



Energy renovation of social housing buildings in Liguria region and innovative financial instruments

Summary of the EnerSHIFT Project



European
Commission

Horizon 2020
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for Research & Innovation

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Regione Liguria
Dipartimento Territorio, Ambiente,
Infrastrutture e Trasporti
Settore Programmi Urbani
Complessi ed Edilizia

The project

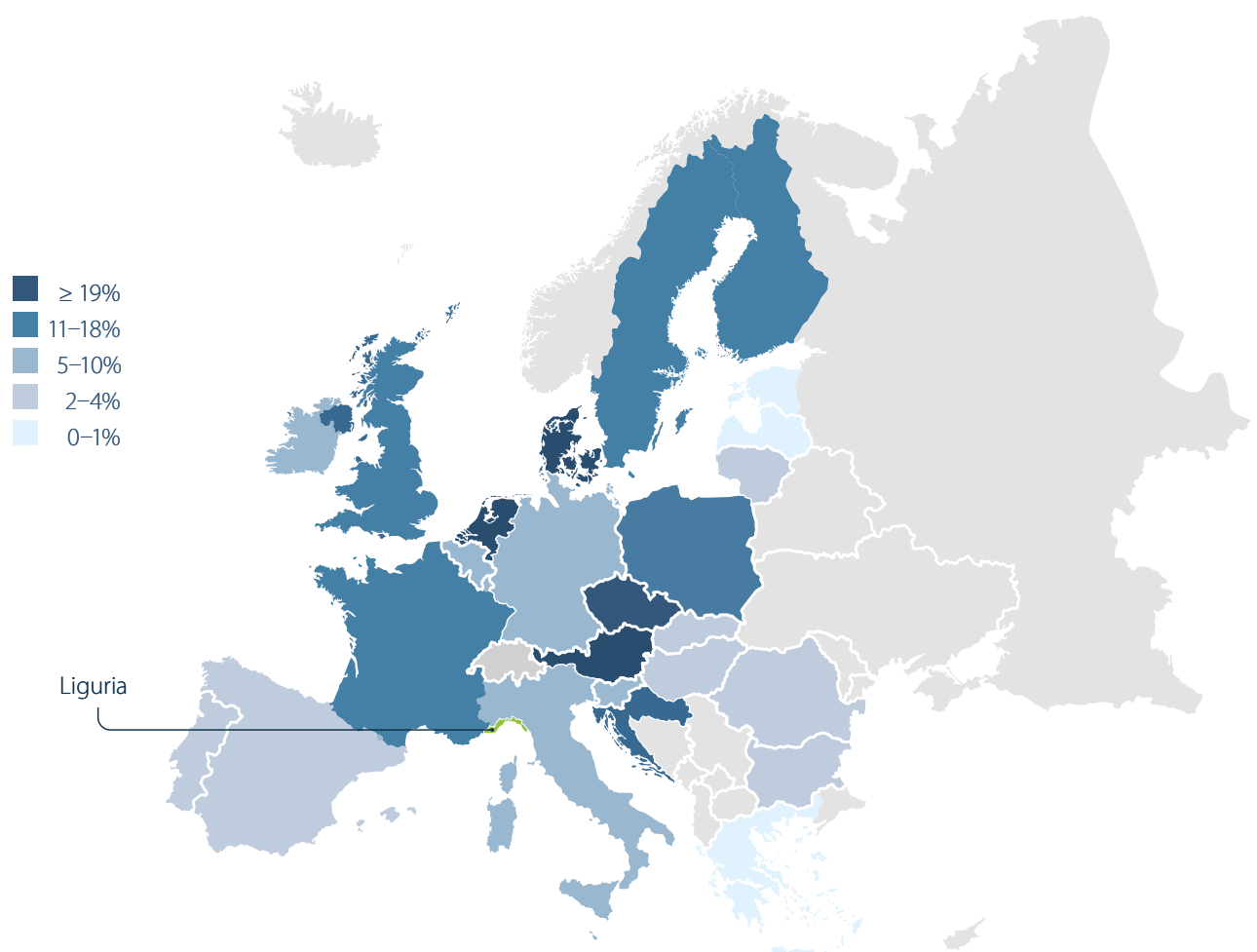
EnerSHIFT is a Horizon 2020 project selected by the European Agency for Small and Medium Enterprises (EASME) as one of the winners of the EE20 Project Development Assistance call.

