



ELENA Completed Project Factsheet

Funding Action in Bergamo for Emission Reduction (FABER)

Location	Province of Bergamo, Italy
Beneficiary	Beneficiary
CoM signatory	The Province acts as the territorial coordinator of the CoM; more than 180 municipalities have signed the CoM.
Sector	Energy Efficiency and Renewable Energy
Total PDS costs	EUR 896 722
ELENA contribution	EUR 807 050
Project development services financed by ELENA	The Province acted as a central purchasing body both for technical support and for implementation of energy efficiency measures. The Province was in charge of technical assistance (audit assessment, baseline, saving potential and costs identification) using external expertise such as additional staff and administrative and legal experts in support of the preparation of agreements, call for tenders, contract definitions and tender awarding. The Province also covered the auditing of the performances achieved and carried out monitoring activities throughout the programme implementation.
Description of ELENA operation	<ul style="list-style-type: none"> • Public Buildings (120 municipalities concerned, targeting in total some 445 buildings): works concerned the improvement of the building envelope, the modernisation of the heating generation, distribution, and the building energy management and control systems. • Public street lighting (67 municipalities are concerned with some 17 900 light posts): works covered the substitution of the existing lightings with more efficient technologies and the installation of voltage regulators.
Timeframe	August 2015 – August 2019
Basis for investment identification	<p>The activities carried out to identify the investments are:</p> <ul style="list-style-type: none"> • survey of the public lighting in 34 municipalities, reporting an energy consumption of 8.07 GWh • survey of 98 public lighting systems owned by the Province of Bergamo, reporting an energy consumption of 7.08 GWh • energy auditing activities in 9 school complexes in the Province of Bergamo, for a total of 33 buildings and ~70 000 sqm, reporting a consumption of 8.25 GWht and 1.97 GWhe • energy auditing activities in 58 municipalities, for a total of 155 public buildings and ~186 000 sqm, reporting a consumption of 27.81 GWht and 5.01 GWhe • pre-feasibility study for a biomass-based district heating network in 4 municipalities, concluding with the non-feasibility (at least by public actors) in all of the municipalities due to either lack of interest in supplying support and cooperation to the study, reduced or uncertain demand of heat by private consumers leading to weak financial sustainability and other technical critical elements.

Investment programme description	Investment sector	Investments (MEUR)	
	EE in public buildings	5 856 000	Energy efficient renovation of buildings (155 or ~186 000 sqm) and street lighting (~19 700 lighting posts), for 92 municipalities, following related energy audits and surveys.
	EE in public lighting	17 864 000	Energy efficient renovation of buildings (~33 or ~70 000 sqm) and street lighting posts (~10 000) owned by the Province of Bergamo, following related energy audits and surveys. Utilisation of publicly-procured EPC contracts with minimum guaranteed saving levels.
	Total	23 720 000	
Investment in implementation phase	EUR 23.72 m		
Results expected to be achieved	Realised investments in Energy Efficiency of buildings and Public Lighting are expected to achieve final energy savings of 19.24 GWh/year and to reduce GHG emissions by 1 885 tCO ₂ /eq per year.		
Leverage factor achieved	29.4		
Lessons learnt	<ul style="list-style-type: none"> • Importance of early efforts in communication and training to the engagement and preparation of the municipalities through the various project phases • Importance of competent technical and legal advisors supporting the municipalities' internal staff since the beginning in preventing problems and proposing solutions • Wide difference in quality and timeliness among audit reports, due to both auditors' competence and difficulties in collecting data and information from the municipalities • The ESCO market is mature and structured enough (under a technical and financial point of view) to undertake investment/capital risk based on performance and long-term paybacks to return their investments under the Third Party financial scheme. Whereas this positive evolution was already evident in the investments for energy efficiency measures for public lighting, such steps forward have now been taken for public buildings where investments are much higher and paybacks are much longer and more difficult for ESCO's to technically and financially sustain. • Importance of ELENA in providing local administrations with the experience/expertise and qualified personnel to implement energy efficiency investment projects at scale. Local level of expertise in the energy efficiency auditing and survey services needs to be enhanced and improved. Not all consultants and auditing companies are used to high standards of detail and information required in the auditing reports and have difficulty in providing adequate specific feedback and information. • Absence of an efficient and consolidated procedure or method for the management and registration of energy bills, cost and contracts of public buildings and public lighting systems. • Local national Public Contracts and Procurement legislation does not help ESCOs' project implementation and needs by-passing through apposite Terms of References and Technical Specifications that adopting an extensive interpretation of procurement and design regulations. • Monitoring and managing on-the-spot regional and national financial grants and subsidies associated with the buildings or the public lighting systems add complexity to implementation, as financing avenues and status of the assets keep changing over time. 		

	<ul style="list-style-type: none">• District Heating networks' feasibility as a public endeavour heavily depends on the availability of financial incentives, which is not granted over time. Public-Private Partnerships (PPPs) could be more suited for this type of intervention.• Changeability of the public procurement and contract legislative frameworks as well as of the composition of some administrations may hamper timely implementation.
Further information sources	https://www.provincia.bergamo.it/ProvBgSettori/provBgSettoriHomePageProcess.jsp?page=&myAction=&folderID=564
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