



## Benchmark of Excellence

### Street lighting with LED technology in the tunnels in Funchal



**Field of Action:** Public Lighting

**Area of intervention:** Energy efficiency in public lighting

**Responsible for action implementation:** Municipality of Funchal

**Implementation timeframe:** 2011-2012

**Financing sources:** Local Authority's own resources

#### Description of the action

The refurbishment of two tunnels in Funchal city's centre to increase road safety and to improve energy efficiency of the street lighting systems, by substituting the existing lamps and fixtures for LED technology. This type of intervention in street lighting was pioneer in Portugal.

The first intervention took place in the *Cruz Vermelha* Tunnel, in 2011, where 150 sodium-vapor lamp fixtures were replaced, with a total power of 30,8kW, by 194 LED fixtures, with a total power of 19,35kW.

The second intervention occurred in the *Hortas* Tunnel, in 2012, where 134 sodium-vapor lamp fixtures were replaced, with a total power of 29,2kW, by 173 LED fixtures, with a total power of 18,5kW.

#### KEY FIGURES

- **CO<sub>2</sub> reduction:**  
132 t CO<sub>2</sub> eq./year
- **Energy savings:**  
194 MWh/year
- **Implementation cost:**  
290 000€

#### Further Information about the action

CMF - City Hall of Funchal  
<http://www.cm-funchal.pt/>

