

## Energy efficiency in the Montjuïc cemetery in Barcelona

by [Marta Aladrén Ribas](#) / 2018-06-12 12:21:56 / España / 4960 / ES



**Year of commitment** : 2016

**Green energies** : Photovoltaic solar



**380 657 €**

**Builder**  
specific

### GENERAL INFORMATIONS

In the cemetery of Montjuïc in Barcelona we have two buildings (A and B) in which the workers of Cementiris de Barcelona are located.

With an installation of photovoltaic panels of direct injection to the electrical installation of the two buildings, a 15kwp is used, this is 10-15% in self-consumption. In addition, since the daylight hours of the buildings are daytime, solar energy is used much more at times of maximum demand for energy consumption.

Regarding the air conditioning system, a variable gas installation was thought that allows, through valves, to have heating and cold at the same time in different spaces of the building. Its control is fully computerized to program schedules, temperatures, etc. and thus be able to optimize energy efficiency.

On the other hand, the installation of equipment was changed to others of high efficiency: it was proposed to make all the lighting using LED systems with point-to-point light control and linked to the control and regulation system. Regarding the air conditioning system, it was thought to work with VRV systems with heat recovery and COPs of 4-5.

The annual forecast of electrical production will depend on the incident radiation, orientation and inclination of the photovoltaic field. In this case, the installation does not have all the subfields with the same orientation and the inclination is about 10°, fact that has been taken into account for the calculation of the annual energy produced by the photovoltaic installation. The calculations made with the PVSYST V6.44 program indicate an annual result of 21,400 Ep kWh. Likewise, the surplus energy of the photovoltaic is injected into the company's electricity grid.

## Progress Status

Delivered

## Data Reliability

Self-declared

## Funding Type

Public

## Sustainable Development

### Attractiveness :

The Energy Agency of Barcelona was involved in the project phase to improve and implement energy efficiency facilities.

### Well Being :

### Social Cohesion :

The implemented measures of energy efficiency allow Cementiris de Barcelona to be linked as a company involved in achieving an activity that is as ecological and sustainable as possible.

### Responsible use of resources :

In this installation a photovoltaic system of direct injection of 15 Kw<sub>p</sub> has been implemented that allows a reduction of the electric consumption of between 15 and 25%.

A centralized VRV climate control system has been implemented that allows the demand of cold and heat zones simultaneously, taking advantage of part of the cooling energy to heat other areas that require it. This system is controlled by a central computerized control that allows to optimize uses and operating hours, maximizing energy savings.

## Governance

Cementiris de Barcelona, SA

**Holder Type :** Public Local Firm  
specific

**Builder Type :** Construction Industry

**Manager / Dealer Type :** Private

## Sustainable Solutions

Instantaneous photovoltaic self-consumption

### Description :

A 15 Kw<sub>p</sub> direct injection photovoltaic system is implemented, which allows a reduction in electricity consumption between 15 and 25%.

A centralized VRV climate control system has been implemented that allows the demand of cold and heat zones simultaneously, taking advantage of part of the cooling energy to heat other areas that require it. This system is controlled by a central computerized control that allows to optimize uses and operating hours, maximizing energy savings.

As a strong point, it can be highlighted that the maximum energy demand of the buildings occurs during the period of solar production, being able to make the most of it.

- o Energy/climate :
- o Renewable energies



### Reasons for participating in the competition(s)

En el cementerio de Montjuïc de Barcelona disponemos de dos edificios (A y B) donde están ubicados mayormente los trabajadores de Cementiris de Barcelona. Con una instalación de paneles fotovoltaicos de inyección directa a la instalación eléctrica de los dos edificios, se aprovecha un 15kwp, esto es un 10-15% en autoconsumo. Además, como el horario de funcionamiento de los edificios es diurno, se aprovecha mucho más la energía solar en los momentos de máxima demanda de consumo energético.

### Building candidate in the category



Premio de los Usuarios



Gran Premio Ciudad Sostenible

