



Case Study

Energy saving investments in a hotel

Main activities	A 144-bed capacity hotel that has an average occupancy rate of 44%
Region	Cyprus
Energy Consumption	The annual costs of energy and water are: €58,056 for electricity, €34,903 for diesel fuel, €4,328 for LPG and €13,458 for water



Project goals

To reduce overall energy and water costs in the hotel.

Main investments

This project consists of the following measures:

1. Installation of 40 solar panels to supplement the water heating system.
2. Replacement of old pipe insulation on the heating and cooling pipes.
3. Replacement of the old boilers of 697 kW capacities (75% efficient) with six new condensing boilers, 60 kW ea, working with LPG instead of diesel fuel.
4. Replacement of the old chiller.
5. Replacing the incandescent lamps (40 W) in the rooms with 15 W compact fluorescent lamps that will supply at least the same amount of light.
6. Using low-flow shower heads, aerators for sinks and double flush systems in the bathrooms in 72 rooms.

Benefits

Reduced energy costs.

Application

Any hotel.

Investment type	Cost (€)	Energy saved (MWh/year)	Saving achieved (€/year)	Payback period from energy saving
Solar panels	11,257	89	6,725	2.2 years
Pipe insulation	25,204	199	9,362	2.7 years
Boilers	29,374	89	9,755	3.0 years
Chiller	30,838	257	8,409	3.6 years
Lights	3,028	36	1,176	2.6 years
Water	4,822		1,905	2.5 years
Total	104,575		37,320	2.8 years