

## Energy Performance Contracts with Result Guarantee in the Dolomites.



*Cortina d'Ampezzo, also known as "The Queen of the Dolomites", member of the consortium*

Energy Performance Contracts (EPC) with Guarantee of Result (GR), for energy requalification of buildings and public street lighting, at **Zero cost** for public administrations, also breach the Belluno area in the Dolomites, among the most beautiful mountains in the world.

Following two public tenders, published by the Provincial Administration of Padua, as contracting authority within the 3L Project (Less Energy, Less Costs, Less Impact), 29 Municipalities of the Belluno province will be able to energetically redevelop 60 buildings and 17,000 street lighting points. To these are added 10 technical institutes and hotel schools, owned by the Province of Belluno.

The results obtained are important: regarding the buildings, mostly schools, the ESCo that won the tender, Edison Facility Solutions SpA, offered over € 11 million of investment, of which € 7 million for municipal buildings and just over € 4 million reserved for provincial school buildings.

The ESCo guarantees 52% of overall energy savings, of which 5%, just under 90,000 €, as immediate budget relief for all the consortium members. Following the award, each single Municipality and the Province will sign a contract with the Concessionaire, each for its own buildings. At the end of the contracts, lasting 15 years, 100% of the savings will be attributable to the consortium members.

On the purely technological side, 57% of energy savings will be achieved through insulation of the building envelopes (windows, perimeter walls, attics, roofs, floors), 35% through the installation of eco-compatible systems and technologies (thermostatic valves, variable speed electronic pumps, condensing and biomass thermal units, LED lighting, regulation & remote management). The remaining 8% of the proposed energy savings will take place with the installation of 9 solar thermal systems, 4 heat pumps for the production of domestic hot water and 24 photovoltaic systems for a total of 180 kW peak.

The proposed system for performance control and consumption accounting is based on a Building Energy Management System, interfaced with all buildings and adhering to the guidelines of the International Performance Monitoring & Verification Protocol (IPMVP) ).

Finally, the methods proposed for the implementation of behavioral modification programs for the school population, specifically required by the tender specifications, are valuable. These programs include information campaigns, through a specific interaction plan that involves the creation of a web portal and profiles on the main social media. The distribution of information material, training sessions for teachers and students on the subject of energy efficiency is planned. Energy awareness meetings will be held with citizens on the subject of energy saving, training courses for employees, teachers and students; interdisciplinary educational workshops and finally the organization of competitions between schools with the aim of transforming the schools themselves, according to the level of education, into incubators for the development of a new mentality oriented towards sustainability and energy saving.

Regarding the public street lighting, the company that won the tender, Servizi a Rete srl (SAR), put on the plate almost 7.3 Millions of Euros of investment, guaranteeing 81% Energy Saving, of which 22% recognized to the Municipalities which, added to a reduction on the Operating and Maintenance costs of 16%, will lead to an immediate annual Budget Relief total of € 225,000, equal to 18% of the total historical cost for Energy and O&M.

The contracts, lasting 15 years, will be signed by each single Municipality for the street lighting systems of its competence. Also in this case, at the end of the contracts 100% of the savings will be attributable to the individual Municipalities.

As compensation for energy saving services, each municipality and the provincial administration itself will pay to the ESCo a fee whose amount will be proportional to the energy savings actually achieved; so if the actual savings will be lower than the guaranteed one, the fee will be reduced by the amount of the missed saving. Furthermore, in the event that at the end of each heating season, an energy saving higher than the guaranteed one is obtained, the economic equivalent of the energy saved will be divided 50/50 between the individual public bodies and the concessionaire.

Globally, for the two tenders, the public bodies involved in the initiative - 29 Municipalities and the Provincial Administration of Belluno - will see their consumption reduced, in terms of Primary Energy, by over 20 million kWh/year, equal to 63 % of historical consumption. The monetary savings recognized to the institutions will be almost € 273,000 which, added to the discount offered on Operation and Maintenance, will lead to an immediate budget relief of € 314,000, equal to 10% of the historical energy costs of buildings and street lighting.

The Saved Energy Cost is also excellent: it ranges from 5 EuroCent/kWh for public lighting, to 7 EuroCent/kWh for building redevelopment against current average costs of 8 EuroCent/kWh for Natural Gas, 10 EuroCent/kWh for gas-oil and about 18 EuroCent/kWh for electricity.

Finally, it should be noted that the 3L Project was made possible thanks to a contribution provided by the European Investment Bank, within the Elena facility, used to cover 90% of the Technical Assistance costs, namely: execution of energy audits , determination of the energy and economic baselines, drafting the terms of reference, the contractual schemes, the system for offers evaluation, the procedures for monitoring, verifying results and reporting. To these must be added a further contribution awarded by the Cariparo Foundation for the preparatory phase and for the last years of the program.

*Sergio Zobot - September 2020*