



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



**EPC Contrats for local authorities**  
***2020 TOGETHER: model and results***

**Abstract**

# The 2020Together European Project : EPC Contracts for Local Authorities -

## Model and Results

### THE PROJECT

The 2020Together project – TORino is GETting THERE - is financed through a 490 thousand Euros European funding as part of the CIP - IEE, Intelligent Energy for Europe / Mobilizing Local Energy Investments - MLEI program.

**Main purpose of the project:** to respond to the needs of municipalities to overcome economic-financial concerns at local level and start energy refurbishment of public assets: buildings and street lighting.

**Innovative measures:** underwriting of Energy Performance Contracts (EPC) and implementation of new forms of financial partnership between local administrations and private investors -ESCO (Energy Service Company).

Energy Performance Contracts envision a private investor (typically an ESCo) using own or third parties' financial resources to carry out a number of integrated services and measures aimed at enhancing energy efficiency of installations and buildings.

**The key to success:** a wide territory, the Metropolitan City of Torino, acts as coordinator and contracting authority. Actions taken by small and medium-sized municipalities are grouped in a single call for tender to form that critical mass required to become appealing for bidders and realize economies of scale.

### THE PARTNERSHIP

The partnership comprehends main institutions within the Piedmont Region and a technical partner.



**Piedmont Region** Lead coordinator, ensuring that the conditions are met for long lasting replicable results



**Metropolitan City of Torino** Acting as contractor authority, and coordinator and aggregator of municipalities



CITTA' DI TORINO

**City of Torino** Experimenting an energy efficiency upgrading model on a pilot case for large-scale replication in the future.

## **BENEFICIARIES**

**11 municipalities** of the metropolitan area have benefited from the innovative model of energy efficiency tender developed within this project;

. **5 municipalities** - Bruino, None, Orbassano, Piossasco, Volvera - have entered into a contract with the successful bidding ESCo for the energy efficacy upgrading of 18 buildings;

. **6 municipalities** - Azeglio, Baldissero T.se, Bibiana, Bussoleno, Pecetto T.se, Rivalta T.se are involved in the call for tender on public lighting opened the first days of January 2017 with final awarding within 2017.

**10** other municipalities have started a similar project that will further replicate the initiative.

The **Municipality of Torino** has entered into an EPC for the replacement of over 120 boilers in 118 buildings.

## **THE CONTEXT**

### **The Covenant of Mayors**

The 2020Together project is part of a plan for sustainable energy started several years ago by local institutions.

Both the Piedmont Region and the Metropolitan City of Torino have been local coordinators of the Covenant of Mayors since 2010 and have worked in the last years to persuade the municipalities to sign up to the Covenant. The Metropolitan City has also provided a substantial technical support to the municipalities with a view to set up, approve, implement and monitor Sustainable Energy and Climate Action Plans (SECAPs).

## **PROJECT DEVELOPMENT**

At the early stages of the 2020Together project, the application of EPCs was still largely unheard of and little practised, in particular at the level of municipalities, but also among small and medium-sized local companies. The project has developed with transversal training initiatives, activities dedicated to small and medium municipalities as well as a dedicated project - Revamping 2 - for the City of Torino.

## **SMALL AND MEDIUM MUNICIPALITIES**

### **ADMINISTRATIVE AND MANAGEMENT MODEL**

The aim of the 2020Together project is to aggregate the needs of small and medium municipalities for energy efficiency upgrading in public building and street lighting, with the purpose to obtain a total investment capable to create interest among ESCos, produce a replicable model and realize economies of scale.

The municipalities involved have been informed and recruited through a series of meetings. To ensure their involvement, commitment and liability, municipalities were asked to underwrite a binding agreement with the Metropolitan City, specifically identifying those public building and street lighting there were to be involved in the tender. The Metropolitan City was designed as the contracting authority. Finally, each Municipality would sign their own performance contract with the awarded ESCo.

### **THE TECHNICAL MODEL**

To increase the attractiveness of the tender, a preliminary technical analysis was performed to identify the buildings (or public lighting systems) mostly in need of efficiency upgrading intervention for each Municipality. A mandatory condition was the lack of any binding pre-existing contractual obligations in the management of the buildings.

The designated buildings and lighting systems were then subjected to energy efficiency diagnosis to establish final energy uses and spot out any energy issues during standard operating conditions. The diagnosis included analysis and economic evaluation of building energy consumption.

To identify the potential measures required to enhance energy efficiency of the building shell and of systems, an energy “baseline” was created by evaluating actual consumption as extrapolated from energy bills, calculating actual Heating Degree Days, measuring internal temperature of the building rooms, and determining hours and days of use of the heating systems. The purpose was to identify a strategy to reduce energy requirement and evaluate cost effectiveness of any measures to be implemented for upgrading energy efficiency.

A similar procedure was applied to public lighting systems with the purpose to carefully evaluate current state of the art and any potentiality for improvement.

## THE FINANCIAL SCHEME

The financial scheme is based on Third-Party Financing, meaning that the ESCo shall make the capital available as equity, or be financed by a third finance institution, or both.

By underwriting individual performance contracts with the Municipalities, the ESCo is committed to make investments in each of the buildings concerned. The Municipalities have the guarantee that all their buildings will benefit from actual energy efficiency upgrading measures, not only from cost savings resulting from improved energy management. Moreover, the ESCo shall hire a professional, appointed by the Contracting Authority, to take part in the works of the Performance Monitoring and Verification Commission, to be carried out at a general level for each Municipality.

