WP4_Action 4.3f

Identify potential for harmonising spatial planning policies with local energy plans

by COA

Index

0 Executive summary

The questionnaire "Which good practices in the energy field are present in your Municipality?" has been drafted by COA energia - Finaosta S.p.A. in the context of the European project "AlpBC - Alpine Building Culture, Sustainable development of the construction sector in the Alps and integration of energy issues in spatial planning", funded by the European Territorial Cooperation Programme "Alpine Space" 2007-2013.
The aim of this survey is to collect information on critical issues and good practices in the Municipalities of the region to be used as a common basis of know-how and good practices for the identification of strategies for energy optimisation of the territory. The audit, which began in May 2013, had very positive feedback: 58 Municipalities have, in fact, replied to the questionnaire, including all those belonging to the Mountain Community Monte Cervino, our Intermunicipal Pilot area for the AlpBC project.
Analysis of the data and the answers obtained shows, moreover, important information and best practices in the different thematic sections.

In particular, the section "**Territorial planning and energy planning**" highlights the lack of tools to guide the Municipalities in the energy management of their territory (such as, for example, municipal energy plans and energy balances). However, in the field of Interreg or European projects some evaluations of the energy potential of the territory have been undertaken, in order to get an energy and environmental certification of the Municipalities (eg, according to the regulation UNI EN ISO 14001) or to estimate the potential production from renewable sources, in order to initiate feasibility studies for the construction of new plants. The difficulty in optimizing energy in the territory as a whole is given by the presence of a high energy consuming building stock and by the differences in the use of the buildings (continuous for the residences or discontinuous for the touristic temporary housing).

With regards to the existing building stock, the optimized management of public buildings and the reduction of energy consumption are priorities identified by local authorities.

Many Municipalities, also in consequence of the results and data obtained from 657 energy audits carried out during 2011 and 2012 on public buildings (funded by Regione Autonoma Valle d'Aosta in the framework of the operational programme "Regional Competitiveness 2007-2013" and from the ERDF), have highlighted the need to intervene in the existing public buildings to reduce energy costs. With regard to data organization and the analysis of the real consumption, most of the municipalities reported the need to have a computer tool, easy to access and use, to systematize the collection of heating and electrical consumption data.

The management of the heat (fuel supply and plant maintenance) is, in many cases, assigned externally, but in a few cases interventions for energy saving have been inserted in the contracts.

In the area of **sustainable mobility**, the most critical issues are related to the presence of a high private vehicular traffic both in the central valley (Plaine) and in the more touristic lateral valleys, an inefficient public transport system even for short distances, a difficult shape of the territory and varying occupation of the territory throughout the year due to the tourism. Many municipalities have considered or implemented different good practices in their territories, especially related to electric mobility with public charging points for electric cars, interventions for the reduction of traffic and optimization of interchanges for public transport. Car pooling and car sharing systems, are still not used.

In the field of **public lighting**, the excessive maintenance and energy costs caused by a very high number of light points have been highlighted as criticalities, together with the presence of light fixtures with outdated and energy-intensive technologies, the increase in the electricity cost, the difficulty in adopting a flexible management system. Municipalities have responded or intend to face up to the need of cost limitation through the use of: devices for the reduction of the nocturnal flux, computerized control systems for the management of public lighting, switch off planned for certain light points, renovation of the plants with LED technology and use of renewable sources to power public lighting (e.g. photovoltaic, hydroelectric, hydrogen, etc.).

In the section of the questionnaire dedicated to **raising awareness to the energy issues** and **incentives** Municipalities have reported the use of regional funds (provided, for example, by the regional law n.3 of 2006 for the construction of best practice projects), and European incentive systems for the production of electricity from renewable sources (e.g. green certificates). Municipalities have expressed their will to start from the results of energy performance certificates to plan the steps of intervention aimed at improving energy efficiency to the public building stock. However, difficulties have been reported in implementing measures to improve the performance of the buildings due to the rules for the protection of traditional buildings and the uncertainties on the recovery and the amortization of the invested capital.

The last section concerning the **studies, the knowledge to be examined more thoroughly and the information and training activities** showed that COA Energia is considered as a point of reference for the information on energy issues, together with the regional Department of the Production Activities and "CELVA" (Consortium of the local authorities of the Aosta Valley). The Municipalities have reported a number of issues that they consider necessary to evaluate more thoroughly, especially those related to the optimization of energy efficiency of public buildings, energy certification and legislation. Currently 25 municipalities are registered for the Newsletter service "Infoenergia Chez Nous" and, considering the increasing need of information on energy issues by local authorities, the enhancement of this tool can be an effective means for the dissemination and the continuous updating of the main information and training on energy.

