

Summary Results/Indicators of Investment Plans carried out for the Municipalities of Unione Reno-Galliera in Italy

- Pictures of some of the concerned buildings**



- General description of the pilot and its location**

The Investment Plan involve 14 public buildings of 7 municipalities belonging to the Unione Reno-Galliera, namely Bentivoglio, Castello d'Argile, Castel Maggiore, Galliera, Pieve di Cento, San Giorgio di Piano. Unione Reno-Galliera is a public body which was selected by the Metropolitan City of Bologna just in order to ease a bundling of buildings in view of an EPC tender. The concerned Municipalities are settled in the North part of the Bologna province. The 14 buildings (2 for each of the 7 concerned Municipalities) range from gyms to municipal halls, from kindergartens and schools to cultural centres. The overall heated volume is 149.983 cubic meter and a baseline consumption of 392.801 cubic meter of natural gas and 80.600 cubic meter of pellet. The buildings, also due to the final destination and age of construction, are quite different each other. For each building a detailed audit has been performed.

- Responsible project partner details**

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- **Summary/Results Indicators**

No. of Municipalities/Public Bodies involved	7 belonging to the Unione Reno-Galliera Municipality of Bentivoglio Municipality of Castello d'Argile Municipality of Castel Maggiore Municipality of Galliera Municipality of Pieve di Cento Municipality of San Giorgio di Piano Municipality of San Pietro in Casale
No. of buildings (bundled EPC)	14
Total Investments needed (€)	6.7M€
Loan by the Public Body? If yes, amount (€)?	No
Available public funding/incentives considered (€)	The National incentive "Conto termico 2.0" 3.3 M€
VAT (%)	22%
Energy vector included? If yes, related value (i.e. €/standard cube metre of methane gas and or €/kWhe)	Yes. 0,4222 €/kWh for electricity 1,2657 €/Sm3 for natural gas
O&M included? If yes, related value (€)	Yes 120.000 € for 15 years

Typology of ECM- Energy Conservation Measures (description)	<p>A set of measures for each building such as:</p> <ul style="list-style-type: none"> • Envelope - External insulation • Heat generators replacement • Internal insulation of the roof • Windows replacement (including Thermoregulation) • Relamping • PV System with storage <p>The above list is only indicative and details are provided for each building in the audits.</p>
Energy saving (%)	<p>Overall the following energy saving is estimated:</p> <ul style="list-style-type: none"> • 41% electricity; • 40% for natural gas; • 37% for pellet fuel.
kWh ANTE and kWh POST implementation ECMs (not standard but resulting from the energy audits)	<p>Overall, for the 14 retrofitted buildings:</p> <p>ANTE</p> <ul style="list-style-type: none"> • Electricity: 686.627 kWh/y • Natural gas: 392.801 Sm³/y; • Pellet: 80.600 kg/y <p>POST</p> <ul style="list-style-type: none"> • Electricity: 403.169 kWh/y • Natural gas: 237.421 Sm³/y; • Pellet: 50.507 kg/y
Avoided CO2 emissions (kgCO₂/y)	<p>509.400</p>