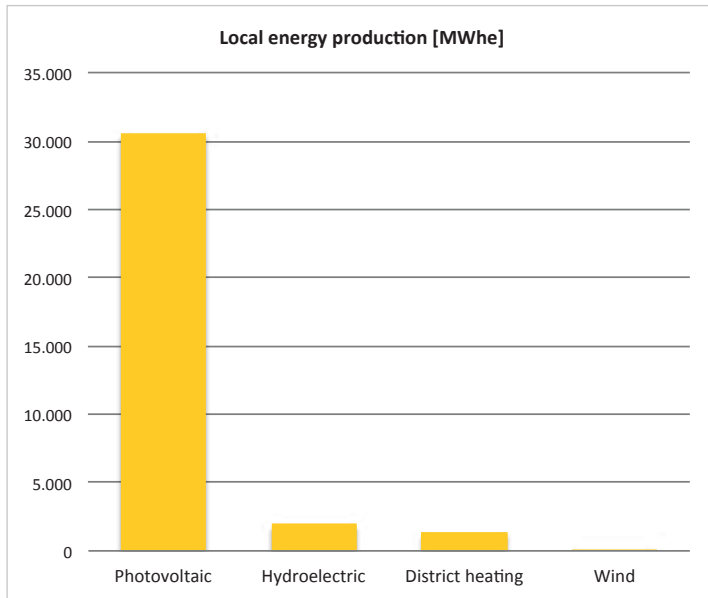
Considering **CO<sub>2</sub> emissions**, we recognize the high burden of electricity, that generates more than one third of total emissions (33,8%), followed by natural gas (27,0%), diesel (20,1%), gasoline (11,5%), heating oil (4,0%) and liquid gas (3,1%). The contribution of the other sources is negligible or null.

The last information collected concerns **the local energy production** from renewable sources.



The following graph shows how photovoltaic leads with more than 90% of the total electrical energy production, followed by hydroelectric (5,8%) and

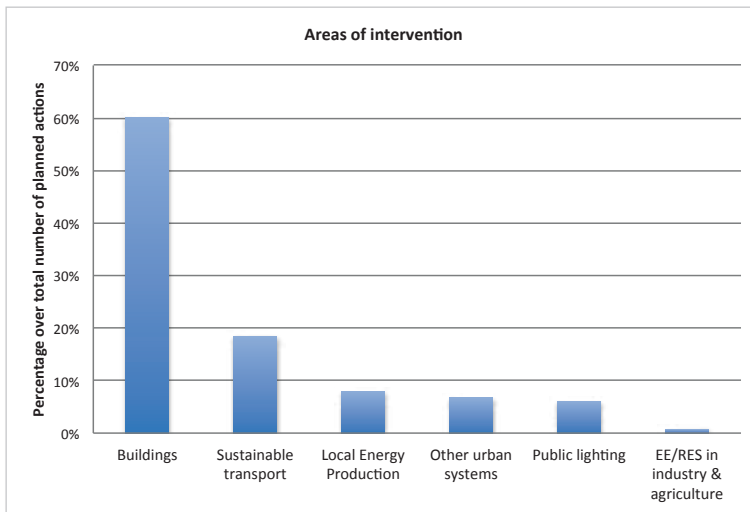
district heating (4,1%). The contribution of wind is almost negligible.



