

4th Interregional Event

DOSSIER





Introduction

The Financial Instruments for Energy Renovation Policies (FINERPOL) Project aims to promote energy policies oriented to increase energy efficiency of existing stock, by improving access to investment finance. It is supported by European Regional Development Funding provided through the Interreg Europe Programme.

FINERPOL partners aim to develop regional Action Plans to overcome barriers to energy retrofit of public and private buildings and public lightings, making use of EU funds, and national and other sources as appropriate, to attract investment finance from a range of sources for energy efficiency renovations.

FINERPOL is a partnership project of nine European countries, with Spanish company Extremadura Energy Agency as a Leading partner. The project also involves other agencies and governing bodies from Czech Republic, Great Britain, Greece, Italy, Portugal and Germany.

Among others, one of the main objectives of this project is the interregional exchange of local experiences and best practices to learn from each other. In accordance with obtaining this objective, the fourth Interregional event in Trento took place, as well as Steering Committee.

For more information about FINERPOL, visit our webpage

Project partners

The partnership is led by the Extremadura Energy Agency (Agenex), Spain and also includes:

- General Direction of Industry, Energy and Mines, Extremadura Regional Government, Spain
- Plymouth City Council, UK
- Western Macedonia Region, Greece
- City of Prague, Czech Republic
- University Centre for Energy Efficient Buildings, Czech Technical University in Prague, Czech Republic
- Climate Protection and Energy Agency of Baden Württemberg, Germany
- CEiiA – Intelligence in Innovation, Innovation Centre, Portugal
- Autonomous Province of Trento, Italy



4th interregional event summary and agenda

The IT event comprised two study visits, at the Science Museum and Le Albere district – Trento -, and at Progetto Manifattura – Rovereto, and a Panel Discussion regarding good practices in the valorisation of energy and environmental certification of building rehabilitation, and an Interregional event in Trento focussing on lessons to be learned from the Italian best practices.

The report summarises case studies and the content of the debate at the Interregional meeting.

WEDNESDAY, 1 MARCH	
18:00	<u>Study Visit 1</u> : MUSE (Science Museum) + the new district "Le Albere" - TRENTO

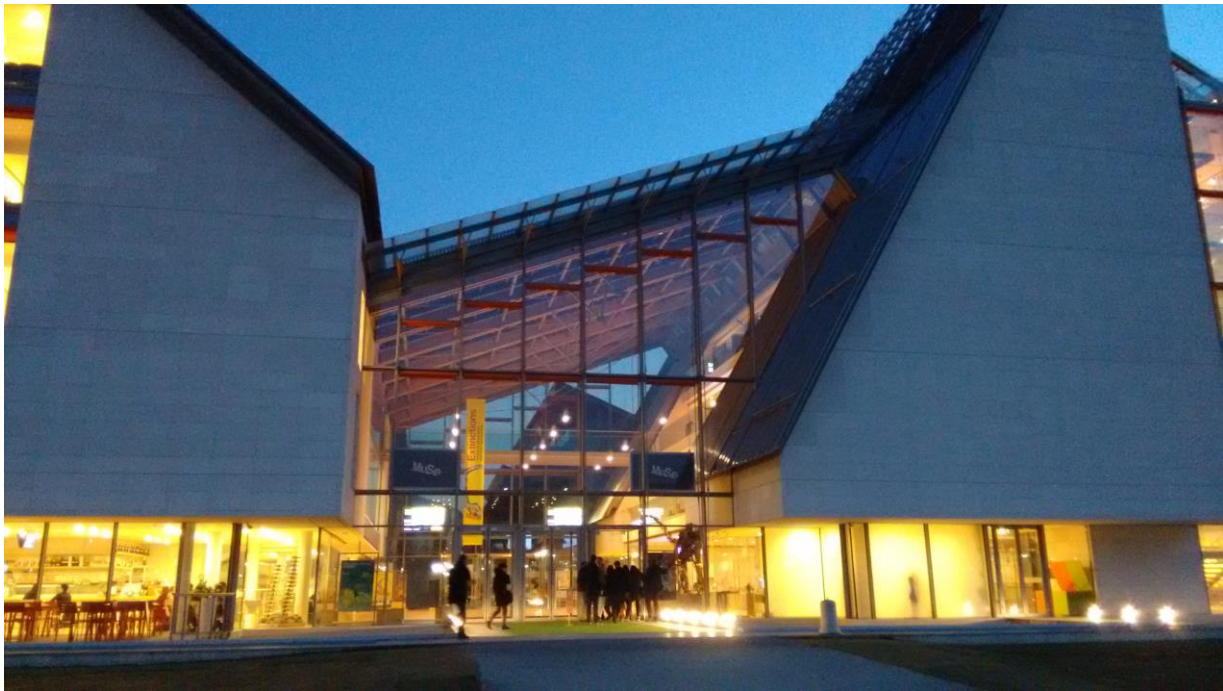
THURSDAY, 2 MARCH	
8:45 – 17:00	<u>Convention</u> : INVESTING IN ENERGY EFFICIENCY: THE ITALIAN BEST PRACTICES IN THE USE OF FINANCIAL INSTRUMENTS

