


Solar water heating in a public swimming pool - Vila Nova de Gaia, Portugal

Keywords	Use of Thermal Solar Energy, Public Swimming Pool
Pictures	
Objectives	The aim of this project was to reduce the energy used to heat the swimming pool water, thereby reducing the associated energy cost.
Description	<p>The public swimming pool in the City of Vila Nova de Gaia in Portugal used to have high heating costs because the pool water was being heated using propane gas. Therefore, the City Administration considered alternative means for heating the pool and decided to install solar water heating system. Not only does the solar thermal system provide a much cheaper way of heating the pool, it also utilises a renewable energy source with no associated CO₂ emissions.</p> <p>In total, 95 solar collectors occupying an area of 220m² were installed. When the solar system is unable to fulfil the thermal needs of the pool, heat is produced by gas boilers.</p> <p>In total, replacing the propane gas heating system with a solar thermal heating system has resulted in the following benefits:</p> <ul style="list-style-type: none"> - Energy saved: 202 MWh/year - CO₂ emissions avoided: 92 tonnes/year - Money saved: €22,000 per year
Friendly advice for replication	If this project was to be replicated, it is recommended that the solar water heating system should also be used to heat shower water, as well as the pool water.
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