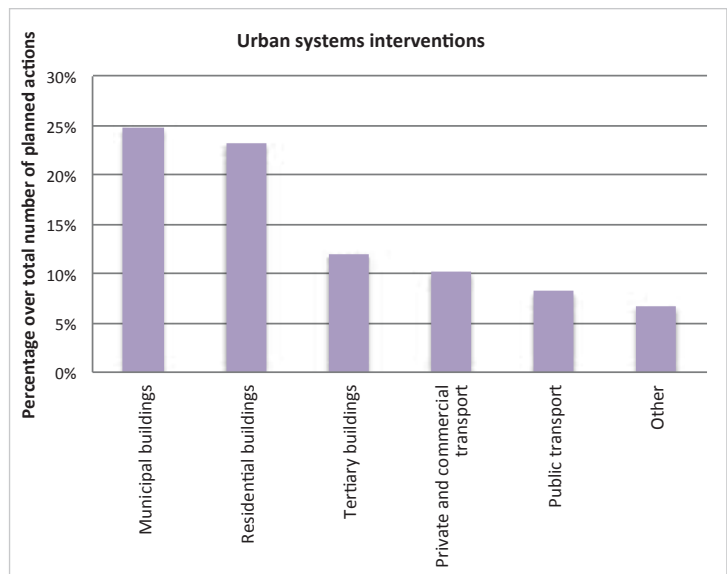
## Planned actions

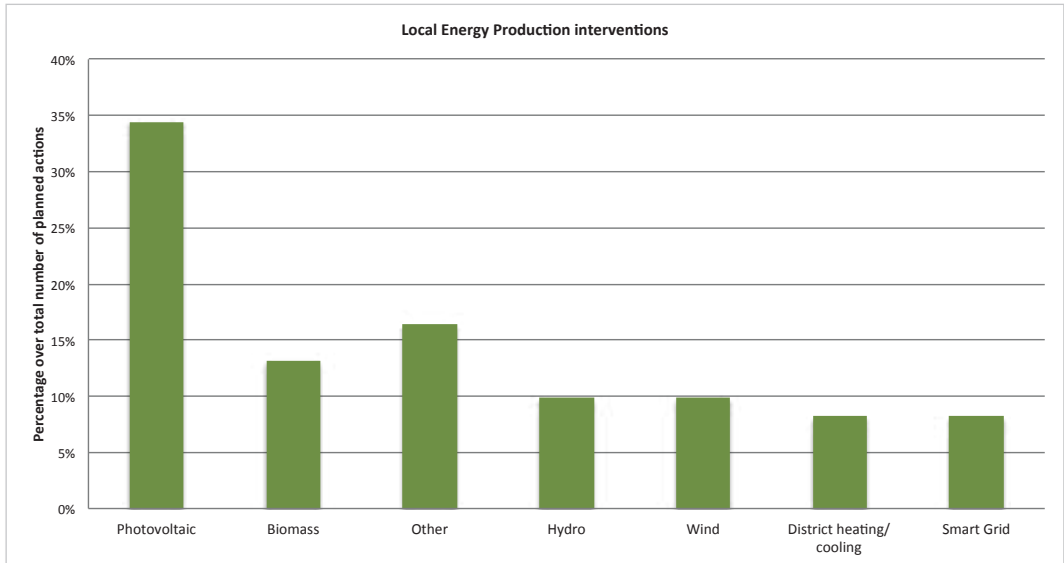
A total of **774 actions** is foreseen in the 42 SEAPs realized by the target communities. About 60% of the planned actions concerns the buildings sector, followed by sustainable transport (18,5%). Local energy production, other urban systems and public lighting follow at some distance, covering on the whole another 21,4%. Interventions in the industry and agriculture sectors only weight less than 1%.

Looking more in detail, the two following graphs depict the distribution of actions in the "urban system" and "local energy production" fields.



The municipal buildings lead the interventions addressing the urban infrastructures and services, closely followed by the residential buildings, respectively scoring 24,8% and 23,3% of actions. Then we find the tertiary buildings (12,0%), private and commercial transport (10,2%), public transport (8,3%) and other (6,7%).

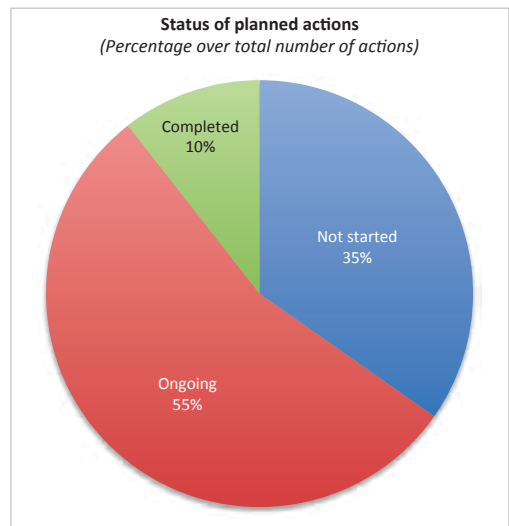




**A total of 61 actions address the local production of energy from renewable sources.**

Of these, 34,4% concerns photovoltaic systems, 13,1% biomasses. Hydropower and wind weight around 10% each, while direct heating/cooling and smart grids score around 8% each. Other solutions weight about 16%. No actions dealing with combined heat and power (CHP) have been planned.

Of all the planned actions, 10% have been already completed, 55% are on-going and 35% have not started yet. In reading these data, it should be considered that a number of cities already had an energy plan, so some of the planned actions were defined prior to the Alterenergy project implementation. Mainly thanks to Alterenergy, a total of 107 feasibility studies has been produced by the target communities, covering the 13,8% of the planned actions.

