



Sustainability begins at Home, Casa Municipal do Ambiente - Almada, Portugal	
Keywords	Public Building, Refurbishment, Building envelope, Lights and Appliances, and Heating/Cooling
Pictures	 
Objectives	Following the implementation of Local Agenda 21 in Almada, this building was refurbished with the aim of providing an appropriately energy- and environment-conscious home for the Environmental Planning Department, Ecolibrary and the Local Energy Management Agency of Almada.
Description	<p>The concerned administrative building houses three different local services: the Environmental Planning Department, an 'Eco-library' and the Local Energy Management Agency of Almada, which aims to raise local awareness of energy efficiency and environmental issues.</p> <p>Situated in a central location of and within easy access for the City of Almada, the building had already housed municipal services prior to its refurbishment. Essential to the refurbishment process was the need to maintain the building's original architectural design features, and to incorporate energy and environmental concerns – to match both the aims of Almada's Local Agenda 21 process and the aims of the organisations it houses.</p> <p>The building was refurbished implementing innovative energy efficiency measures in each of the main 'sectors': building envelope, lights and appliances, and heating/cooling. For the building envelope, thermal insulation was applied to the roof and double glazed windows were installed. There is also a new efficient lighting system, with both movement/occupancy sensors and daylight sensors based on a photo-electrically controlled dimming circuit and TL5 fluorescent lamps. The air conditioning system is a natural gas direct-fired absorption chiller for cold water production, coupled with a natural gas hot water boiler. The building also benefits from good natural ventilation, which brings cool air from the shady back of the building through several entrances which can be left open according to need.</p>
Results / Achievements	<p>The framework for monitoring and evaluation is comprehensive, incorporating heat metering, monthly energy readings and a full biannual assessment – graphically evaluated – of the energy performance, displayed in the building. This is strongly communicated in internal coordination meetings, and as a result has contributed to a high level of environmental and energy awareness amongst the staff, as well as to helping to identify new energy-saving opportunities over time. This establishes the motto that "sustainability begins at home", which ensures that from the outset provides a positive example for visitors and other municipal staff.</p> <p>Active measures, such as the lighting control system installed, have proven very effective. Overall, the approach taken for the Casa Municipal do Ambiente is considered a successful one, with other local services – planning small interventions – taking this building as an example to follow in order to replicate its success.</p>
Online information	<p>http://www.display-campaign.org/rubrique163.html (in English)</p> <p>http://www.display-campaign.org/rubrique166.html (In Portuguese)</p>
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