1 Introduction

Finaosta S.p.A., through its in-house service “COA energia”, is partner of the European project "AlpBC - Alpine Building Culture, Sustainable development of the construction sector in the Alps and integration of energy issues in spatial planning", funded by the European Territorial Cooperation Programme "Alpine Space" 2007-2013 – Priority 1 “Competitiveness and Attractiveness”. The AlpBC project, in particular, intends to propose strategies for integrating energy efficiency in territorial planning and to develop competitiveness of the SMEs related to the energy field, through the exchange of good practices at transnational level and the support to local administrators and professionals involved in the construction process.

One of the first activities of the project consists of the collection of information related to the experiences and good practices existing in the different partnership regions, in order to create a common base of knowledge and exchanges in the cooperation area. In this context this questionnaire, submitted to all the Municipalities of Valle d'Aosta, was formulated in order to understand the current status of energy integration in municipal planning, the presence of innovative tools, or any particular problems, needs or themes that should be evaluated more thoroughly.

Knowing the strengths and weaknesses of the Municipalities of the region will allow the identification of development potential in the energy sector, through an effective exchange of experiences.

2 The questionnaire

2.1 The structure of the questionnaire

The questionnaire “Which good practices in the energy field are present in your Municipality?”, formulated by COA energia with the objective of identifying the current situation and the experiences undertaken by the various Municipalities in the Valle d’Aosta with reference to best practices in energy optimisation across the territory, it takes into consideration various aspects:

- **General information,** including identification data of the Municipality e the technical officer completing the questionnaire;
- **Territorial planning and energy planning,** where the Municipality is asked for information about initiatives regarding the integration of energy aspects in the territorial planning tools, such as:

- the energy balance (analysis of in/out energy flows in the Municipality over a given period of time);
- the Municipal Energy Plan or evaluation studies on the energy potential of the territory;
- participation in initiatives that foresee an evaluation of the territory with the aim of energy optimisation (e.g. “Covenant of Mayors”);
- integration of energy aspects in the Municipal Building regulations (for example, in an energy appendix);

- **Management of Municipal buildings,** with particular reference to:
  - current use or the need to arrange an electronic system for collecting and monitoring thermal/electricity consumption of public building stock;
  - the presence of heat management contracts (fuel supply and plant maintenance) where energy saving interventions are included;
  - the possibility of using remote management systems for programming and optimising use of plants;
  - programming energy optimisation measures for public buildings in the next three years;
- **Sustainable transport,** that is setting up or studying at Municipal level best practices in alternative systems of public/private transport;
- **Public lighting**, in particular the adoption of consumption reduction measures in this area;
- **Raising citizens’ awareness of energy issues and funding,** through:
  - setting up forms of funding for undertaking energy saving/energy efficiency measures and the use of renewable energy;
  - organisation of initiatives at Municipal level to raise awareness of citizens to energy issues and energy saving;
  - the use of financial grants by the Municipality to undertake interventions in the energy sector (e.g. European funding, white certificates, also referred to as Energy Savings Certificate (ESC) or Energy Efficiency Credit (EEC), etc).
- **Studies, knowledge to be analysed in depth and education/training activities** regarding energy issues that will be able to support the activities undertaken by the Municipality. In particular, in reference to the development of specific skills regarding energy efficiency in the Municipality, technical officers are asked to indicate any specific training courses undertaken and their training needs. They are also asked to indicate the study activities or energy saving/energy efficiency in buildings and use of renewable energy research promoted by the Municipality, also concerning the participation of the Municipality in European projects regarding energy.

The questions, which require a yes/no answer, have been integrated, in some cases, with the request for further clarifications to help the survey and eventual references to the method of consultation of documentation useful for studying the various topics in depth.

Fields regarding “criticality”, “needs” and “ideas” have been included in each section, which allow the respondent to freely indicate the main problems identified in the various fields analysed, any particular needs for further study of specific knowledge and ideas that the Municipality intends to propose or develop.

A sample translated in English (in order to share the methodology and survey tool with the other partners of the AlpBC project) of the questionnaire that was distributed to the Municipalities (in Italian) across the region can be found below.

Which good practices in the energy field are present in your Municipality?

COA energia (Centro di Osservazione e Attività sull'energia) established within Finaosta S.p.A. is partner in the European project **AlpBC - Alpine Building Culture,** *Sviluppo sostenibile del settore edilizio in ambito alpino e integrazione dei temi energetici nella pianificazione del territorio (Sustainable development in the building sector in an alpine context and integration of energy issues in territorial planning)*, under the European Territorial Cooperation Programme "Alpine Space" 2007-2013-Objective 1.
The European project AlpBC intends to propose **strategies to integrate energy efficiency into territorial planning** and to develop the competiveness of companies involved in the energy sector, through the **exchange of good practices at international level** and through **support to local administrations** and all the actors involved in the building process.
One of the first activities of the project foresees the collection of data regarding experiences and good practices present across regional territory in the energy field.
In this context, the present questionnaire, submitted to all the Municipalities of the Valle d'Aosta with the cooperation of CELVA, was elaborated in order to discover the current state of integration of energy aspects in municipal planning, the presence of innovative tools, particular areas of criticality or eventual need to examine in depth specific issues.