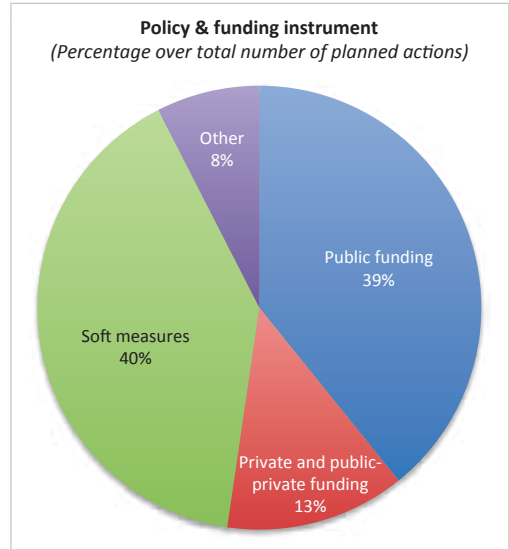


## Foreseen policy and financial instruments

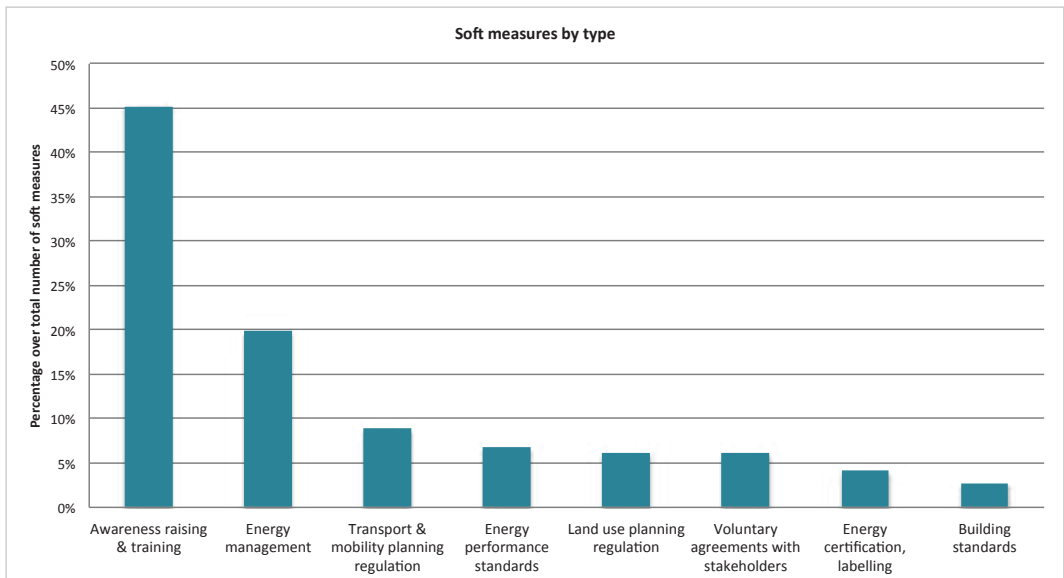
The planned energy saving and renewable energy production actions can be put in place mainly through the following tools:

- by public funds, like the municipal budget, regional, national and European grants and subsidies
- by private funds or public-private partnerships (e.g. ESCOs, bank loans, shared property etc.)
- by regulatory (soft) measures such as new urban or building rules or energy standards and energy management procedures;
- by indirect measures such as training and information initiatives.

The diagram in the following shows how these tools weight according to the survey: public funding and regulatory measures make the 79% of all the foreseen tools, while private and public-private funding scores 13%. The remaining 8% refer to other measures and instruments.



A detail of the regulatory measures is depicted below.