The aim of EnerSHIFT is to promote the energy renovation of social housing buildings in Liguria Region. The project is particularly significant because it is the first Italian experience using innovative Energy Performance Contract (EPC) instruments, achieving reductions in energy consumption and related bills without drawing on the economic resources of the building owners.

The use of EPCs in social housing is hampered both by the complexity of the financing operation in relation to the potential results (energy bills will be influenced by tenant behaviours) and by the rigidity of the existing EPC models, which are not suitable for the needs of public bodies (where housing owners and tenants are separate subjects).

Intervening in this area is a priority given the presence of about 25 million public residential buildings in Europe, since these are often in deteriorated condition and thus consume excessive amounts of energy.

The map below shows the percentage of social housing buildings in relation to total residential buildings.



To overcome these problems EnerSHIFT has developed a flexible financial model that takes a triple win approach, achieving equal sharing of the energy renovation benefits among the tenants, building owners and the energy service companies.

Housing conditions are improved while at the same time CO2 emissions are reduced, also achieving economic benefits for the local entrepreneurial fabric.

The project started in February 2016 and ended in January 2020, with contracts to upgrade the selected buildings involving about €14 million of investments in energy efficiency.

The EnerSHIFT objectives

- Overcome the technical, economic and legal barriers to the use of Energy Performance Contracting in public housing.
- Promote the development of the market of Energy Service Companies (ESCOs) and cooperation with the credit sector in Italy, favouring the bankability of energy requalification projects.
- Develop innovative financing schemes through Public Private Partnership and the use of flexible contractual models able to offer energy services to the public administration.
- Apply the triple win approach to achieve equal sharing of benefits from energy savings between tenants, building owners and energy service companies, without a financial burden on end users.
- Improve the quality of life of residents and fight energy poverty through training and information activities organised by tenant unions.

The EPC contracts

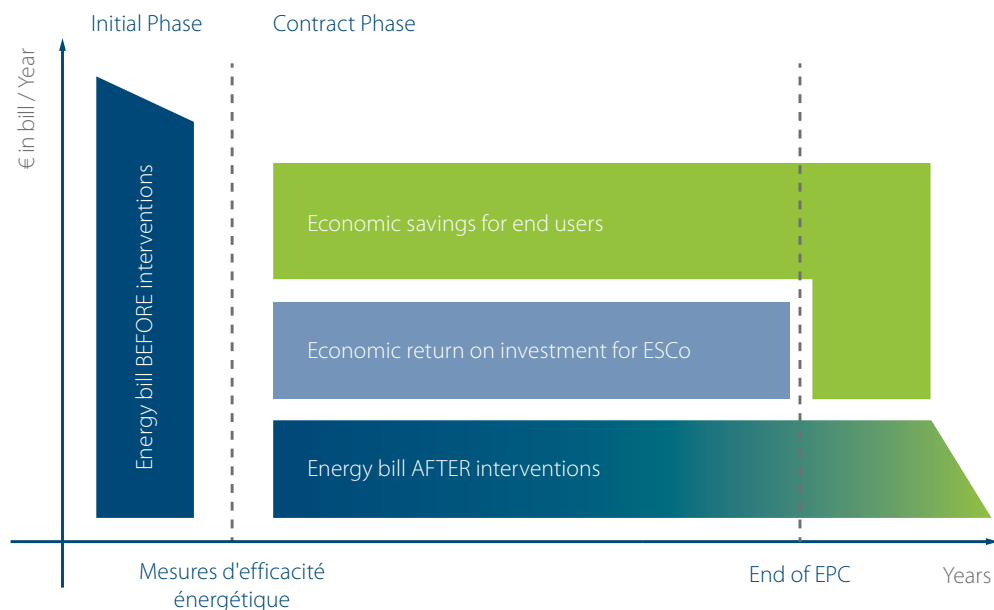
Most of the retrofitting interventions planned under EnerSHIFT will be implemented through the self-financing mechanism typical of EPC contracts, entrusted to market operators through public tendering processes carried out in line with current Italian and European laws.

These tenders, the first of their kind in Italy, have used the legal form of the Service Concession and were reserved for ESCOs certified under UNI-CEI 11352.

The EPC achieves the energy renovation of a building without the need to draw on financial investments by the owner or manager, since the costs for carrying out the interventions are borne by the implementing party, usually an ESCO.