FRIDAY, 3 MARCH	
10:00 – 13:00	<u>Study Visit 2</u> : PROGETTO MANIFATTURA - ROVERETO <u>Panel Discussion</u> : GBC Italia – ing. Sebastiano Cristoforetti; Rebuilding Network – dott. Claudio Cont; Energy Sprong Italia, Habitech – ing. Thomas Miorin; Discussant: Sara Verones, APRIE
14:00 - 16:00	<u>FINERPOL Steering Committee</u>



Study visit 1 - the MUSE and Le Albere Neighbourhood - TRENTO

MUSE, the Science Museum of Trento, is a place of constant change, from the main exhibitions, up to date with the latest developments, to special projects, with prestigious national and international collaborations, and finally to MUSE Lab, where the most advanced experiments in the field of new technologies take place.



MUSE exhibits use the metaphor of the mountain to describe life on Earth. You start from the top: the terrace and the 4th floor allow us to encounter the sun and ice; from there, you descend to investigate the issues of biodiversity, sustainability, and evolution, until you reach the basement and the wonders of the tropical greenhouse.

The construction techniques focus on environmental sustainability and energy saving through a wide-ranging use of renewable energy and high efficiency systems. There are solar panels and geothermal probes that provide support to a central trigeneration system for the whole neighbourhood.

The building's system is centralised and mechanised. The energy system is accompanied by a careful study of stratigraphy, thickness and type of insulating, windows and shading systems in order to maximise the energy performance of the building. A sophisticated system of blinds controlled by temperature sensors reduces sunlight in summer hours and facilitates it during winter days.



In certain areas, the use of natural lighting and ventilation allows for reduced energy consumption and the creation of more comfortable environments. The main plant also makes use of features that reduces consumption, such as cisterns which collect rain which provide water for the toilets, irrigation in the greenhouse, the aquarium and the body of water that surrounds the building.

Thanks to the collaboration of the Trentino Technology District – HABITECH located in Progetto Manifattura - Rovereto, the building designs underwent the procedures to achieve LEED certification. The level of LEED certification obtained by the museum is GOLD.

The project also aims to create bicycle parking spaces, changing rooms and showers, and a limited number of parking spaces to encourage the use of public transport by visitors. Located near the cycle path, the museum can be reached easily on two wheels.

The most striking feature of the building designed by Renzo Piano is the sloping roof, which simulates the steepness of mountain slopes. The MUSE building extends over a length of 130m above ground level and a width (north/south) of 35m. Its internal structure is divided into two basement levels and five levels above ground. All floors, including -1, share space between public areas and those dedicated to Museum's administration, services, and research.

The architectural idea was born from the search for the right balance between the need for flexibility on one hand and the need to cater for scientific content on the other. The main themes of the exhibition are recognisable by their form and volume while the flexibility of large exhibition spaces - typical of the latest generation of museums - is maintained. The building consists of a sequence of spaces and volumes, solids and voids, lying on a large body of water on which they appear to float, multiplying the impact and vibration of light and shadows.





The structure appears to be held together from above, with a large pitched roof that follows the curves of the building and is a quickly recognisable feature.