Building  
capacities

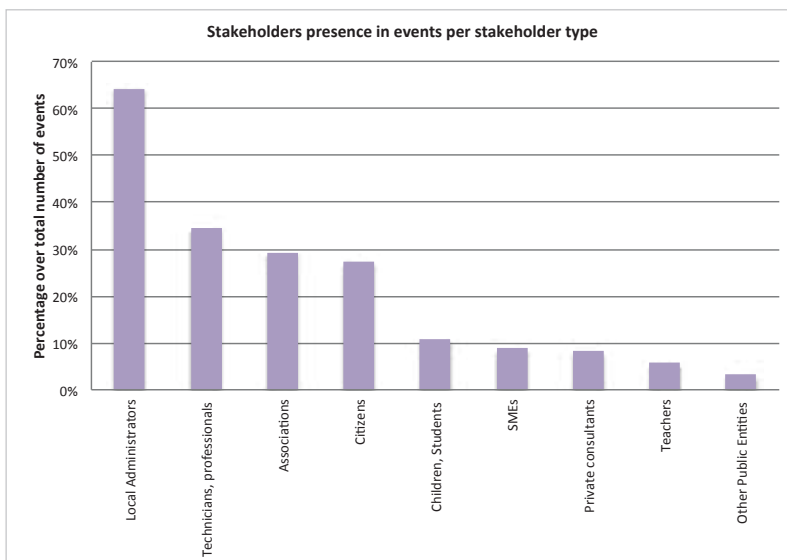
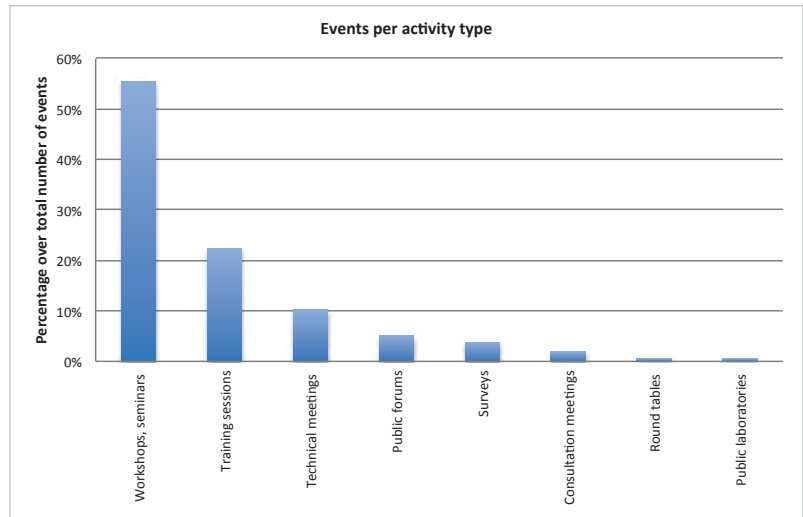


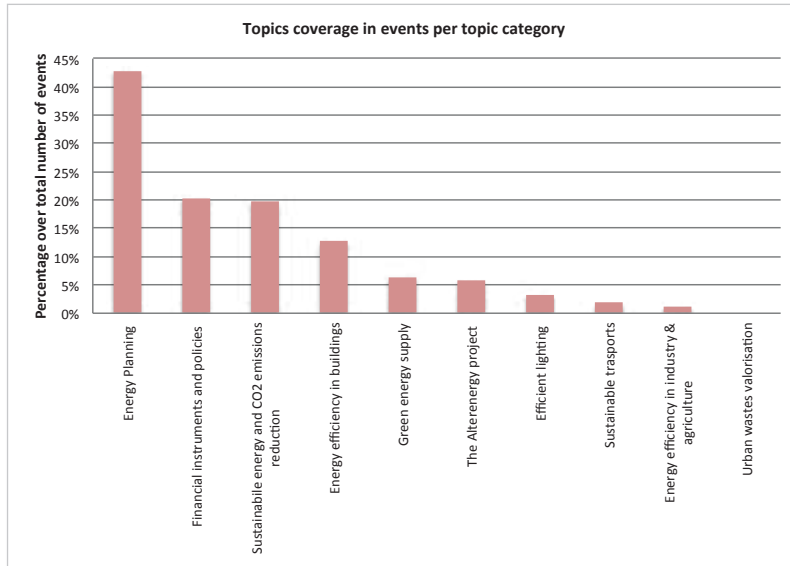
Several initiatives, including activities for territorial awareness raising, information and training, were carried out specifically addressed to the ALTERENERGY target communities. The objective was to supply local administrator, citizens, and local businesses with assistance in developing skills and competencies in the energy sustainability field.

## Activities overview

A wide range of capacity building initiatives was implemented in the selected target communities. The graph below depicts the number of events per type of initiative, showing that 77% of the total number of events (157) consisted of **workshops/seminars** and training sessions.

Looking at the stakeholders involved in the capacity building activities, it emerged that the **local administrators attended the 64% of the events organized**. A second group scores around a participation level around 30%: professionals and technicians (34%), local associations (29%) and citizens (27%). Kids and students participated to 11% of the events and all other categories, including SMEs and private consultants, are under the 10%.





Among the topics covered in the different events, **energy planning** were, as expected, the most popular, scoring a 43% of presence over the total number of events. Next come the topic related to the financial instruments and policies (20%) and of the sustainability of energy use and production and CO2 emissions (20%). Energy efficiency in buildings scores a presence of 13%, while the other topics follow at some distance.

### Activities evaluation

The evaluation of the capacity building activities realized in the target communities has been quite positive:

- 76% of the communities recognized a good attitude by the population to be involved in information and dissemination activities.
- In 80% of the cases, a good attitude to be involved in training activities was also verified.
- In 22% of cases obstacles to develop information, dissemination and training activities emerged.
- 35% of the target communities developed a web tool to help implementing information, dissemination and training activities.
- In 57% of the cases, people and stakeholders from outside the interested municipality were involved in the capacity building activities.



