

MARIE TRAINING PROGRAM FOR IMPROVEMENT IN ENERGY EFFICIENCY (EE) OF EXISTING BUILDINGS

F1 | BEST PRACTICES COLLECTION

Best Practice Name:	nZEB building refurbishment
Code:	IT_RE_CO_07

Best Practice Description:

Type:	<input checked="" type="checkbox"/> Action for improvement in the EE	<input type="checkbox"/> Training experience (*)
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Description:	<p>Complete refurbishment of a residential building of the '60s with 240 square meters of heated useful surface on two levels.</p> <p>Interventions provided:</p> <ul style="list-style-type: none"> - Insulation cover on the inside with wood fiber insulating; - Wall insulation with EPS insulation system with 22 cm thick; - Windows replacement with their containers; - Fixing all thermal bridges existing and implementing air tightness with final test result of $n_{50} = 1$; - Replacement of obsolete heat generator with geothermal heat pump system; - Radiant floor with free-cooling in summer; - Controlled mechanical ventilation with heat recovery at high efficiency (93%); - Installation of hybrid solar panels (thermal and photovoltaic); - CasaClima Certification A class.
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Location:	Talmassons (UD)	Country:	Italy
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Contact (team):	<p>APE – Agenzia per l'energia del Friuli Venezia Giulia Via Santa Lucia, 19 – 33013 Gemona del Friuli (UD) www.ape.fvg.it – info@ape.fvg.it Impresa: Color 2000 snc Energy designers: geom. Paolo Gon, ing. Pierangelo Virgolini</p>
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Type of building:	<input type="checkbox"/> Tertiary	<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Mixed
Property:	<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Mixed
Management:	<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Mixed
Fields of action:	<input checked="" type="checkbox"/> Construction	<input checked="" type="checkbox"/> Maintenance	<input type="checkbox"/> Use
	<input type="checkbox"/> Energy generation and distribution		<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Replacement or implementation of renewable energies	<i>Which ones?</i>	

Please, evaluate if the following processes take place in the Best Practice that you are describing in this form:

	Yes	No
The data collection has been complete and rigorous	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Communication and awareness processes have been developed to disseminate this practice	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Training actions have been provided	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Product and services have been improved	<input type="checkbox"/>	<input type="checkbox"/>

Jobs have been created

<input type="checkbox"/>	<input type="checkbox"/>
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Sustainable financial models have been applied

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Agreements or **collaboration models** have been defined between parties

<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Positive impact tested in the following fields (add quantitative data if you have):

ENERGY EFFICIENCY IMPROVEMENT (EE)	Net energy requirements for heating: from 243 kWh/mqa to 14 kWh/mqa. Able to cover 100% of the energetic needs with renewable sources (low temperature geothermal energy, solar thermal, photovoltaic)
FINANCIAL COVERAGE	The project has benefited from the following incentives: - Provincial contribution for upgrading the housing improving energy efficiency - Tax deduction (national law) for restructuring and upgrading the energy efficiency; - Energy account for the production of electricity (national law).
EMPLOYABILITY POTENTIAL	Improving the skills of those involved in the restructuring process through certification CasaClima and its quality requirements to be met in the design phase, construction and installation.
OTHER	
DIFFICULTIES	

Agents involved in this experience:

<input type="checkbox"/>	Legislation agencies
<input type="checkbox"/>	Public promoters
<input type="checkbox"/>	Private promoters
<input checked="" type="checkbox"/>	Technical public institutions
<input checked="" type="checkbox"/>	Technicians of the private sphere (professional associations ...)
<input checked="" type="checkbox"/>	Builders
<input type="checkbox"/>	Industrial
<input type="checkbox"/>	Facility Managers (property managers, cleaning companies ...)
<input type="checkbox"/>	Energy supply companies
<input type="checkbox"/>	Users/owners (homeowners association, schools ...)
<input checked="" type="checkbox"/>	Other: installers and certification body CasaClima
GAPS	

(*) **RR_BB_FF_NN**

RR Country: **CY** (Cyprus), **FR** (France), **GR** (Greece), **IT** (Italy), **MA** (Macedonia), **MT** (Malta), **PO** (Portugal), **SL** (Slovenia), **SP** (Spain)

BB Type of building: **RE** (residential), **TE** (tertiary), **MX** (mixed)

FF Field of action: **CO** (construction), **MA** (maintenance), **US** (use), **EN** (energy generation and distribution), **OT** (other)
(in case of affecting more than one field of action choose the most relevant)

NN Number of the practice: **01, 02, 03...**

(*)IN CASE OF A TRAINING EXPERIENCE:

Course name:	
Duration:	<i>Training hours/ECTS</i>
Web:	
Director/a:	
Who is it aimed:	<i>Profile of trainees</i>
Objectives:	<i>What enables this training?</i>
Program:	
Methodology:	<i>Format (face-to-face, on-line), structure of sessions, visits, case studies, evaluation systems, dynamic sessions, other aspects ...</i>

X I agree to bring this experience to the database of the MARIE project, which will create a comprehensive training program for improving the energy efficiency of buildings in the area of the Mediterranean.