The Quartiere delle Albere district, site of a former Michelin factory, is now a new part of the city of Trento. This transformed post-industrial brownfield site now shares many characteristics with Trento's urban fabric: the clear hierarchy of the design, its functional stratification and an overall similarity in the size of buildings and materials used for their construction. This urban renewal project has reconnected the city to its natural context, which in Trento is defined by the nearby Adige River and Monte Bondone. This new district, for a long time physically separated from the city centre by the railway, now feels psychologically closer. Quartiere delle Albere welcomes MuSe, the new Science Museum, thus reinforcing the cultural identity of this area of Trento.



The boundaries of the new district, which covers an area of 116,300 sq m, are clearly defined by the Adige River to the west and the railway to the east. The northern edge borders the Palazzo delle Albere, a renaissance villa-cum-fortress. The project called for a mixed development so that the area could be, in and of itself, self-contained with all implied services and functions. The new buildings have a clear and unified horizontal impact on a similar scale to those in Trento's historical centre and are located on the eastern side of the huge site, leaving the western part open for a new public park facing the river. The buildings are interspersed with green areas and waterways, a system of canals that crosses over the entire area and actively connects it with the river and natural landscape.

The layout of the commercial buildings is linear and their 'green' facades become something of a natural screen, hiding the tracks along which they are, to a large degree, lined up. The residential buildings are provided with open courtyards that have been cut into so that the glimpses of the internal treed gardens can be seen from the outside. The buildings are four to five storeys high and their zinc roofs give the neighbourhood a certain visual unity. Taller buildings stand on either side of the complex: a multipurpose building to the south and MuSe – a large interactive science museum - on the northern end. The museum acts as the project's



magnet and, together with the Palazzo delle Albere (today the Modern and Contemporary Art Museum), attracts the public and confirms the revitalized area's vocation for culture and recreation. The layout of the urban plan placed these two buildings as its main anchors, surrounded by water and connected to one another by the two main pathways: one is a straight footpath along the east and the other a curved one along a canal that serves to connect the buildings to the park.

Sustainability was a large part of design of the Quartiere delle Albere's regeneration project. Indeed the buildings consume little energy with the extensive use of renewable resources. MuSe has been given LEED Gold certification, and all of the residences and offices have a level B CasaClima classification. They were among the winners of the 2013 CasaClima Awards.



Convention “investing in energy efficiency: THE ITALIAN BEST PRACTICES IN THE USE OF FINANCIAL INSTRUMENTS” - TRENTO

MORNING SESSION Chaired by Prof. Paolo Baggio, DICAM, University of Trento	
8.45	Registration
9.00	Welcome
9.15	Introduction to Trentino & FINERPOL
9.45	<p>European instruments as an incentive for action</p> <ul style="list-style-type: none"> • <i>Energy Efficiency for the public building stock – critical issues, opportunities and experiences</i>, SINLOC – dr. Martinez • <i>Horizon 2020”enerSHIFT” – innovative financing for the energy retrofitting of social housing</i>, IRE Regional Agency of Liguria – dr. Fabianelli • <i>2020Together projects: schemes and results</i>, Piedmont Region – dr. De Nigris
COFFEE/TEA BREAK	
11.20	<p>Private Players for financing the energy efficiency</p> <ul style="list-style-type: none"> • <i>Energy Efficiency Projects and finance "off balance" for local governments: spending reduction, retraining and enhancement of municipal assets</i>, PVB Solutions Esco – eng. Zadra • <i>The collaborative policy making as a key for a real “renovation revolution”. Aims and results of the Project H2020 BUILD UPON</i>, GBC Iyalia – eng. Cristoforetti • <i>A crowd-funding Instruments for boosting a share clean energy revolution</i>, INFINITYHUB – dr. Braghin
12.20	<p>Lessons from Investors</p> <ul style="list-style-type: none"> • <i>“The instruments of BEI in supporting actions against climate change, for energy efficiency and renewable energy”</i>, European Investment Bank – dr. Orlando • <i>SEEF: tailor-made financial instruments for energy efficiency</i>, SUSI PARTNERS – dr. Caporali.