Success  
stories

Some of the experiences carried out during project implementation by ALTERENERGY partners, that have shared a common approach for entering into the process of SEAP development and energy strategies implementation at local level.

Indeed, a well structured course of action is needed since the SEAP process is highly holistic:

- awareness, knowledge and expertise has to be raised;
- commitment and actual participation are needed from local actors and stakeholders;
- policy framework has to be improved;
- markets have to be created or encouraged, financing and support schemes have to be assessed and organised

## TOPIC: ENERGY PLANNING PROCESS

*Ex-ante surveys supporting the energy planning process development in the experience of municipalities of Marche Region (Italy).*

In order to build a sound and clear picture of the starting level and background of Marche Region communities with respect to energy sustainability, a survey has been realized in seven municipalities of the Region: Offida, Castorano, Spinetoli, San paolo di Jesi, Santa Maria Nuova, S. Angelo in Vado and S. Giorgio di Pesaro, belonging to 3 provinces: Pesaro-Urbino, Ancona and Ascoli Piceno. The survey was based on 3 different questionnaires, distributed to politicians, local decision makers and technicians from the local administrations:

- Questionnaire n. 1, collecting information and data concerning the knowledge of territory and of its main energy features, critical aspects or trends, projects and initiatives already realized, ongoing or planned in the short time in the energy field;
- Questionnaire n. 2, regarding the already realized training initiatives about energy topics involving the different local administration sectors and departments, with the purpose to evaluate their effectiveness;
- Questionnaire n. 3, aimed at mapping the local stakeholders that could be involved in the energy planning process. The following classes of stakeholders have been targeted by the survey: Local public bodies (i.e regions, provinces, municipalities associations or unions, etc.); Institutional bodies (i.e. consortia, chambers of commerce, Energy Agencies, research centres, etc.); Business companies (i.e. firms, ESCOs, lending institutions, etc.); Professional and trade associations; Public utilities. About 60 local stakeholders have been mapped.

## TOPIC: ENERGY PLANNING PROCESS

*Supporting municipalities to adhere to the Covenant of Mayors Initiatives (Emilia Romagna Region, Italy)*

In order to facilitate as much as possible the local authorities to adhere to the Covenant of Mayors, the Emilia Romagna Region, with the support of ARPA Emilia-Romagna and Ervet, has created a series of tools for the construction of the municipal energy balance and the resulting baseline emission inventory (BEI), which constitute the basis for elaborating the entire Sustainable Energy Action Plan:

- Regional tool #1: the Emilia-Romagna Region makes available for municipalities a regional energy data base and signed protocols of agreement with energy providers and producers (sources of energy data), in order to assure an easier availability of data for the municipalities.
- Regional tool #2: the SEAP of municipalities has been compiled within CLEXI, the regional platform by which municipalities can manage and monitor the implementation of their SEAPs and produce the information needed to comply with the requirements of the Covenant of Mayors initiative (e.g. monitoring).

## TOPIC: ENERGY BASELINE ASSESSMENT AND MONITORING SYSTEM

*Implementing an energy information system, based on the principles of energy Monitoring and Targeting (M&T) for buildings in the domains of Municipality Brda, Municipality Miren-Kostanjevica and Municipality Divača (Slovenia)*

In order to effectively manage costs and consumption of energy and water, a system of energy accounting was set up for data capture of costs and consumption of electricity, heat and water in public buildings in the domains of Municipality Brda, Municipality Miren-Kostanjevica and Municipality Divača.

The system is based on monthly data from statements of charges or received invoices.

The energy information system enables the integration of multiple energy control systems facilities and allows to access energy and water use data in real-time (one minute), as well as data on other relevant energy factors (outdoor temperature, indoor temperature, ...). During the implementation phase of the project, building energy control systems are already being set up at three facilities, namely: Castle Dobrovo, Primary School Kostanjevica na Krasu and Kindergarten Divača.

Based on collected input data for the buildings that were selected for energy accounting, indicators for energy efficiency were established, along with certain basic targets for the system. The energy information system is built on a 3-tier architecture, services for this project are provided from the Cloud. The software solution enables the comparison of energy efficiency indicators among municipal buildings. The project has also implemented promotional activities addressing the use of the energy information system, as well as training in the deployment of energy management systems compliant with SIST EN ISO 50001.



