

BEST PRACTICE IN ITALY – ENERGY EFFICIENT CITIES

BASIC INFORMATION

Title of the Best Practice

Reducing greenhouse gas emissions through the energy conversion of social housing

Energy efficiency measures implemented in the building:

- External envelope thermal insulation
- Roof thermal insulation
- Basement thermal insulation
- Replacement of windows and glasses with low emission ones
- Seismic structural improvement of basement
- Activity of capacity Building for the tenants

Location:

City: Reggio Emilia

Region: Emilia-Romagna

Country: Italy

Coordinates: 44.698010°N 10.619503°E

GoogleMaps link: <https://goo.gl/maps/8f3XWA2YaaKj8jPu5>

Partners involved:

- Municipality of Reggio Emilia, Piazza Prampolini, 1 42121, Reggio Emilia, Web: <https://www.comune.re.it/>, owner
- ACER Reggio Emilia, Via della Costituzione 6 - 42124 Reggio Emilia, Web: <https://www.acer.re.it>, administrator
- AESS – Energy and Sustainable Development Agency, via Caruso 3 - 41122 Modena, Web: <https://www.aess-modena.it>, advisor
- ART-ER, via Gobetti 101 - 40128 Bologna, Web: <https://www.art-er.it/>, capacity building

Implementation year: 2018÷2020

Photos



- of the first works on the building:



Source: ACER Reggio Emilia website [<https://condominioviamagenta.it/>] and google street view [maps.google.com]

SYSTEM CHARACTERISTICS

Brief Description: The building was built in 1936 and consists of 51 social housing dwellings, representing a great condominium with a series of issues to be dealt with. The presence of low income tenants has driven many common goods into misuse and sent the building into degradation and vandalism. The thermal dispersions of the building envelope are high due to the obsolete and inefficient type of windows and the opaque non-thermally insulated structures with deteriorated plasters. The tenants started to face energy bill related problems, due to the lack of ordinary maintenance and knowledge of how to save energy.

In addition, the building is seismically obsolete and situated in a very seismic active area (thinking of the 2016 earthquake).

FINANCIAL SOURCES AND FINANCING DETAILS

Total investment value: 1.198.345,00 €

Sources of financing:

- design and tender phases: Horizon 2020 PDA EU fund;
- realization of the intervention phase: Legge 80 of Emilia-Romagna Region and Reggio Emilia municipality own funds

Energy savings: 336 MWh/y

Cost savings: 70.500,00 €/y

PROJECT IMPLEMENTATION BENEFITS

The intervention on the structures allows the reduction of the need for heating, with direct economic benefit. The new envelope will guarantee a better quality of life to the economically weak tenants, together with the addition of a improved aesthetic view of one of the main streets of the city.

The seismic upgrade, done together with the energy efficiency intervention, will guarantee the safety of the inhabitants and of the structure with a cost 17% higher than applying energy efficiency alone.

The experimentation of the Horizon Project Lemon has provided training and awareness campaigns to help future tenants to understand their energy consumption, demonstrating high effectiveness when in accordance to other interventions.

ADDITIONAL INFORMATION

Calculations are made by the managing company, ACER Reggio Emilia, and their technicians. With this intervention, Energy poor tenants will be able to save up to 50% of their actual bill.