

Supporting Municipalities in Covenant of Mayor Initiative in Torino Province

ALL TOGETHER WITH 2020 IN MINDS! Supporting local authorities in adopting sustainable energy plans to achieve the EU targets.

Summary

The project aims at supporting Local Administrations (LA) of the province of Torino toward the achievement of 2020 EU targets. The core activity lies upon the promotion of the Covenant of Mayor Initiative, with several technical services in support provided to the signatories of the CoM. The logical framework of the project is based on a continuously improve approach supporting the LA in the adhesion to the CoM, in the preparation of the SEAPs, in its implementation and finally in its monitoring and improvement.

In order to achieve this goal several assistance services have been put in action. First of all a Baseline emission Inventories for all the 315 LA of the province of Torino was elaborated. Energy information about consumption and production at Municipal level have been collected with a bottom-up approach (from local and national utilities) and with a 10 years trend. This amount of data was possible thanks to a long time working experience in elaborating energy balance sheets at local level. The collection of energy data is updated every 2 year and it is currently working. Starting from this solid energy data framework available, an own methodology for the elaboration of SEAPs was set up and applied to more than 30 LA up to now. In October 2012, this methodology has been approved by the JRC; all the Municipalities supported by the Province of Torino in the elaboration of their SEAP have seen validated by default their document. Some of them will start this year the monitoring phase. In order to push LA in concretely implementing SEAPs, Province of Torino is providing additional support focused on local needs, such as: energy management of public properties, financial support in the retrofit of public properties, set up of a template for local building code and the promotion of information campaigns.

In order to introduce energy management principles in LA, a web-based application was elaborated for the collection of energy bills of public buildings, lightning systems and facilities. The application, named ENERCLOUD is based on the data-mining system. No software has to be installed in the local end-users computers and only a online login/password is required. ENERCLOUD give an immediate description of the energy status of the facility under assessment thanks to a benchmarking approach. The electric and thermal consumptions taken from monthly bills are translated into energy performance index (kWh/sqm) and a “traffic light” show weather the facility is overcoming or is in line with the fixed target. This application is used either for the elaboration of the baseline emission inventory for the energy public consumption and for the day-to-day energy management of the properties. Besides, it is also a way for the Province of Torino to monitor the effectiveness of energy retrofit interventions supported with financial subsidy. Thanks to a call for tender addressed to existing street lightning systems and public buildings to be retrofitted, more than 2,5 M€ investments will be realized with the financial support of the Province of Torino within the end of the current year. Enercloud use is a requirement to get for funding.

To have a local building code updated is essential to be effective in reaching EU 2020 targets in private building stock. A common template fixing energy standards and requirements was elaborated by the Province of Torino and disseminated to all LA in addition to a data-sheets helping public technicians in its application.

A wide communication campaign was managed, too. An informative brochure named “L’energia di casa mia” provides information about what a person can do in its own house in order to save energy and use RES. This brochure is available for each public event a LA is organizing with its own citizens. Besides, a tour of 25 energy days was organized in different LAs involving hundreds of people interested in retrofitting their house. A video about energy insulation of buildings was produced, too. Also an energy help desk service is operating in order to provide consultancy for specific issues on private and public building activities from normative, technical and financial points of view.

Finally, the Province of Torino has participated to the “Cities on Power” european project to promote the use of renewable energy in urban areas. The four participating cities and regions: Warsaw, Klagenfurt, Ravenna and Turin, will prepare together local action plans to boost renewable energy. They will also deliver an interactive tool to support citizens in the decision making on new ways of energy supply. In this way the citizens will become on-site investors into renewable energy, which will lead to higher quality of their life and increase of their energy independence.

Contribution to the EU 2020 objectives

The energy policy of the Province of Torino, so-called “PENSA AL 2020”, is aimed at achieving the objectives contained in the EU climate and energy package, the 20-20-20 strategy, adopted in December 2008 by the European Parliament. The Province aims to build from the bottom (supporting the municipalities) a low carbon and low energy consumption economy, which tackle climate change and improve environmental quality and services provided to citizens and businesses. The target of 20% in energy efficiency, compared to 2020 projection of the current trend of total consumption is pursued:

- through proactive policies to reduce consumption in the transport sector, reducing the reliance on private vehicles and discouraging the individual movements by car;
- in private and public buildings, stimulating the energy upgrading of energy-intensive building stock, requiring low transmittance values to building components, increasing efficiency in domestic boilers,
- in improving the quality of public services, saving energy in public lighting and public procurement.

The target of 20% in final use energy from renewable sources is pursued actively by promoting new technologies, always respecting the environmental and landscape values incorporate in the territory. In 2009, in the Province of Torino the share of RES was nearly about 8%. The target to 2020 will be reached thanks to a two-edged strategy, on one side a strong reduction of final consumptions (above all focused in building stock) and on the other an increase of the use of RES mainly in thermal use.

By consequence, the objective of reduction of CO₂ emissions is pursued, finally:

- in the transport sector, stimulating the replacement of petroleum fuels in favor of methane, improving the emissions of private vehicles and enhancing the local public transport in the urban area of the City of Torino;
- in the construction sector, pushing towards the gradual improvement of energy performance of public and private building stock and deploying local energy production (photovoltaic, solar thermal, geothermal, biomass);
- in the field of energy production, pointing to the completion of the expansion of district heating in the metropolitan area of Torino, recovering the heat from the CHP plants surrounding the City.