The interventions are planned on the basis of an energy audit. The analysis of previous years of consumption determines the amount of the bill, which remains constant for the contract duration. After expiry of the EPC, the housing owners/tenants continue to benefit from the entire savings generated by the interventions.

The ESCO regains its investment with the energy savings achieved through the building's improved performance: the higher the savings, the shorter the investment payback time, and consequently the duration of the energy performance contract.



The energy efficiency tenders

The calls for tenders for award of the EPC contracts, published in August 2017 by the Liguria Regional Single Contracting Authority (SUAR), introduced many innovative procedures in the areas of public-private partnerships and application of the new Law on Public Contracts (Legislative Decree no. 50/2016).

The object of the tender was the Services Concession for energy efficiency upgrading, management and supply for the thermal systems of 67 public residential buildings owned and/or managed by the four Ligurian ARTE. The partners drew up the tender documents, starting from the consumption baseline data prepared by the Energy Department of IRE SpA, the Regional Agency for Infrastructures, building Renovation and Energy of Liguria.

Considering the peculiarities of the Italian ESCo market, which is divided into large companies in the energy-carrier sector and SMEs specialised in training in the technology and engineering of building redevelopment, the project team decided to divide the procedure into three separate lots.

The response to the call for tenders was dominated by the participation of large energy market operators, also favoured by the project team's choice of including the supply of fuel in the contract.

The most substantial lot at tender, for a concession concerning the province of Genoa and totalling about €16.7 million, was awarded to a large Italian company in October 2018.

However, the lots for social housing buildings in the provinces of La Spezia and Savona-Imperia attracted no bidders, probably because the tender was too complex for small businesses, while the size of the lots was insufficient to attract large business groups.

These considerations led to the publication of a new call for tenders with a single lot for the three provinces, in April 2018, with a concession valued at about €4 million. The lot was awarded to a large company in September 2019.

Difference between Public Procurement and Concession

Public procurement: The contract is directly remunerated by the purchasing authority, which grants the contractor a pre-established consideration for the implementation of specific works, services or supplies.

Concession: The contract is remunerated by the user, for a service managed and provided by the concession holder. The amount of the remuneration depends on the level of performance with which the service is provided.

In 2016, the EnerSHIFT project obtained an allocation of €3.5 million from Liguria ROP-ERDF funds, to be used for energy efficiency measures on public sector assets.

The project team intended to use these funds to finance certain kinds of building interventions (replacement of windows, doors and/or insulation) that normally have very long payback times (12-15 years) and so are difficult to include under an EPC type of contract. This strategy would have served to reduce the duration of the concession, in particular by lowering the financial exposure for the ESCos.

However, given the regulations on reporting of structural funds, it was not possible to activate the envisaged synergies. Instead, the ROP-ERDF allocation, with co-funding from the ARTE bringing the total to about €6.5 million, was used as the basis for a separate call for tenders in the form of a Procurement Contract, announced in autumn 2018.

The relative interventions started in 2019, with completion expected by early 2020, providing for efficiency upgrading of 9 PRB complexes and achieving as much as 70% in energy savings compared to previous consumption.

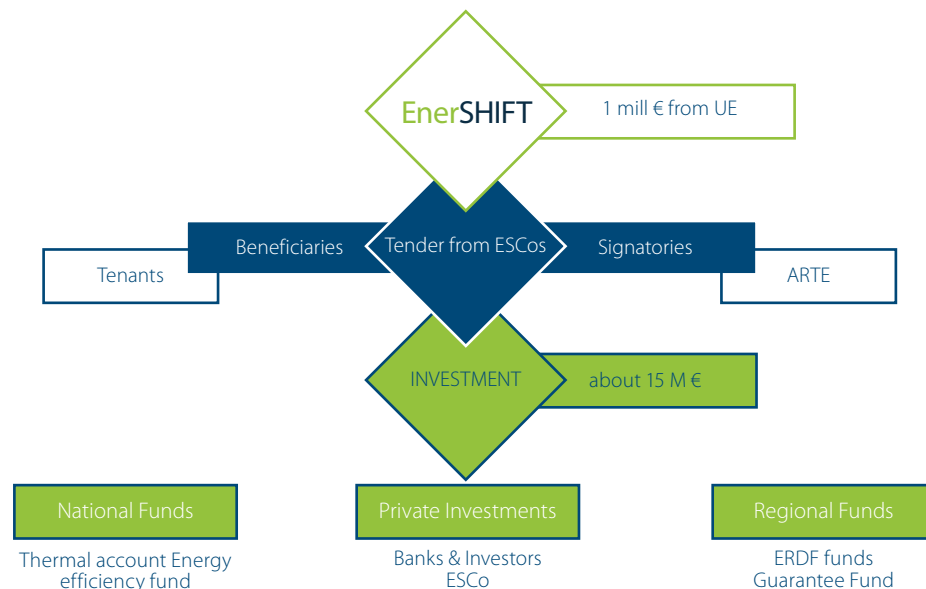
Moreover, the project partners were able to obtain additional national funding of around €3.7m, to be used for further works on some of the buildings in the EPC tender for the province of Genoa.