13.00	NETWORKING LUNCH
AFTERNOON SESSION Chaired by Prof. Paolo Baggio, DICAM, University of Trento	
14.00	Introduction to the Science Cafè
14.20	Science Cafè <ul style="list-style-type: none">• <i>Public Buildings</i> Chair eng. Cattaneo – Habitech; co-chair dr. Anna Camp Casanovas – coordinator of BeenerGI programme• <i>Private Residential Buildings</i> Chair eng. Cristoforetti – GBC Italia; co-chair dr. Nadalini – Cassa del Trentino• <i>Public Lighting</i> Chair prof. Fauri – Unitn; co-charis dr Demozzi – Gruppo Dolomiti Energia; eng. Calliari – Municipality of Mori
16.00	Panel and audience debate
16.40	Summary and next Steps



The energy and energy-saving sector is one of the big issues in which Italy and, in general, Europe, is investing both financial and research resources. It is precisely these new forms of investment in energy-efficiency that was discussed in Trento on 2nd March 2017, on the occasion of the national convention organised by the Autonomous Province of Trento and the Agency for Water and Energy Resources (APRIE). Opening the



proceedings, the Provincial Councillor for Infrastructure and the Environment, Mauro Gilmozzi, presented, amongst others, the packet of measures that Trentino introduced last year in support of energy-efficiency: “Construction is moving away from building new structures towards the recovery of existing assets. In this context, the theme of financing assumes a crucial importance. In Trentino, through the integration of State concessions, we have introduced new financing packets so as to facilitate actions that are able to assure real energy savings and efficiency. Public intervention has to find businesses, banks and private individuals that are able to redefine their roles so as to fully access these new opportunities”.

The convention, “Investing in energy-efficiency”, held in the state-rooms of Buoncosiglio Castle in Trento, is an opportunity to compare Italian and European good-practice in energy saving and in the reclamation of existing real-estate assets. For example, more than 900 public buildings in the territory of Trentino have an energy-consumption of more than 120 KWh/m² per year, with a potential saving of more than 40%. Preliminary studies suggest that renovation interventions on these assets could generate an activity-related income of at least 150 million Euros. In addition, privately owned buildings in Trentino, estimated at 15,000 apartment blocks (of over 6 dwelling units each), present notable energy-efficiency achievement potential. The same is true for public lighting which, with its current consumption of 44,000 MWh, equivalent to 9 million euros, could, through the upgrading of its 89,000 lighting units, guarantee a saving of approximately 39%, bringing consumption down to 26,600 MWh. The scale of potential investment, in this case, is equivalent to approximately 170 million euros.



In his address, Councillor Gilmozzi highlighted the objectives behind the incentives being promoted by the Autonomous Province of Trentino by placing them in the local context: “We are working so that Trentino’s companies can be competitive through a unified proposal for energy-efficiency interventions that goes beyond private residences, so as to enable them to undertake interventions aimed at apartment blocks, public buildings and public schools. We are, furthermore, committed to accelerating the use of instruments put in place by the



administration, such as contributions, tax credits and 'thermal accounts'. In this context, we are working on the capacity of the private and public sectors to cede, for example, all fiscal bureaucratic obligations to these companies and, at the same time, to guarantee the same companies should they take on these obligations, thereby transforming a possible negative influence into a concrete opportunity".

Returning to the themes elaborated on by the speakers at the convention, it should be noted how energy-efficiency, in its end-use, thanks to European, national (through, for example, the 'Thermal Account 2.0' and energy-efficiency certificates) and provincial resources, allows for ample margins of action. It is enough to think that, alone, this packet of measures introduced by the Autonomous Province of Trento in favour of private habitations, with a budget totalling 8 million euros in 10 years, has already received 1,821 requests, generating an activity-related income of 163 million euros.

The capability of the construction and public-lighting sectors, as emphasised in various contexts by the experts attending the convention, would permit the achievement of the energy-savings objectives as laid out by the European Union and the National Energy Strategy, as well as those contained in the Provincial Environmental Energy Plan: "It is necessary to strengthen the understanding that, along with the environmental benefits derived from the reduction of climate-altering gases in the atmosphere, there are also economic returns that can be very interesting".

Moreover, the energy-efficiency sector necessitates specific technical skills and financial instruments that are able to support those who decide to undertake energy-efficiency improvement.