Action plan

Covenant of Mayor

- Adhesion as supporting structure (Feb 2010)

- Methodology set up (Dec 2010) and approved by the JRC (October 2012)
- Promotion of the CoM at local level (2 events in 2010 and 4 events in 2011, 2 events in 2012)
- SEAP elaboration/approval (from June 2011 – ongoing)

Building Code Template

- The approval took place on Nov 2010 and the dissemination phase was done during 2011

Enercloud

- Enercloud system was officially set up on Jan 2012, but test phase was carried out during the second half of 2011. A dissemination phase with training sessions has been organized from March to April 2012.

Subsidies for energy retrofit

- The public call was approved on Oct 2011; the selection of the investment has taken place in Feb 2012.

Information campaign

- Energy information desk set up (July 2011 - ongoing)
- Informative brochure elaboration and dissemination (Oct 2011 – ongoing)
- Video on energy insulation of the building (March 2012)
- Energy day tour (Oct 2011 – Jan 2012)

Cities on Power project

- The project started in 2011 and will end in 2014.

Project impact

It is estimated that implementation of the project “PENSA AL 2020” on the territory of the Province of Torino will provide energy savings for 1,203 GWh, by virtue of achieving the objectives that the individual municipalities, participating to Covenant of Mayors, have identified for 2020. About half the savings come from structural changes in heat consumption, related to renovation of public and private buildings, and the remaining 50% derives from reductions in electricity consumption and from the transport sector, with an increasing efficiency of vehicles and modal diversion in the mobility system.

The energy savings will contribute to an overall reduction of CO₂ emissions equal to about 382 kton, which is approximately 4,2% of total CO₂ emissions of the Province.

Communication results

The achievement of the objectives of the project depends, in no small measure, by the active participation of citizens and various stakeholders. In order to involve the different actors of the territory, the Province has primarily disseminated information, through awareness campaigns about general objectives and strategy and the instruments required for its implementation. Secondly, the Province has attempted to illustrate the benefits obtained from implementing the planned actions, both in specific terms, such as reducing energy consumption and costs, both in more general terms, such as reducing emissions of greenhouse gases and increase local employment. Here, in summary, the main results:

- 39 adhesions to the Covenant of Mayors with the support of the Province of Torino;
- Explanation of the Covenant of Mayors initiative through the organization of 6 workshops between 2010 and 2011;
- 24 Sustainable Energy Action Plans approved with the support of the Province;
- Training of 200 municipal technicians on energy and eco-building legislation;
- Organization of 25 energy days on energy efficiency and energy production from renewable sources;
- Realisation of one video on the thermal insulation of buildings;

- Realisation and distribution to all municipalities of the information brochure "L'energia di casa mia".

Management/method

The monitoring phase is an essential action of the project. The Sustainable Energy Action Plans are based on a 3 level monitoring scheme. The ex ante monitoring checks the consistency of actions with respect to the objectives, the ongoing monitoring verify the municipal implementation strategies and the ex-post monitoring control the effectiveness of implemented actions. Especially the last phase of monitoring, which is realized through the Monitoring Emission Inventory, has to be drawn up every two years to identify any anomalies in the estimated energy consumption trends, according to which were defined and quantified the actions. If anomalies are identified it is possible to act in feedback both on goals (emission reduction target) and actions (which can be changed or strengthened). Data collection of energy consumption and production for 2010 and 2011 is starting on March 2012.

Sustainability

The project is characterized by a high degree of reproducibility and long-term sustainability. The objectives that arises, oriented to 2020, but with an even longer-term perspective, to be realistically achieved and to spread benefits to the citizens, should provide a series of actions that cannot be static but must be highly flexible. The project was set up as a process without a specific deadline (2020 is an intermediate objective), provides specific actions to achieve the objectives of reducing municipal energy consumption and emissions of greenhouse gases. But these actions, since socio-economic dynamics and other external or internal variables can vary significantly, must be able to be rethought and recalibrated both from a qualitative and quantitative point of view.

Replication potential

The project, implemented on a municipal basis from the provincial level, is a perfect example of a multilevel governance, which is highly replicable in other territories. Thanks to the evidence of such a good practice, the example of the Province of Torino was shown in national public events. The participation of the Province of Torino in several EU projects (i.e. Alcotra and Central Europe Program) related to energy issues will grant the dissemination of such a model outside the borders of Italy. This project property follows from its own procedural and methodological nature, highly flexible and adaptable to individual local contexts. The project represents a concrete attempt of systematization of initiatives aimed at promoting renewable energy, energy efficiency and reduction of CO₂ emissions and creation of a convergence between multiple objectives.

Beneficiaries

The project is devoted mainly to municipalities as priority targets for tackling climate change. Municipalities, in fact, not only manage many public assets but also represent the main regulators of the territory, also actively involving citizens. Municipalities, at the same time, have many informative, technical and financial limitations which cause difficulties in defining and implementing the actions; the support of an intermediate body, like the Province of Torino, therefore, is essential to remove these existing barriers. The project also encourages investment in the building sector, either directly, by providing funding (project REP), or indirectly, by stimulating the development of a low carbon and low energy consumption economy. This stimulus could provide in the next decade, a revival of local business (and especially young companies), particularly in the areas of energy production from renewable sources and energy efficiency in buildings and contribute to the reduction of unemployment.