## TENDER DOCUMENTS

All tender documents were prepared by the Metropolitan City in its capacity of Contracting Authority. The bids were evaluated based on the principle of the most economically advantageous tender and in line with a set of standard technical and economic criteria. For further details, see the "[Guide for drawing up EPC contracts - The 2020 Together experience](#)" as well as the [tender documents](#) provided.

## INVESTMENTS ON BUILDINGS

Following the results of the goods and service concession awarding for energy qualification upgrading and the management of **18 buildings owned by 5 municipalities** of the Metropolitan City, current prospects are: **average energy consumption reduction of over 60%**, investments of the tender winner ESCo - BOSCH ENERGY & BUILDING SOLUTIONS - for **over 3 million Euros**, a **reduction of energy and maintenance costs of over 11%** and a substantial **reduction of emissions, corresponding to 4,360 tons of CO<sub>2</sub>-eq.**

Total investment	3.1 million Euros
Number of buildings	18
Guaranteed energy savings	60%
Primary energy savings	3,050 MWh
Average economic savings	11%
Avoided emissions of CO <sub>2</sub> -eq	620 tons
Renewable energy produced	200 MWh

## INVESTMENTS ON PUBLIC LIGHTING

The purpose of the call for public tender issued by the Metropolitan City in January 2017 is to identify the ESCo that shall be awarded the energy efficiency upgrading project and the management of public lighting systems in the municipalities of Azeglio, Baldissero Torinese,

Bibiana, Bussoleno, Pecetto Torinese and Rivalta Torinese. The project covers **3075 lights** for a **minimum contract starting investment of about 1.7 million Euros** in total. The **minimum contract starting energy savings** ranges **between 22% and 44%**, according to the municipalities, while expected contract duration is **13 years**.

Minimum contract starting investment	1.7 million Euros
Minimum number of spot lights for energy retrofiting	2054
Minimum contract starting energy savings	22%-44%
Minimum primary energy savings	1500 MWh
Minimum avoided CO <sub>2</sub> -eq emissions	200 ton

### **TORINO: REVAMPING 2 PROJECT**

The 2020Together project also comprises the **REVAMPING 2** plan that represents an example of a **massive operation of technological renovation of boilers** in about **120 buildings owned by the municipalities**, implemented by underwriting an energy performance contract with IREN Servizi e Innovazione S.p.A.

This energy performance contract includes: installation of high efficiency boilers and burners; acquisition and installation of thermostatic valves for part of the buildings; management of the buildings subjected to intervention until 31.12.2020.

The remuneration of supplies and services provided by the implementing body is granted in the form of annual fees. Expected **energy savings are about 30%** of previous recorded energy consumption, **10% of which is guaranteed under contractual terms**.

Total investment	7.7 million Euros
Number of buildings	118
Expected energy savings	30%*
Minimum primary energy saved	17,500 MWh
Minimum avoided emissions of CO <sub>2</sub> -eq	3540 tons

\*Granted savings is 10%, but contractual conditions push the realization of about 30% energy saving.

## TOTAL RESULTS AND INDICATORS OF THE PROJECT

Total investments (VAT incl.)	12.5 million Euros
Project budget	490,000 Euros
Leverage ratio	25
Avoided emissions of CO <sub>2</sub> -eq	4360 tons
Primary energy savings	22050 MWh
Renewable energy produced	200 MWh

## COMMUNICATION AND NETWORKING

The communication of the actions carried out and of the results obtained is one of the most important step in a project like 2020Together that involves a number of different stakeholders.

The figures: 1 internet site, 11 press releases, 4 newsletters, 77 articles, 6 presentations at national events, 6 presentations at international events, 5 Facebook postings, 7 tweets, 1 roll-ups, 2 videos on YouTube, 1 leaflets, 1 final publication.

## RECOMMENDATIONS

The development of a project like 2020Together faces a number of **obstacles** and **flaws** that are inherent in any innovative path. This experience has brought about some **keywords** for the improvement of project repeatability:

**strong political commitment; compelling agreements, actually binding the parties concerned; intense training and technical-administrative support to Municipalities; communication and discussion with ESCOs; reduced number of calls for tender; dissemination of project model and results.**

## REPEATABILITY

In the process of its development, 2020Together has been presented in several occasions, both in Italy and abroad. On these occasions, we have illustrated the course of the project while also emphasizing the difficulties met, the ongoing adjustments required during works, and the lessons learned so that these could be helpful for those who were interested in starting a similar project. Another tool designed to promote the repeatability of the project is the "[Guide for drawing up EPC contracts - The 2020 Together experience](#)".

Thanks to the work and experience gained during the implementation of the this project, **25 more buildings in 10 Municipalities** are now ready to be submitted to the same procedure during 2017 at the care of the Metropolitan City of Torino.

**For details see:**

- . Final publication
- . Guide for drawing up EPC contracts - The 2020 Together experience
- . Tender documents

GENERAL INFO:

PROJECT: 2020TOGETHER

European Program: Intelligent Energy Europe – IEE

Measure: Mobilising Local Energy Investment - MLEI

April 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2017

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