To know and understand the areas of strength and weakness in the Municipalities allows us to identify the potential for development in the energy field, through an efficient exchange of experiences.

Following these premises, we ask your kind collaboration in answering the questions, using the instructions below to help you.

Instructions for the completion of the questionnaire

- The respondent can answer the questions only within the blank fields of the tables (each field can be made longer according to the needs of the respondent);
- In the YES/NO questions it is sufficient to mark the appropriate answer with an X;
- In a YES (*specify*…)answer the respondent should answer precisely with brief, exhaustive indications regarding the study;
- In the question: *Can the documentation be consulted*? You should specify if the indicated documentation can be consulted and by what means, for example: on the web via a link (in this case, if possible, include the link), through a file attached to the questionnaire, in paper form at the municipal offices, etc.
- In the fields: *criticality, needs, ideas* the respondent can indicate liberally the criticality for each area analysed, particular requirements for in-depth analysis of specific knowledge and ideas that the Municipality intends to propose or develop.

For further information and clarification contact:
COA energia_Arch. Chiara Bertolin, tel. 0165269285
COA energia_Arch. Erika Favre, tel. 0165269265
or visit the site of the Alpine Space Programme: http://www.alpine-space.eu/projects/projects/detail/AlpBC/show/

Thank you for your cooperation!

General information

MUNICIPALITY:
NAME OF RESPONDENT:
CONTACT (tel. and/or e-mail address):
DATE:

Section I - Territorial planning and energy planning

1. Has your Municipality already drawn up an Energy balance, that is an analysis of the energy flows into and out of the Municipality in a given period of time?

YES	
NO	
For which years?	
If you answered YES, can the documentation be consulted? Indicate the format it is available in.	

2. Has your Municipality already drawn up a "Municipal Energy Plan" or have any studies been undertaken to evaluate the energy potential of the territory?

YES (specify which)	
NO	
For which years?	
If you answered YES, can the documentation be consulted? Indicate the format it is available in.	

3. Has your Municipality subscribed to the Covenant of Mayors (www.pattodeisindaci.eu) or other similar initiatives?

YES (specify which and when)	
NO	

4. In the Building Regulation of your Municipality are the energy aspects considered (for example, in an energy attachment)?

YES (specify how)	
NO	
If you answered YES, can the documentation be consulted? Indicate the format it is available in.	

5. Has your Municipality undertaken any other initiatives to integrate energy aspects into the territorial planning tools?

YES (specify which and the date implemented)	
NO	

6. In the context of territorial and energy planning are there any areas of criticality, needs or ideas that you would like to develop?

Criticality	
Needs	
Ideas	

Section II - Management of municipal building

7. Do you have a system for data collection/ monitoring of thermal consumption of municipal buildings?

YES (specify which system)	
NO	

8. Do you have a system for data collection/monitoring of electricity consumption of municipal buildings?

YES (specify which system)	
NO	

9. Do you think it would be useful to have a computer program to organise and analyse this kind of data?

YES	
NO	
OTHER	

10. Do you have management contracts for heating in municipal buildings (supply of fuel and maintenance of heating plants) which contain energy saving interventions?

YES (specify which, the date and if the Municipality used an ESCO - Energy Service Company)	
NO	

11. Are the buildings equipped with remote-management devices, that is intelligent systems and innovative devices that allow the management and programming of plant systems remotely?

YES (specify which systems and the date installed)	
NO	

12. Have you planned any interventions of energy optimisation on public buildings in the next three years?

YES (specify)	
NO	

13. In the context of public building management are there any areas of criticality, specific needs or ideas that you are planning to develop?

Criticality	
Needs	
Ideas	

Section III - Sustainable transport

14. Have any good practices in sustainable transport or alternative transport been analysed and/or implemented in your Municipality either in the private or the public sector?

	YES	NO	WHEN?
Car pooling			
Car sharing			
Electric transport			
Public charging points for electric vehicles			
Interventions to limit traffic			
Optimisation of the interchange hubs for public transport			
OTHER			

15. In the area of sustainable transport are there any points of criticality, specific needs or ideas that you are planning to develop?

Criticality	
Needs	
Ideas	

Section IV - Public lighting

16. Has your Municipality adopted any measures to reduce energy consumption in the field of public lighting?

YES (specify which measures and the date installed)	
NO	

17. In the area of public lighting are there any points of criticality, specific needs or ideas that you are planning to develop?

