

Cost Savings €15,000 / Annum

Investment €210,000

Payback 10.5 Years

Environmental Benefits:

CO₂ reduced: 46 Tonnes p.a.

Solar Thermal Provides 30-40% of Annual Heating Demand

BEWLEY'S HOTEL - DUBLIN AIRPORT



Description of Property

Bewley's Hotel, Dublin Airport is a 466 bedroom hotel with conference facilities, a bar and restaurant. The hotel was built in 2006 and is now a certified member of the Green Hospitality Programme.



Project Description

During the design of the hotel it became apparent that energy consumption for hot water, for baths, showers, kitchen etc., would constitute approximately 50% of the hotel's total energy use. A number of energy saving technologies were considered at the planning stage of the hotel and the technology considered most feasible was the installation of solar collectors.

The hotel decided that the installation of 56 solar panels or 308m² of collector area on the roof and 2 x 5,000 litre hot water storage tanks would be adequate. The estimated cost of the solar system was €210,000, approximately 25% of this was obtained from SEAI for the purchase and installation of the solar panels. It was estimated that, operating at optimal conditions, the solar thermal system could provide approximately 40% of the hotel's hot water requirements, with the remainder of the heating demand provided by natural gas boilers.



The Results

It is estimated that the system provides 198,000kWh of thermal energy on an annual basis, representing 42% of the hotel's annual heating demand. When compared to a reference heating system of only natural gas, this system reduces CO₂ emissions by 46 tonnes per year and reduces fuel costs by €15,000 per year. At a total cost of €157,500 to Bewley's, the payback period is 10.5 years. The life time of the panels is 25-30 years, meaning that the hotel will be getting free energy for 15-20 years.



Our solar system is supplying 30-40% of our hot water needs. This system is supplying green heat to our hotel and is completely automated.

Clio O'Gara - BRAND MANAGER OF BEWLEY'S HOTELS



TOP TIP - Solar thermal, when properly integrated into a hotel's heating system, can prove to be effective at reducing energy costs.

Source Details:

SEAI - Email: info@seai.ie www.seai.ie

seai SUSTAINABLE
ENERGY AUTHORITY
OF IRELAND

 **BeGreen**
PREVENTING WASTE & SAVING MONEY