## Energy Combined Heat and Power

Cost Savings .... €70,000 / Annum Investment......€210,000 Payback....Less than 3 Years

**Environmental Benefits:** CO<sub>2</sub> reduced: 507 Tonnes p.a.

# **Combined Heat and Power System and Fuel Switching Saves €70,000 Per Annum**

**TULLAMORE COURT HOTEL** 



### Description of Property

The Tullamore Court Hotel, located on the outskirts of Tullamore, is a 4 star hotel that has 104 guest rooms, bar, restaurant, leisure centre, and conference facilities. The hotel has received Environmental Certification from the Green Hospitality Programme and has been a member of the programme since 2005.



#### **Project Description**

In 2006 the hotel underwent an expansion, adding 32 new rooms, a new kitchen, and 9 new meeting rooms. As part of this expansion it was decided switch from LPG to Natural Gas and to install a Combined Heat and Power (CHP) unit to reduce energy costs. While Natural Gas had become available in the town it had not been connected to the hotel. Natural Gas costs at the time were half those of LPG.

The CHP plant was installed to generate electricity in-house using natural gas, at a lower price than offered by grid suppliers. The added bonus was free hot water produced by the CHP plant, which was used to heat the pool and guest accommodation.



#### The Results

The CHP unit provided 122kW in electrical output and 196kW in heating output. The savings achieved by the CHP unit were in excess of €70,000 per annum. The payback for this project was less than 3 years. Consequently the hotel also reduced its CO<sub>2</sub> emissions by 507 tonnes per year.

Following the expansion of the hotel by 32 new rooms, a new kitchen and 9 new meeting rooms; the energy bills only rose by 7% due to the installation of the CHP unit. The CHP plant has been of huge benefit to the hotel. Philip O'Brien - GENERAL MANAGER





TOP TIP - To understand energy costs calculate fuel costs in cent per kWh. (Tullamore Court Hotel was paying 6 cent/kWh for LPG, but when they switched to natural gas they paid 3 cent/kWh.)



Green Hospitality Programme www.greenhospitality.ie