Criticality	
Needs	
Ideas	

Section V - Raising awareness in the population about energy issues and incentives

18. Have you activated/foreseen any forms of incentives for citizens that implement energy saving measures, energy efficiency or the use of renewable energy sources (for example, reduction in building taxes, etc.)?

YES (specify which measures and the date)	
NO	
If you answered YES, can the documentation be consulted? Indicate the format it is available in.	

19. Have any initiatives been organised in your Municipality to raise awareness in the population about energy issues and energy saving?

YES (specify which initiatives and the date)	
NO	

20. Has your Municipality used incentives to implement interventions in the field of energy (for example, European funding, white certificates, etc.)?

YES (specify which incentives and the date)	
NO	

21. In the area of raising awareness in the population about energy issues and incentives are there any points of criticality, specific needs or ideas that you are planning to develop?

Criticality	
Needs	
Ideas	

Studies, in depth knowledge and information and training activities

22. How do you trace information on energy issues to support the activities that you are undertaking in your Municipality?

	YES (specify which bodies and for which subject areas)	**NO**
Regional offices, (Department of productive activities, COA energia, Réseau Energie)		
GSE		
OTHER		

23. Within the Municipalities have been developed particular expertise related to energy efficiency and and integration of energy issues in municipal energy planning (e.g.: participation in specific training courses, activation of consulting activities related to these issues)?

YES (specify which expertise and the date)	
NO	

24. In the area of the training programmes offered by CELVA in Réseau Energie, which subject areas do you think it necessary to develop and analyse?

	SI	**NO**
Energy legislation		
Heating management contracts		
Volume bonus l.r. 26/12		
Energy certification and L. 10/91		
Energy optimisation in public buildings		
“Conto energia” and “conto termico”		

OTHER	

25. Has Your Municipality promoted any studies or research in the field of energy saving, energy efficiency of buildings or the use of renewable energy and energy production?

YES (specify which studies, the subject area and the date)	
NO	
If you answered YES, can the documentation be consulted? Indicate the format it is available in.	

26. Have there been or are there currently any European projects relating to energy in your Municipality?

YES (specify which programmes, the subject area and the date)	
NO	

27. In the area of studies, in-depth knowledge and information and training activities are there any points of criticality, specific needs or ideas that you are planning to develop?