An English-language excerpt of the EPC tender documentation is available at the following link

<https://enershift.eu/wp-content/uploads/2017/09/EnerSHIFT-tender-data-sheet-EN.pdf>

The economic and financial plan

Originally, the development of the economic model for the sustainability of the EPC contract was aimed at reducing the level of financial risk of the operation through synergies between different sources of financing: private investors, national public contributions, and regional and structural funds.

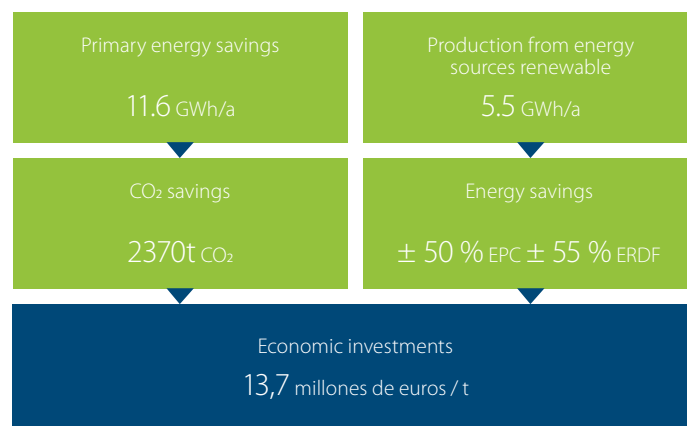


However the project team had to deal with and overcome many administrative, legal and financial problems, meaning that the activation of these synergies was not always possible. Instead, the team developed a new economic and financial model for EnerSHIFT, which eventually resulted in an EPC concession without public co-financing.

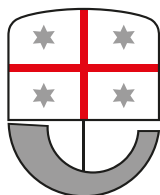
The results achieved

Through the EnerSHIFT project, Liguria Region and its partners - representing all the actors in governance of social housing - have brought about reforms in housing policies that advance the quality of living, in line with high technical and environmental standards and with the tenants' needs.

The project has activated more than €13 million in investments for the energy redevelopment of 76 buildings in 16 municipalities of the 4 Ligurian provinces, providing homes for about 3,000 low-income families.



The Partners



REGIONE LIGURIA

The Liguria Region Urban Development Project Office, the project leader, deals with urban regeneration and social housing programmes, develops laws and regulations for public buildings, and defines criteria for the management of PRB assets.

The Liguria Regional Single Contracting Station (SUAR) also participates in EnerSHIFT, and since 2012 has acted as the central contractor for the authority and for the broader regional administrative sector.



Founded in 2014 by the merger of three regional technical companies, Ire SpA operates in the areas of infrastructure, construction, urban renewal and energy. In particular, the Energy Division draws up energy plans, manages the Liguria Energy Consortium and oversees the regional energy certification system for buildings. IRE SpA currently serves in the role of vice-president of the National Network of Energy Agencies (RENAEL) and of FEDARENE, the European equivalent.



The ARTEs are public bodies of an economic nature which own and/or manage most of the public housing stock in Liguria, often on behalf of the municipalities.

They operate in the area of territorial use and development and as a structure for the local administrations in the realisation of complex works.

The ARTEs are members of FEDERCASA, the national network of 114 Italian public operators in social housing construction and management.



SUNIA, SICET and UNIAT are the main national unions representing tenants of both private and public housing.

Their social purpose is the recognition of the right to housing for every citizen, under conditions compatible with the needs of the families. They also pursue the objective of safety and quality of living in an appropriate urban environment.

The Awards

EnerSHIFT received the 2018 Sustainable Public Administration Award as the best Italian project in the field of Environment, Energy, Natural Capital and the prestigious 2019 European Energy Efficiency Award 2019 as Best European Energy Service Promoter.



