



VIRTUOUS TERRITORIES

The energy efficiency project of
Milan Metropolitan City



COMUNITÀ
AL LAVORO



UNIONE EUROPEA
Fondo europeo di sviluppo regionale



Regione
Lombardia



POR FESR 2014-2020 / INNOVAZIONE E COMPETITIVITÀ



Città
metropolitana
di Milano



Virtuous territories

The project has been created through two joint financial promoters:

- Cariplo Foundation
- Lombardy Region – Structural Funds

The aim is to reduce the CO2 emission percentage and energy consumption in the buildings based in Milan Metropolitan City.

Cariplo Foundation launched a call to select ad hoc consultancy services to support and drive local bodies in energy re-qualification so as to reduce primary energy consumption of property owned buildings.

Milan Metropolitan City (CMM) obtained the funding and could increase the energy efficiency of its buildings through energy re-qualification operations. This process is applicable thanks to Third Party Financing, through Energy Service Company (ESCo).





What is the energy performance contract?

In the VIRTUOUS TERRITORIES strategic action, CMM opens a «restricted procedure» for EPC (Energy Performance Contract), i.e. contracts that are stipulated with Energy Service Company (ESCo).

The **energy performance contract** is a contract through which a supplier (normally an Energy Saving Company) is obliged to deliver services and operations aimed at re-qualification and improvement of energy efficiency of a plant or building owned by another subject (in this case, CMM); the compensation is related to the energy savings (previously identified during the feasibility analysis) that have been obtained at the end of the system efficiency.

The contract's object is therefore the identification, design and implementation of an energy efficiency level (in relation to a specific plant or building) which can guarantee energy saving on customer's energy bill.





In the VIRTUOUS TERRITORIES initiative we count 141 school buildings plus one building office complex owned by CMM, including 12 school real estates upon which it has been possible to implement an energy efficiency intervention, partially funded through structural funds of Lombardy Region.

The **142 building** within CMM real estate, that are part of the VIRTUAL TERRITORIES initiative, have been selected according to their energy consumption and excluding buildings:

- For sale,
- In A class,
- With district heating
- Listed within “neighborhood networks”

The selected ESCo company will have to guarantee suitable operations so as to reach performances higher than those reported in the call «Terms of Reference» (minimum guaranteed results), applying the Minimum Environmental Criteria (CAM) as by law provision.





The use of regional funds in the VIRTUOUS TERRITORIES project is the occasion to re-qualification of CMM buildings, with high energy performance results.

The opportunity to match structural funds with Energy Performance Contracts (with a guaranteed result), produces a virtuous effect for what concerns expected energy performances.

The same timing of the two funding schemes allows the mutual benefit for both projects, reducing implementation time and management costs.

Joint resources will allow to reach high and innovative levels, maximising goals for energy efficiency for what concerns impact and reduction of air emissions.





Cariplo Foundation offers:

Consultancy for:

- Diagnosis building assessment
- Legal support for documents preparation and calls management
- Projects' economic-financial evaluation
- Relationships' management with banks and balanced public/private partnership
- Preparation and implementation of monitoring programmes
- Check and reporting of performances and results (at the end of the implemented actions)



Lombardy Region offers

100 % funding on total valid costs to achieve the following goals :

- **Support toward transition to a low carbon emissions economy**, to reduce energy consumption in public buildings and the promotion of eco efficiency
- **Reduction of energy requirements** with reduction of fossil fuel dependency and improvement of environment conditions thanks to climate emissions.

[ACTION IV.4.C.1.1 of Regional Operative Programme ROP-ERDF 2014/2020]





How to use regional funds

- **Energy certification** of the building before and after the operation
- **Technical expenses** for realisation of the operation
- energy efficiency operations in buildings:
 - **Insulation of building**
 - **Frames** changing
 - Implementation of **technical solutions** to promote **passive cooling** such as ventilated wall, shielding systems or others
 - Technical solutions to promote **passive heating**
 - Purchase and installation of **solar plants** or other renewable energy systems
 - Installation of systems and devices for **automate control** and **building tele-management**





Public buildings that need requalification through Regional Structural Funds

- **18 buildings in 12 school complexes**
- **€ 14.200.000 to be used in 2018/2020**

Actions

- **Energy restructuring** of complexes and buildings through the use of **innovative solutions with high energy performances**
- Installation of smart tele control, adjustment, management, monitor and optimisation systems for energy consumption (SMART BUILDING) and pollution emissions even through technological mix
- **Adaptation of plant and construction performances to required standards** foreseen by national and European goals for energy efficiency
- **Optimisation of areas' usability** both for school activities and extra-school services, offered to local communities





Where we are now

Closed activities

- Signature of Memorandum of Understanding with Cariplo Foundation and Lombardy Region
- Preliminary actions and data eligibility verification
- Analysis of the buildings with advisors
- Preparation of the “restricted procedure” call for EPC contracts to be signed with Energy Service Company (ESCo)

Current activities

- Invitation letters
- Selection of providers
- Management terms of contract
- Templates of framework and operative contracts
- Definition of savings and leases





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