Their possible use in the Trentino territory is at the centre of the Finerpol (Financial Instruments for Energy Renovation Policies) project that has the purpose of promoting policies for the definition of financing instruments aimed at improving energy-efficiency and the production of renewable energy sources in existing buildings. The Autonomous Province of Trento, through APRIE, is an active partner in the project, hence the desire to promote good-practice through today's convention which proposes an important opportunity for dialogue between decision-makers, both administrative and financial, who make their resources available to the sector, and to arrive at the achievement of a complete integration of all the instruments available.

The slides of the speakers (some in Italian, some in English) are available here:

<http://www.energia.provincia.tn.it/ultimora/pagina231.html>



Study visit 2 – PROGETTO MANIFATTURA - ROVERETO

Progetto Manifattura - Green Innovation Factory is transforming a 9-hectare (22-acre) historic tobacco facility into an innovation hub for green building, renewable energy, and environmental technology. The project is the premier green technology partner in Italy, offering turnkey business solutions, a supportive environment, and excellent connections to northeast Italy and Europe.



The project is focusing on business development in a framework of a regional strategy to promote climate change accountability. Using business and public strategies in the context of a landmark facility, Manifattura will demonstrate how to reach carbon reduction targets, achieve sustainable growth and adopt responsible behaviors. The location will inspire innovation by offering attractive spaces in historic and new eco-sustainable buildings.

Progetto Manifattura - as an incubator and hub for companies with sustainable projects managed by Trentino Sviluppo, a sectoral agency of the Autonomous Province of Trento - is designed to be a model for sustainable growth that educates the public as it stimulates the green economy. It's a productivity platform that offers a mix of uses: offices, light manufacturing, test labs, research, education, and services. Access to plazas and walkways give people a chance to learn and participate.

The project provides companies with a production platform complete with services, skills, and specialized know-how. The rebirth of the old Manifattura is the result of the combined actions of companies, research laboratories, services targeted to business, and other actors with the common goal of growing ecosustainable enterprise.



Guiding principles

- Plan, realize and manage buildings and infrastructures dedicated to companies in the green economy.
- Offer a stimulating, creative work environment thanks to a combination of public and private activities.
- Build and remodel buildings and deliver systems that will have the lowest possible environmental impact.
- Promote innovation through a mix of education, training, research, development and production.
- Contribute to the development of innovative technologies that reduce consumption of non-renewable natural resources.

The project is part of a wider sustainable strategy of the Autonomous Province of Trento:

Environmental sustainability. With its precious natural resources, the Province of Trento is a place with a strong tradition of environmental sustainability. A balanced approach to natural resources has always been a guiding principle to the people of this region.

Economic sustainability. The Province of Trento is a leader in green economy strategies. The growing push of the private sector and the strong support of the provincial government is completed by a research platform with international reach.

Social sustainability In the province of Trentino social responsibility is a dearly held ideal among people and in the private sector. The desire to combine social, economic and environmental efforts is a characteristic that defines the province far over its borders.



The aim of Progetto Manifattura is to reach the highest levels of sustainability during restoration and reconstruction of historic buildings, as well as in management of all the campus buildings. To this end, the project is following the LEED® certification system. For new buildings, the goal is to reach the highest level of sustainability certification, LEED Platinum. This means hitting objectives in seven areas:

- Site Sustainability
- Water Management
- Energy and Atmosphere
- Materials and Resources
- Internal Environmental Quality
- Design Innovation
- Regional Priorities

Moreover, the project goes beyond LEED standards by looking at ways to introduce or increase the environmental sustainability. Examples of this are on-site production or local sourcing of food, lessening the project's lifecycle "carbon footprint", and the implementation of a mobility plan integrated with the city.

The new space houses 20 start-up companies involved in the renewable energy, sustainable building and environmental services sector. Each start-up has its office, three walls and a large window, to preserve privacy and at the same time be connected – visually but not only – with the other enterprise. «Here we have created an



unprecedented network, because we put together startup companies that have unique expertise in multiple sector from green built-in to renewable energies», explain Michele Tosi, operation manager di Progetto Manifattura.