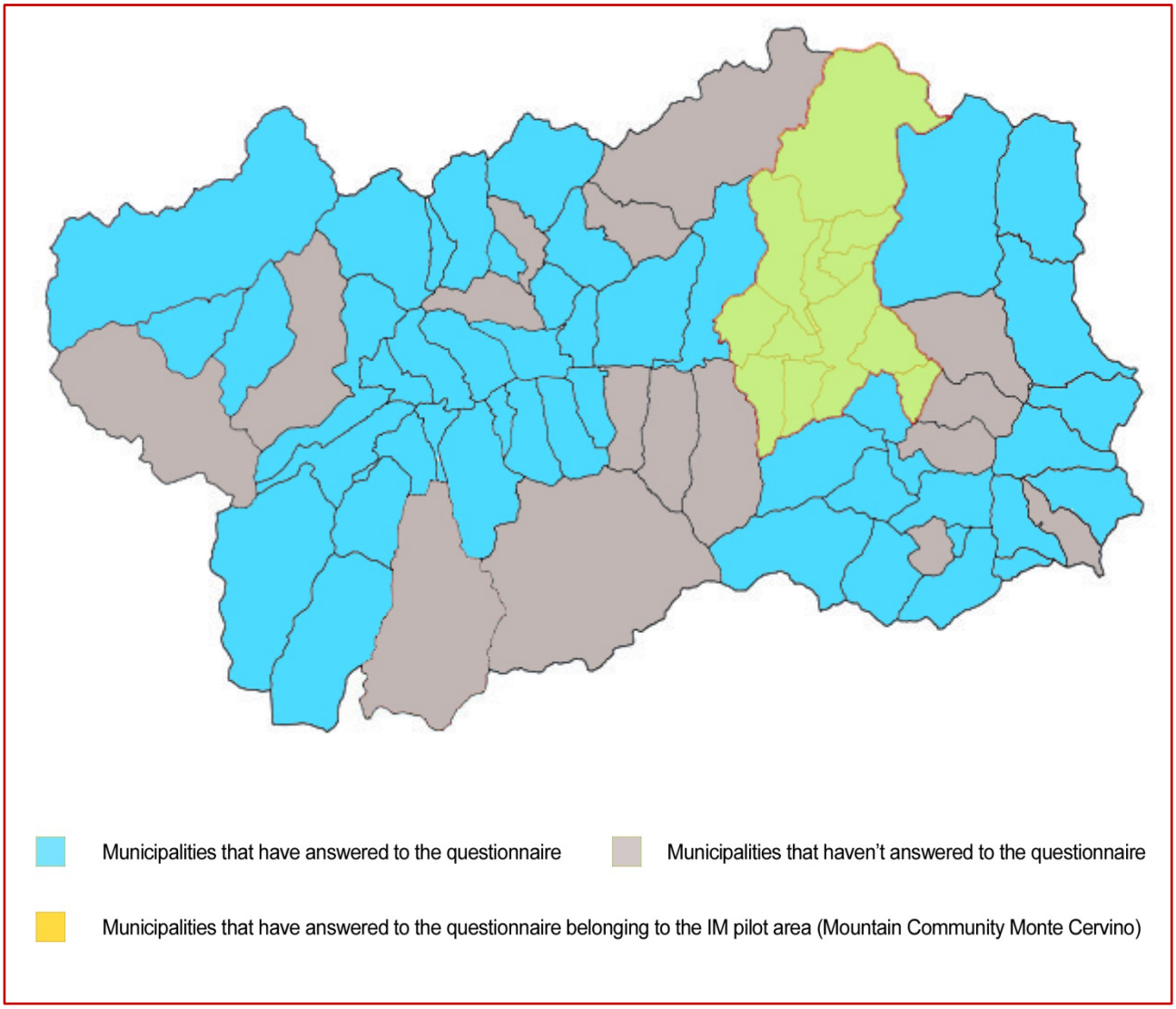
Criticality	
Needs	
Ideas	

3 The results

3.1 Participation of the Municipalities in the survey

The survey, which began in May 2013 through the dispatch of the questionnaire in a *.doc format so as to allow easier completion and return via email, was well-received and many replies were received by email, fax, telephone completion or by personal completion at the COA energia offices.

As indicated in the map below, completed questionnaires were received from 58 Municipalities belonging to the Monte Cervino Mountain Community, which was the subject of the in-depth study of the project as it was the Intermunicipal Pilot Area of the AlpBC project.



3.2 Summary of the results that emerged in the various sections

Thanks to the high number of Municipalities involved and the quality and the thoroughness of the answers received, the survey has allowed the creation of a full picture of the current situation and the experiences of the various Municipalities in the Valle d'Aosta with respect to the various aspects of the best practices of energy optimisation across the regional territory.

In particular, in the context of **territorial and energy planning,** Municipal Energy Plans and Balances have not yet been elaborated, except in a few cases within the framework of some interreg or European projects (for example, Villages Durables, Progetto Legambiente European Energy Award, etc.), some evaluations of the energy potential of the territory have been made, analysing just some of the aspects regarding energy production from renewable sources (e.g. solar, hydroelectric) or collecting data necessary for the energetic-environmental certification of the Municipality.

With regards to legislation, only the most recent building regulations and regulatory plans have introduced aspects pertaining to energy optimisation. However, in most cases, in the legislative updates foreseen and those currently underway these aspects will be introduced and integrated.

Territorial and energy planning presents criticalities tied, in many cases, to the obsolescence of the legislative tools (where the energy component was not considered a priority), to the high energy consumption of the existing building stock and the non-homogeneous nature of building use (continuous/discontinuous use in the case of second homes). The needs that have emerged consist, therefore, of the necessity to manage the territory more carefully with the aim of optimising the existing stock and the use of renewable energy sources. Several different solutions have been put forward by the Municipalities to achieve this aim: territorial feasibility studies to identify the energy improvement potential, training of technical officers and raising awareness of the general public by using new forms of incentives, updating of legislative tools and the construction of district heating systems that use local renewable energy.

In the area of the **management of Municipal buildings,** less than half of the Municipalities involved in the survey has a data collection system to collect, organise and monitor thermal and electricity consumption. The data are collected manually, through the analysis of the energy bills by the accounts office and by the technical department using heating meters or periodical summaries from the companies responsible for the management of the systems. In a few cases there are remote control management and programming systems and automatic accounting of consumption. Furthermore, some Municipalities have indicated that the their public building stock is not managed in a uniform manner: only the most recent

buildings or plant systems have automatic and efficient heating management systems with real consumption data.

Heating management (fuel supply and maintenance of plant systems) is often contracted to external companies, but in only a very few cases have energy saving measures been implemented.

Many Municipalities, following the results which emerged from the energy audits undertaken on municipal buildings in 2012, have programmed energy optimisation measures for their public building stock in the coming three years, in particular: the construction of solar systems (thermal and photovoltaic) on public buildings, overall energy requalification of the building-plant system, substitution of existing heating systems with new condensing systems or systems using wood biomass, the demolition and reconstruction of some buildings to achieve high energy performance buildings, optimisation of public lighting systems and the installation of charging points for the integration of electric transport.

