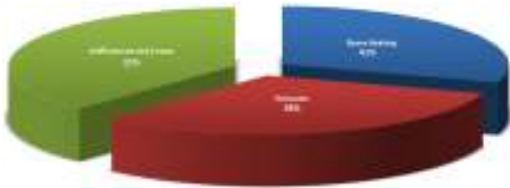


"Ashgrove can help you produce a more comfortable and healthy environment for your patients while at the same time reducing your running costs and providing you with a reliable, renewable alternative to fossil fuels"

Nursing Home realises savings of €27,284 over 12 months.

A 110 bed nursing home in Co. Cork with a 2008 energy cost of €39,800 engaged Ashgrove Renewables to assess their current heating system. A cost effective and sustainable solution was developed to generate hot water for space heating and domestic use. Once a survey was complete, the true extent of energy consumption was apparent.



With energy costs creeping higher on the budgeting priority list, Ashgrove proposed renewable technologies to provide their heating energy requirements. The nursing home consumed 645,161 kWh (66,511 litres of home heating oil) in 2008. At a cost of €0.062 per kWh to produce the heat from oil, the more attractive solution of an 110kW geothermal heat pump was proposed based on improving the efficiency of heat generation and overhauling the existing heating system to minimise inefficiencies. A heat pump installation was designed to cater for the space heating and hot water requirements while a solar water heating system was included to assist in producing hot water through harnessing free energy from the sun.

2008 hot water generation cost was €15,200. A solution using solar water heating and the heat pump was installed. The solar system produced 60% of the hot water for the year harnessing free energy from the sun and achieving savings of €9,120. The heat pump contributed the remainder at a cost of €3,717, resulting in an overall saving of €11,483 or 76% of 2008 costs.

An existing underfloor heating system was retained as an ideal distributor for the heat pump's energy. Upgraded controls and a re-commissioned system allowed distribution efficiencies to be improved while improved insulation and system balancing leveraged further savings from the installation. The annual

heating cost for 2008 was €24,600. The running cost of the heat pump was €8,799. This resulted in a saving of €15,801 or 64% saving over the previous year's heating cost using the oil boiler installation.

Through these steps the total energy spend for the Nursing Home was reduced by €27,284 or 68% of the previous years costs. When compared, there was little difference to the actual heating requirement year-on-year; therefore the savings achieved were solely resulting from Ashgrove's re-designing of the system.

Management at the Nursing Home were presented with detailed breakdowns on all aspects of the proposed system prior to any works commencing. This step ensured that the associated capital costs complemented the budgetary requirements set out and that the Nursing Home was able to remain cost competitive into the future while improving the living conditions for inhabitants and staff. The total installed cost of the new heating system to the Nursing Home stood at €18,500 for the solar system and €79,400 for the geothermal heat pump system (including outside collector ground works). A payback period of 3.4 years was realised through net simple payback calculations.



To compliment the installation, Ashgrove have offered detailed warranties on all equipment and a maintenance service to help in achieving the maximum lifetime from the system. The solar panels receive maintenance every 2-3 years with a 30+ year lifetime while the heat pumps are serviced annually with a 25+ year lifespan.