## TOPIC: CAPACITY BUILDING ACTIVITIES ADDRESSED TO TECHNICIANS

*“AZIONI E STRUMENTI PER UNA GESTIONE LOCALE SOSTENIBILE DELLE RISORSE ENERGETICHE” – Training activity to increase knowledge and expertise on energy topics among politicians, technicians and freelance consultants of Puglia Region (Italy)*

A training activity has been planned and realized, targeted to politicians, technicians and freelance consultants of Puglia Region and aimed at creating or improving their expertise on energy topics and at increasing their capability in supporting sustainable local energy strategies and policies.

Main training topics concerned:

- the framework of directives, regulations and procedures concerning energy at European, national, regional and local level;
- analysis of technologies and actions to increase energy efficiency in final uses and renewable energies exploitation;
- analysis of main strategies and tools necessary to support actions development and diffusion at local level.

The initiative has been supported and sponsored by the Associations of Engineers and of Architects of the Bari Province. All the 5 training sessions (18 hours in all) have been realized at Mediateca Regionale Pugliese in Bari in May and June 2015, according to the following programme:

- Session 1 – Energy management and financial tools (21 may, 4 hours)
- Session 2 – Photovoltaic (22 May, 4 hours)
- Session 3 – Smart City (27 May, 3 hours)
- Session 4 – Solar Thermal (28 May, 3 hours)
- Session 5 – Energy efficiency in buildings (10 June, 4 hours)

More than 60 people, mainly technicians and consultants from the whole Puglia region, have attended the training initiative.





## TOPIC: CAPACITY BUILDING ACTIVITIES ADDRESSED TO CHILDREN

*“RES&RUE small school” in Župa dubrovačka, Konavle, Ston (Dubrovnik and Neretva County, Croatia)*

A group of workshops organized in 6 elementary schools of the three municipalities has been organized with the participation of more than 400 children. Through age-appropriate lectures, discussions and quizzes, the following topics were covered: energy, sustainability, environment, energy efficiency and renewable sources.



## *The “Energiochi 9” Contest (Abruzzo Region, Italy)*

The Energiochi Contest is a competition addressed to all children of kindergartens and to students of primary, lower secondary and secondary schools of the Abruzzo Region. The contest aims at bringing students closer to energy issues with a focus on sustainable energy and eco-friendly development for a “green” future.

Students can take the challenge to measure their skills and creativity at regional level in order to compete for a final prize through the presentation of a work on issues related to renewable energy.

Students taking part to the contest also benefited from the participation of expert teachers. While promoting the contest, a virtuous system has been activated fostering an opportunity for education and growth for all the people involved in this project. The top three winning schools in every province have been awarded according to their educational level, that is kindergarten, primary schools, and lower secondary and secondary schools.



Looking ahead:  
the lessons learnt

On the basis of experiences collected during project implementation, the ALTERENERGY partners have shared a common approach for entering into the process of SEAP development and energy strategies implementation at local level. Indeed, a well structured course of action is needed since the SEAP process is highly holistic:

- awareness, knowledge and expertise has to be raised;
- commitment and actual participation are needed from local actors and stakeholders;
- policy framework has to be improved;
- markets have to be created or encouraged, financing and support schemes have to be assessed and organised.

The need of a SEAP process comes mostly from the exigency to organise a local energy policy in a structured way, inserting the single initiatives in a justified multi-annual programme with clear objectives.

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The ALTERENERGY project could identify several steps leading from the assessment of the baseline to the concrete implementation of SEAP strategies. Namely, the following main **lessons learnt** emerging from the project refer to this issue.

## Background of the SEAP development

The role of the Municipal Government, including all its different competences and sectors, is essential in a local strategy planning and implementation.

The success of SEAP strategy development relies on the united efforts of the **key actors at all levels of the local governance**.

Nevertheless, politicians, decision makers and municipal technicians are quite often unaware or insensitive to energy issues and their environmental effects and so hard to convince in committing themselves in energy policies or initiatives, seen as an additional cost rather than as an opportunity, especially in situations of budget constraints. This generally depends on their lack of knowledge, technical expertise and information and from a general mistrust as well, due to the economic crisis.

The lack of internal expertise in municipal administrations can push them to delegate some external consultants preparing the SEAP and to accept uncritically the strategic choices and priorities that they define; this may result in a failure to take responsibility towards the SEAP and its implementation.