Even in the area of Municipal building management, the criticalities are often bound to the consumption and excessive energy costs, due to the period in which the buildings were built, to the obsolescence of the plant systems, and the diverse and discontinuous use of the buildings (e.g. multifunctional buildings) and the low awareness of the users. The need to reduce costs is high through improvement of energy performance and a careful rationalisation of consumption.

For **sustainable transport,** the Municipalities that took part in the survey highlighted the best practices studied or activated across their territory: the most diffuse involve electric transport, together with public charging points for cars, measures to limit traffic and optimisation of public transport hubs. No use is made of car-pooling or car sharing systems. Some Municipalities have indicated other systems to optimise transport, such as bike sharing and shuttle bus services during the tourist seasons; in other cases, initiatives have been undertaken at inter-municipal level (e.g.: allô bus) and studies for the improvement of Municipal transport have not had positive outcomes, due both to the complex territorial conformation and to the scarce use by citizens.

The greatest criticalities that emerged from the sustainable transport section regard the presence of a high level of private vehicular traffic both in “Plaine” and in the various tourist valleys, this is due to an inefficient public transport system even over short distances, also due to the difficult territorial conformation and a level of territorial occupation that is not the same throughout the year. From these considerations the need emerges for a reduction in traffic, above all in the historical centres of settlements and to increase the use of the public transport system, through the optimisation of the transport of goods, the promotion of the use of public and sustainable transport, both for residents and tourists, the development of awareness campaigns and the diffusion and increase of electric transport (e.g. favouring the diffusion of electric bicycles, cars, shuttle buses and vehicle charging points).

With regards to **public lighting,** the majority of the Municipalities highlighted various points of criticality that lead to excessive energy and maintenance costs; the causes are mainly due to an elevated number of lighting points, to the presence of lamps using obsolete and high consumption technologies, to the increase in electricity costs and to the difficulty in adopting flexible management systems as well as onerous maintenance requirements. The Municipalities indicated that they intend to answer the need to contain costs through the use of consumption reduction measures, such as: devices for the reduction of night-time light flow, systems for electronic management control of public lighting and programmed switching-off of some parts of the system (for example, spotlights on monuments or some hamlets that are not accessible during the winter season), the restructuring of systems with LED technology and the use of lighting points fuelled by renewable energy (e.g. photovoltaic, hydroelectric, hydrogen).

In the field of **raising awareness of citizens to energy issues**, almost all the Municipalities involved in the survey had neither activated nor foreseen forms of incentives for those undertaking energy saving/energy efficiency measures or the use of renewable energy sources. The only scheme identified is that which offers a reduction in the urbanisation tax foreseen by the regional law n. 24/2009 “Piano casa”.
In order to increase the involvement and sensitisation of citizens, several informative events have been organised by the Municipalities, in connection with the participation in European and transfrontier projects (e.g. AlpHouse, Alpenergy, DYNALP, Villages Durables) or other initiatives organised at national level (“M’illumino di meno”), regional level (Tour énergie), Mountain Community or Municipal level.

The Municipalities have used various forms of incentives to undertake measures in the energy sector. As well as funds from the operative programme “Competitività regionale 2007-2013” (regional competitivity 2007 – 2013) which funded energy audits on publicly owned buildings of 70 Municipalities of the region (ref. d.G.r. 2539 of 23/09/2010 and d.G.r. 2672 of 18/11/2011), FOSPI (Funds for special programmes of investment) funds were used for interventions of energy optimisation of buildings, financial grants foreseen by regional law 3/2006 for the construction of pilot projects and other European, national and regional funds for sustainable transport and public lighting. Some Municipalities have also benefitted from other incentive mechanisms for the production of electricity from renewable energy sources (e.g. green certificates).

In the area of **studies, knowledge to be analysed in-depth and education/training activities aimed at the Municipalities,** the need emerged for a single reference point for all energy issues. COA Energia and the regional offices of the Ministry, as well as Celva (Consorzio degli Enti locali della Valle d’Aosta – Consortium of local administration bodies of the Valle d’Aosta) and GSE (Gestore dei servizi energetici – Energy service manager), currently constitute the reference points for information in the field of energy. In some cases, information is gained from the newsletter service *Infoenergia chez nous* and the regional

website or through other bodies that operate in the field of sustainable energy (e.g: ENEA, FIRE, etc.). Only two Municipalities that completed the questionnaire use the services of external consultants for gaining information on energy issues.