Network is a keyword at Progetto Manifattura, a mission for whom has ideated this project. For this reason they have created network-event as the "Piazza Condominiale", a convivial potluck where all the startups meet and mingle, in order to discuss new business-ops, ideas, projects, or to listen and chat with invited guest from across the green-biz world spectrum.

Oros and Evotre are the first two enterprises that have been participating in the business incubator. The first one deals with technical closures and green high-tech windows for buildings, while the second one provides "green-oriented" advices to the players of the design and construction industry. As Carlotta Cocco of Evo3 underlines, the opportunity of work side-by-side with others operators of the sector is one of the most relevant perspective: «The professional network we can develop here is our capital. Freelance professionals tend to work as isolated individuals, but networking is much more useful, especially in an industry such as the sustainability one that concerns the common goods of all». Alessandro Pezzani of Oros adds: «Having different working skills next to us was been very useful for the launch of our enterprise. For example, we needed a website, so we contacted GreenTrenDesign, the startup in front of our office».



Panel discussion





Steering committee

Steering Committee meeting Agenda of 3rd March, 2017

START	TOPIC
14.00 – 16.00	Best practises - Status of the analysis. Problems - Dossier. Partners proposals - Deadline - Finer-map tool <input type="checkbox"/> Ex ante assessment - Methodology - Status ex ante - Local stakeholders seminars <input type="checkbox"/> Communication commitment <input type="checkbox"/> Next technical and financial progress report <input type="checkbox"/> Additional topics / pleas and questions - Status of Consortium - Status of the Project

List of Attendants:

Attendants	Organization
Alex Midlen	Plymouth City Council
Ian Hutchcroft	Plymouth City Council stakeholder
Jan Hrdina	City of Prague
Tereza Fuka	City of Prague
Jan Hauser	City of Prague
Olga Gionsorová	City of Prague
Tereza McLaughlin Vanova	University Centre for Energy Efficient Buildings, Czech Technical University in Prague
Michal Tobias	University Centre for Energy Efficient Buildings, Czech Technical University in Prague
Lara Redondo	Agenex
Javier Ordoñez	Agenex
Sara Verones	Autonomous Province of Trento
Laura Segalla	Autonomous Province of Trento
Chiara Vivaldelli	Autonomous Province of Trento



The conclusion of the Steering Committee meeting of FINERPOL project held on 3th March in Trento set out below:

1. Best practices,

1. Status of the analysis. Problems

- Trento mentioned that is very difficult adapt the data to the contents on the Google form. For example, some type of Financial Instruments that they has studied, are not included on the Google form classification.
- In response to this problem it is agreed that UCEEB ask to their stakeholders the items more relevance to be included in the Google form, which will also serve of keywords to Finermap tool.
- Deadline for best practices: Every partner will upload to the Google form all the best practices collected at the latest on 31th March.

2. Dossier. Partners proposals

- Plymouth will define the template for the dossier about 5 best practices. Plymouth will made a proposal at the latest 21th March. After a feedback of the consortium partners (24th March), the final template will be defined on 31th March.
- Although in the meeting it is agreed that in the next meeting in Greece every partners will explain the best practices analysed by each, Agenex thinks that this activity has to be finished in this semester, so we propose:
 - UCEEB send to the partners all the best practices in a visual format to analyse them.
 - Partners select 5 and development the dossier accord to the template made by Plymouth.
 - In the next consortium meeting (1st May) every partner will analyse and justify the selection.
- Deadline for dossier with 5 best practices (national language): 21th April.

3. Finer-map tool

- After all the best practices will be finished, Agenex will elaborate the Finermap tool.
- Deadline: 28th April.

2. Ex ante assessment

1. Transnational ex-ante assessment methodologies

- Partners will send to Agenex feedback of the ex-ante assessment methodology sent in the email of 14th February.



3. Communication commitment

- Based on the Annex IV: Communication Commitments and due to the fact that most of the partners have not fulfilled the commitments, partners should carry out the pending work in this and next semester.
- Agenex will send to the partners, the Google analytics of the Project Website.

4. Next technical and financial progress report

- Agenex will send to the partners, the steps for the next progress report.
- Each partner should think how envisage the improvement of the policy instrument. If the improvement differs from the initially proposed in the application form, should be indicated in the next progress report.