## Our advice

- Learning from successful experiences (best practices) already developed by or in other municipalities and local communities (pioneers) could be worth in order to create a more favourable political background towards sustainable energy planning and local energy management.
- The direct relationships with pioneer local administrators is so a fundamental step for the starting and the development of sustainable energy community policies.
- Along with contacts with pioneer municipalities, training and informing sessions targeted to both municipal administrators and technicians could be very useful in order to provide the necessary basic expertise and technical background. Particularly these initiatives should deal with topics of energy efficiency and RES, financial opportunities or tax facilitations at local, regional and national level.
- Just as important is the analysis of the national and regional reference policy and planning framework of which it is necessary to be aware of and to which the SEAP must be harmonized.
- The Councillor for environmental policies should usually be the promoter and co-ordinator of the energy strategy.
- As energy is a typical cross-sectorial topic and human and financial resources have to be attracted from many parts, other colleagues dealing with key sectors for energy have to be involved: urban planning, public works, maintenance of Municipal properties, economic development.
- Once the political consensus is reached, an inter-sectorial working group should be established inside public administration (so called

“energy office or service”), composed of politicians and technicians from the main relevant sectors (environment and/or building and urban sectors);

- The “energy office” should be responsible for SEAP development and implementation and should assure inner coordination among municipal offices and outer coordination with other local communities or stakeholder as well.

## Baseline assessment

An initial analysis of the communities energy situation is the base for planning energy sustainability, but also for monitoring the progress that will be achieved by implementing the new measures.

It is so very important that municipalities could carry out an overall energy accounting procedure, involving the entire municipal area in order to understand thoroughly the real state of energy flows, to identify the fields of action with the highest potentials for energy savings or renewable energies to change such flows.

The **collection of data for energy analysis** could be a very difficult task for municipalities involved in the SEAP development procedure.

Methodological difficulties often occur, since in several cases data collection is mostly performed on national level, instead of regional/local level; more often data are completely lacking or data fonts not identifiable. Finally, local energy suppliers and utilities do not fully cooperate in the supply of necessary data.

### Our advice

- Considering that detection of data is essential and preliminary to CoM and development of SEAPs, the procedures for data collection should be properly planned and updating and an estimation methodology properly outlined and widely agreed.
- Energy consumption and supply data can be gathered directly from existing local, regional or national databases or through official inquiries and agreements to/with major local energy producers, distributors and consumers.

- If the availability of data is possible only at a broader territorial level (regional or national), the use of a top-down approach can help the accounting procedure, starting from the upper territorial level and using proxy variables to estimate the local level data.
- As energy consumptions are affected by different level of accuracy depending on the availability of data, it is important to establish systems to better control data availability working together with all local energy suppliers and with the major industrial and commercial energy consumers.

## Analysis of best practices

Before planning actions it is worth to **learn from experiences and projects on energy efficiency**, sustainable mobility, differentiation of energy sources, made in other communities or already set up on the municipal territory.

Schemes which have worked well in one situation may fit in well in another, or may work with some adaptation.

### Our advice

- Search and analyse all projects and initiatives in the sustainable energy field having already been performed.
- Verify which projects were successful and which were not and compare them to the situation in your own community.
- As for non successful ones, try to analyse the reasons for failure.
- Comprehensive data bases of ‘Best Practices’ are available in which experts describe lessons learned and success factors of their action, whether these are about innovative technologies, policy instruments, market or financing mechanisms or campaigns.

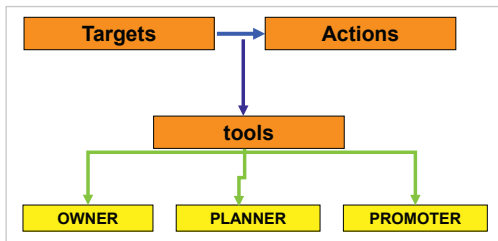
## Local energy strategy development and implementation

The evolution of the local energy system towards higher consumptions and GHG emissions levels can actually be halted only through a **wide-scale**

**diffusion of actions**, involving the highest number of users, sectors and technologies.

A local energy policy aiming at sustainability should so be developed (and should be implemented till 2020) basing on local administrations main tasks and role in local planning and management such as:

- owner and/or manager of buildings, lightning, vehicles;
- manager and regulator of the territory and activities on it;
- promoter, coordinator and partner of large scale initiatives.



A local energy policy aiming at sustainability should so necessarily be shared with the **whole territory** and should be able to interact with local stakeholders, directly or indirectly involved in energy management. The involvement of a **wide partnership** must be considered one of the most effective means for public administrations to plan and realize initiatives in the energy field, assuring the highest chances of success.

### Our advice

- If the public administration promotes energy efficiency in its own properties (buildings, vehicles, street lightning) apart from energy saving, economic savings could be reach as well, so assuring benefits for local administration finances. Moreover it could spur on citizens and local final users towards energy saving and energy efficiency.
- SEAP has to focus on energy as a “crossing element” to territory management and planning and to ground on integration of its targets and goals with territory planning and regulatory tools related to building, mobility, waste and

water management, etc. Particularly SEAP strategy has to be based on a strong integration and coordination with urban and building codes.

