

# 2015 European Energy Service Award

## Energy Efficiency in Public Buildings through an EPC Global Strategy

Institut Català d'Energia (ICAEN)



Generalitat de Catalunya  
Institut Català d'Energia

### Description

#### Background | Initial Situation

During the economic crisis in 2008, the classical supply model was reconsidered in order to seek a new model with the main objective of achieving energy savings.

As energy costs were sharply increasing, projects became unviable and a new and fairer model was needed. At the same time, the EPC model was known and considered as the best solution for both companies and building owners to promote the renovation of buildings realised by ESCOs.

#### Challenge

- » Create a completely new energy service market
- » Develop new tendering and project models based on guaranteed savings
- » Introduce and spread the EPC concept in the market
- » Get a broad consensus among all stakeholders to ensure success in the implementation of this new model
- » Carry out investments, improve energy efficiency and reduce energy bills in public buildings

#### Solution | Measures

Main measures implemented are retrofit and installation of efficient chillers and boilers, replacement of standard lighting systems by efficient ones, installation of efficient pumps and fans as well as heat recovery systems, renewable facilities and monitoring & control systems.

#### Results

ICAEN initiated projects resulting in investments of 38 mio. € for public lighting, and of 7 mio. € for energy efficiency measures in 10 public buildings/building pools. It realised in total 40 projects of which are most relevant Tarragona's public hospital and the High



Energy efficiency improvement in the public hospital of Tarragona

Performance Sports Centre (CAR) in Barcelona. Furthermore, ICAEN developed and published a new strategic energy plan at regional level to facilitate the implementation of EPC in public buildings.

It developed and implemented a new EPC tendering model and also established two models of energy efficiency projects: EPC high investment projects with a maximum duration of 10 years, and EPC light projects with very low or no investment and a maximum duration of 4 years.

#### Savings

- Achieved average cost savings: 20 % of energy bill
- Achieved natural gas savings: 5,7 GWh/a in 10 buildings
- Achieved electricity savings: 14,4 GWh/a in 10 buildings and 44,7 GWh/a in 30 municipalities

#### Contact

Josep Maria Granollers  
Phone +34 93 | 622 05 00  
E-Mail [jm.granollers@gencat.cat](mailto:jm.granollers@gencat.cat)  
<http://icaen.gencat.cat>

#### Key Results

Guaranteed savings	20 %
Achieved electricity savings	59,1 GWh/a
Reduction of CO <sub>2</sub> emissions	22.600 t/a
Total investment	45 mio. €