Half of the Municipalities involved in the survey have developed in-house particular skills/knowledge regarding energy efficiency and the integration of energy aspects in Municipal energy planning, through the participation in training courses foreseen in the funding call for energy audits on public buildings, through other training courses organised by COA energia in the context of the Réseau Energie project in collaboration with Celva or by other European projects (e.g. EEA).

The aspects that the Municipalities feel that it is necessary to develop and study in-depth through training sessions dedicated to administrators and technical officers are, in order of priority, energy optimisation of public buildings, energy legislation, energy certification and the law 10/91, volume bonuses (l.r. 26/12), heating management contracts, “conto energia” (feed-in tariff scheme for PV production) and “conto termico” (scheme of incentives for efficient production of thermal energy). Furthermore, the need to provide the Municipal technical offices with tools to verify the energy performance declared in the energy certificates and the creation of a network for the sharing of initiatives and strategies tied to territorial energy optimisation were also highlighted.

Approximately one third of the Municipalities that took part in the survey has already promoted studies or research in energy efficiency, through the evaluation of proposals for optimisation of their territory (e.g. in public lighting), the study of energy efficiency of the public building stock and the potential for improvement (audit), for new systems for energy production from renewable sources (wood chip boiler plants, hydroelectric plants and photovoltaic systems) and new low energy consumption buildings (pilot projects). European projects have also contributed, in some cases, in analysing energy themes, bringing know-how regarding approaches and innovative technologies that can be applied to new areas of territory and that can be diffused as best practices.

3.3 The answers to the questionnaire: summary

The answers to the questionnaires completed by the Municipalities that took part in the survey are presented below. They are divided by argument, with the intent of showing the number of positive/negative answers received for each question, but also to highlight the criticalities, the needs and the ideas that the Municipalities identified in their comments.

3.3.1 Section I - Territorial and energy planning

1	Has your Municipality already drawn up an Energy balance, that is an analysis of the energy flows into and out of the Municipality in a given period of time?	
	YES	**2**
	NO	**56**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**1**

2	Has your Municipality already drawn up a "Municipal Energy Plan" or have any studies been undertaken to evaluate the energy potential of the territory?	
	YES	**3**
	NO	**55**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**3**

3	Has your Municipality subscribed to the Covenant of Mayors (www.pattodeisindaci.eu) or other similar initiatives?	
	YES	**3**
	NO	**55**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**1**

4	In the Building Regulation of your Municipality are the energy aspects considered (for example, in an energy attachment)?	
	YES	**13**
	NO	**44**
	No answer	**1**
	Comments *(see the section 3.2 "summary of the results")*	**19**

5	Has your Municipality undertaken any other initiatives to integrate energy aspects into the territorial planning tools?	
	YES	**7**
	NO	**49**
	No answer	**1**
	Comments *(see the section 3.2 "summary of the results")*	**8**

6	In the context of territorial and energy planning are there any areas of criticality, needs or ideas that you would like to develop?
Criticality	▪ *15 answers (see the section 3.2 "summary of the results")*
Needs	▪ *14 answers (see the section 3.2 "summary of the results")*
Ideas	▪ *16 answers (see the section 3.2 "summary of the results")*

3.3.2 Section II - Management of municipal building

7	Do you have a system for data collection/monitoring of thermal consumption of municipal buildings?	
	YES	**24**
	NO	**34**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**28**

8	Do you have a system for data collection/monitoring of electricity consumption of municipal buildings?	
	YES	**17**
	NO	**39**
	No answer	**2**
	Comments *(see the section 3.2 "summary of the results")*	**23**

9	Do you think it would be useful to have a computer program to organise and analyse this kind of data?	
	YES	**46**
	NO	**7**
	Other	**4**
	No answer	**1**
	Comments *(see the section 3.2 "summary of the results")*	**6**

10	Do you have management contracts for heating in municipal buildings (supply of fuel and maintenance of heating plants) which contain energy saving interventions?	
	YES	**8**
	NO	**48**
	No answer	**2**
	Comments *(see the section 3.2 "summary of the results")*	**11**

11	Are the buildings equipped with remote-management devices, that is intelligent systems and innovative devices that allow the management and programming of plant systems remotely?	
	YES	**20**
	NO	**38**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**20**

12	Have you planned any interventions of energy optimisation on public buildings in the next three years?	
	YES	**27**
	NO	**31**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**27**

13	In the context of public building management are there any areas of criticality, specific needs or ideas that you are planning to develop?
Criticality	▪ *21 answers (see the section 3.2 "summary of the results")*
Needs	▪ *27 answers (see the section 3.2 "summary of the results")*
Ideas	▪ *20 answers (see the section 3.2 "summary of the results")*

