

Energy efficiency financing models - case: Italy

Deliverable D.T 2.3.2

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TABLE OF CONTENTS

TABLE OF CONTENTS	1
1. INTRODUCTION	2
2. AVAILABLE INCENTIVES AND FINANCING MECHANISMS IN ITALY	3
2.1. OVERVIEW OF FINANCING MECHANISMS FOR EE	3
2.2. LIST OF INCENTIVES FOR EE.....	4
3. ASSESSMENT OF THE NEED FOR INCENTIVES FOR EE PROJECTS	5



1. INTRODUCTION

As any activity, energy renovation has its related costs, which vary according to the depth of the refurbishment, i.e. number and complexity of implemented energy efficiency (EE) measures. Therefore, any decision on energy renovation of a building must carefully evaluate these costs and ensure financing, in order to reap the benefits after the implementation.

The most usually utilised financing models for EE were presented and discussed in the **Deliverable D.T2.2.1 - Collection of existing financing mechanisms**. They include: own funding, loan financing, ESCO model (Energy Performance Contracting – EPC), public-private partnership (PPP), grant schemes or some combination of the beforementioned models. All financing models may be compared based on several important criteria as demonstrated in the Table below. There is no universally best solution, but for each particular situation (country, region, building) an optimal solution should be tailor-made.

Table 1 - Comparative analysis of considered alternative models

Criteria/ Model	Own financing	Loan financing	Grants	ESCO model	PPP model
Neutral impact on government debt	😊	😞	😊	😐	😊
Administrative procedure complexity	😊	😐	😐	😐	😞
Guarantee of savings / service standard	😐	😐	😐	😊	😊
Capacities and capabilities of the public bodies to implement the model	😊	😐	😐	😐	😞
Estimated multiplier effect	😐	😐	😐	😊	😊
Projects for which the model is appropriate	Simple EE measures with short pay-back periods	Simpler EE measures with shorter pay-back periods	More complex projects, with longer pay-back periods	Highly complex projects, with moderate pay-back periods (up to 10 years)	Highly complex projects, usually with new buildings, long-term

Usually, energy efficiency projects in public buildings combine two financing models. Rarely, more than two financing models are used. Research of usual practices in the Project Partner countries showed that dominantly grants (if available) are combined with own financing.

Recently, with the availability of EU structural and investment funds for energy efficiency across the MS, the blending of such funds with other financing models becomes increasingly interesting. The blending refers to combination of EU grants with other financing mechanism such as loans or ESCO/PPP model.

The deliverables D.T2.2.1 presented available financing models in each participating country and, based on the Project partners' feedback, provided a comparative analysis of availability, current usage and planned usage of different financing models.

This document builds upon the previous data gathered on and analyses of available and desirable financing models and provides the list of all available incentives and financing mechanisms for energy efficiency actions in Italy.

2. AVAILABLE INCENTIVES AND FINANCING MECHANISMS IN ITALY

2.1. Overview of financing mechanisms for EE

In Italy, EE projects in schools are typically financed through combination of grants and own funding.

The main type of incentives issued by the Italian Government and available for Public Administration is the "Conto Termico 2.0" (Thermal Bill). Grant incentive includes: 1) up to 65% for the nearly Zero Emission Building for existing building; 2) up to 40% for the insulation of walls and roofs interventions, for the replacement of windows, for the installation of solar shielding, indoor lighting, the building automation technologies and condensing boilers; 3) up to 50% for heat insulation measures in climate zones E/F and up to 55% in the case of thermal insulation and replacement of windowed closures, if combined with other system (condensing boilers, heat pumps, solar thermal, etc.); 4) up to 65% for heat pumps, biomass boilers and appliances, hybrid systems with heat pumps and solar heating systems; 5) 100% of the costs for the Energy Audit and for the Energy Performance Certificate for the PA (and ESCOs operating on their behalf) and 50% for private entities, with the cooperatives of inhabitants and social cooperatives.

Another important source of funding is European Regional Development Fund. Grants up to 30% can be awarded from ERDF. The incentives can be combined as long as they do not exceed 100% of the eligible expenditure.

ESCO model is still underutilised in the public sector, while PPP development is still in very early phase.

Table 2 - Overview of financing mechanisms for EE projects in schools

Criteria/ Model	Own financing	Loan financing	Grants	ESCO model	PPP model
Availability	√	-	√	√	√
Previous and current usage	√	-	√	-	-
Planned usage	√	-	√	√	-

In table below the sources for more information on financing mechanisms for EE are provided.

Table 3 - Overview of sources for more information about financing mechanisms for EE

Information	Source
General information about EE	Italian National Agency for New Technologies, Energy and Sustainable Economic Development www.enea.it Ministry of Economic Development www.mise.gov.it Emilia-Romagna Region https://.energia.regione.emilia-romagna.it/bandi GSE – energy company www.gse.it Ministry of Education, Universities and Research www.istruzione.it
Information about loan financing	Banca d'Italia www.bancaditalia.it
Information about ESCO financing	ASSOESCO – Association of Energy Service Companies www.assoesco.org FEDERESO – non-profit association for promotion of energy services www.federesco.org
Information about PPP financing	www.codiceappalti.it

2.2. List of incentives for EE

Analysis of energy efficiency improvements' costs and benefits in the selected schools demonstrated that EE projects need high grants in order to demonstrate financial feasibility. It is, therefore, very important to ensure incentives in form of grants as well as to inform potential users on their existence and terms and conditions for their utilisation.

An overview of available incentives for EE projects in schools in Italy is given in Table below.

Table 4 - Overview of incentives and financing mechanisms for EE projects in schools

Criteria/ Model	Grant programme 1	Grant programme 2
Name of institution	Ministry of Economic Development	Ministry of Economic Development
Name and description of grant	Energy renovation of buildings and use of renewable energy sources in the public sector buildings (Thermal Account)	Energy renovation of buildings and use of renewable energy sources in the public sector buildings (Regional development calls)
Max. percentage of grant (%)	65%	30%
Max. value of grant (€)	-	500.000,00 €
Availability	constant	periodical
Legislative reference	Thermal Account: decree 16/02/2016	European regional development fund
Possible combination with other incentives/financing mechanisms	YES	YES
More info	www.mise.gov.it	https://.energia.regione.emilia-romagna.it/bandi



3. ASSESSMENT OF THE NEED FOR INCENTIVES FOR EE PROJECTS

The feasibility of EE projects depends on both technical potentials of applied measures in terms of energy savings and on the conditions of financing mechanisms available for their support. The financing gap occurs when the investment in EE cannot be paid off from savings on energy costs. The incentives in forms of grants are needed for closing the financing gap. The assessment of the need for co-financing in EE projects in participating schools in Italy is performed with assumptions shown in the Table below.

Table 5 - Overview of incentives for EE projects in schools

Criteria/ Model	Value
Interest rate	2,5%
Discount rate	3,5%
Life cycle of EE renovation (years)	25
Administrative, legal and architect cost	10%
Other bank cost	1%
ESCO cost	30%
PPP cost	22%
Max % of grant available	100%