- In the process of SEAP strategy preparation and implementation, strong commitment and participation of local stakeholders and partners, representatives of different fields of expertise and interests of the community, is needed.
- Appropriate stakeholders which shall have great impact in SEC strategy development and be directly linked to its implementation should be selected and involved.

Partner consortia could cover differing sectors: citizens, industry and trade, energy suppliers and utilities, professionals, banks, branch organizations, the civil society structures, experts from state institutions, persons recognized by society etc.

- The public administration should be the referent actor promoting a participative process aimed at agreeing SEAPs targets and strategic lines.
- The public administration should be the referent actor promoting a participative process aimed at sharing, with local stakeholders, critical aspects, roles and opportunities for cooperation in SEAP strategy implementation.
- The public administration should be the referent actor promoting a participative process aimed at involving local stakeholders in technical and/or financial partnerships start up.

Lack of financial resources is one of the main problem affecting CoM joining, elaboration of SEAPs and energy strategies implementation as well, especially in case of small municipalities that do not have financial resources for extra activities. On the other hand, the awareness of the opportunities for public-private funding, such as the ethical buying groups, agreements with banks to concessional credit lines, agreements with private investors, ESCOs and energy companies are not known.

- In SEAP development, mainly as for small and medium municipalities, a supra-local approach should be promoted. On the basis of such approach, municipalities commit themselves to tightly co-operate for SEAPs development,

exchanging methodologies, views on main sectors of intervention, experiences and best practices, sharing problems and obstacles, planning common policies and measures.

- Commitment of local communities in energy strategies or initiatives could be promoted and assured on the long period through wide information and dissemination programmes/campaigns development, aimed at overcoming general unawareness or insensitivity to energy issues and their environment effects, general lack of knowledge, of technical expertise, of technical and economic information and, nowadays, general mistrust as well, due to the economic crisis.

## Awareness raising, information and communication

Implementing a local energy strategy requires a consistent involving and communication with key stakeholders and the whole local community.

Dissemination and information campaigns and communication tools as well, should foresee different approaches and methods so as to be able to efficiently communicate with all targets groups according to their features, needs, reference situations they are familiar to, actions and objectives to be reached; they could so perceive the added value of their involvement in the energy planning process.

Generally, it could be quite difficult to find an effective local communication channel able to concretely reach, attract and involve target audiences in dissemination initiatives. General media (press, TV, radio) are very difficult to involve and generally unconvincing and unconvinced in their messages; new media (social networks such as Facebook, LinkedIn and so on) are still too focused and/or fragmented.

### Our advice

- As for public authorities, administrations managing boards and technicians, they should be involved for the purpose of awareness raising in efficient energy management systems and in interventions planning methodologies, in

actions and tools to increase energy efficiency and the share of energy generated from renewable sources, in co-operation opportunities for the development of actions and initiatives in the energy field in the territory.

- As for technicians (architects, engineers, installers), consultants and market actors (producers and distributors of technologies, plants and equipment) they should be involved for the purpose of awareness raising in technical and technological innovation along with cost/benefit analysis.
- As for citizens (final users) dissemination should be combined with a clear stress on systematic energy savings and RES utilisation and costs, possible grants, subsidies & also technical assistance.
- Communication methods comprise a range of approaches: general information in local news media like TV, radio, newspapers; CD Rom, websites, posters, leaflets, stickers etc.; local information office in City Hall or Green Shop; manuals, handbooks, educational materials; general or local area fairs, seminars, workshops, stakeholder meetings; local information campaigns over a period with information, workshops; local area site visits and dialogue with concerned citizens, companies.
- Local dissemination events (informing or training seminars, conferences, workshops, fairs, etc.) are generally the most effective tools for awareness raising and information transfer at both local and wider level, assuring direct contact with targets and stakeholders, allowing direct discussion and debate, direct sharing of experiences.
- Local/regional stakeholder associations (trade and professional associations, environment associations, consumers associations, municipalities networks, etc.) are the most effective communication channels to be exploited at the moment.
- Generally contacts with "pioneers" having the experience of implementing a scheme and able to discuss informally the benefits and difficulties of it, and public presentations of successful experiences (best practices) already developed, could be very effective in order to

create a more favourable political background towards sustainable energy planning and local energy management, to increase expertise and trust as well.

- So as to assure the greatest effectiveness of information and dissemination initiatives and

programmes, managing and coordinating structures/offices should be foreseen, directly led by the public administration board committed to local energy strategy implementation.









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