3.3.3 Section III - Sustainable transport

14	Have any good practices in sustainable transport or alternative transport been analysed and/or implemented in your Municipality either in the private or the public sector?
Car pooling	**0**
Car sharing	**0**
Electric transport	**7**
Public charging points for electric vehicles	**8**
Interventions to limit traffic	**6**
Optimisation of the interchange hubs for public transport	**4**
Other	**5**

15	In the area of sustainable transport are there any points of criticality, specific needs or ideas that you are planning to develop?
Criticality	▪ *14 answers (see the section 3.2 "summary of the results")*
Needs	▪ *14 answers (see the section 3.2 "summary of the results")*
Ideas	▪ *18 answers (see the section 3.2 "summary of the results")*

3.3.4 Section IV - Public lighting

16	Sono state adottate sul territorio comunale delle misure per la riduzione dei consumi dovuti all'illuminazione pubblica?	
	YES	**31**
	NO	**17**
	No answer	**10**
	Comments *(see the section 3.2 "summary of the results")*	**41**

17	In the area of public lighting are there any points of criticality, specific needs or ideas that you are planning to develop?
Criticality	▪ *22 answers (see the section 3.2 "summary of the results")*
Needs	▪ *20 answers (see the section 3.2 "summary of the results")*
Ideas	▪ *26 answers (see the section 3.2 "summary of the results")*

3.3.5 Section V - Raising awareness in the population about energy issues and incentives

18	Have you activated/foreseen any forms of incentives for citizens that implement energy saving measures, energy efficiency or the use of renewable energy sources (for example, reduction in building taxes, etc.)?	
	YES	**2**
	NO	**56**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**3**

19	Have any initiatives been organised in your Municipality to raise awareness in the population about energy issues and energy saving?	
	YES	**10**
	NO	**47**
	No answer	**1**
	Comments *(see the section 3.2 "summary of the results")*	**3**

20	Has your Municipality used incentives to implement interventions in the field of energy (for example, European funding, white certificates, etc.)?	
	YES	**28**
	NO	**27**
	No answer	**3**
	Comments *(see the section 3.2 "summary of the results")*	**29**

21	In the area of public lighting are there any points of criticality, specific needs or ideas that you are planning to develop?
Criticality	▪ *8 answers (see the section 3.2 "summary of the results")*
Needs	▪ *7 answers (see the section 3.2 "summary of the results")*
Ideas	▪ *13 answers (see the section 3.2 "summary of the results")*

3.3.6 Section VI - Studies, in depth knowledge and information and training activities

22	How do you trace information on energy issues to support the activities that you are undertaking in your Municipality?
Regional offices of the Department of productive activities	**20**
COA energia	**35**
Celva (Consortium of the local bodies in the Valle d'Aosta) - Réseau energie	**15**
GSE (Energy Service Manager)	**7**
Other	
• ***Regionale official Website of the Valle d'Aosta***	**1**
• ***Italian Federation for the Rational Use of Energy (FIRE)***	**1**

• ***National Agency for Energy Efficiency (ENEA)***	**1**
• ***Other websites***	**1**
• ***Mountain Community Mont-Emilius***	**1**
• ***Regional newsletter service "Infoenergia Chez Nous"***	**3**
• ***External consultants***	**3**
• ***Other sources***	**5**

23	Within the Municipalities have been developed particular expertise related to energy efficiency and and integration of energy issues in municipal energy planning (e.g.: participation in specific training courses, activation of consulting activities related to these issues)?	
	YES	**29**
	NO	**29**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**30**

24	In the area of the training programmes offered by CELVA in Réseau Energie, which subject areas do you think it necessary to develop and analyse?		
	Yes	**No**	**No answer**
Energy legislation	**45**	**10**	**3**
Heating management contracts	**35**	**12**	**11**
Volume bonus l.r. 26/12	**38**	**9**	**11**
Energy certification and L. 10/91	**44**	**8**	**6**
Energy optimisation in public buildings	**46**	**8**	**4**
"Conto energia" and "conto termico" incentives	**34**	**13**	**11**
Energy legislation	**2**	-	-
Comments *(see the section 3.2 "summary of the results")*	**2**		

25	Has Your Municipality promoted any studies or research in the field of energy saving, energy efficiency of buildings or the use of renewable energy and energy production?	
	YES	**18**
	NO	**40**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**19**

26	Have there been or are there currently any European projects relating to energy in your Municipality?	
	YES	**12**
	NO	**46**
	No answer	**-**
	Comments *(see the section 3.2 "summary of the results")*	**13**

27	In the area of studies, in-depth knowledge and information and training activities are there any points of criticality, specific needs or ideas that you are planning to develop?
Criticality	▪ *5 answers (see the section 3.2 "summary of the results")*
Needs	▪ *8 answers (see the section 3.2 "summary of the results")*
Ideas	▪ *9 answers (see the section 3.2 "summary of the results")*