



OH4 ENERGY SAVING
CASE STUDY:
THE PRIEST HOUSE HOTEL,
CASTLE DONINGTON
2025.12.17 V5

The Priest House Hotel is a historic hotel located close to the East Midlands Airport, boasting beautiful surroundings and offering excellent dining facilities. The hotel operators are keen to engage with renewable technology to provide environmental benefits and to reduce the operating cost of the hotel.



Total Savings: 21.3%

The Challenge:

As a historic building in a rural area, the property operates on a combination of LPG and oil to provide heating and cooking facilities. The client's current annual spend on heating and hot water was in the region of £40,000, which represented a significant cost and effect on operational expense. In line with their sustainability and cost reduction targets, they were keen to explore OH4 as a potential solution that didn't require extensive investment in new equipment.

The Solution:

After a short site visit, it was agreed that OH4 would be installed at the premises with a guarantee that the installation cost would not exceed the year one saving. With no need for any downtime on the heating and hot water system and access only required in the plant rooms, it was shown that there would be no disruption to hotel and restaurant operations. OH4 was fitted in the three plant rooms on a 60kw boiler servicing hot water, a 100kw boiler and back-up boiler servicing the hotel heating, and a 100kw boiler servicing holiday housing in July 2024, with the installation taking a total of 2.5 hours.

Monitoring System:

Under the terms and conditions, the Client provides their monthly energy usage data, which is adjusted for degree days and occupancy numbers. The data for each month is compared to the same month of the previous year to provide a litres of fuel per degree day per guest figure, which is then compared to see the effect. Please note, our data has been adjusted to remove fuel used during cooking, which is approximately 1700 litres per month..

Financial Benefits:

Based on the data collected between August 2024 and May 2025, the hotel has seen a reduction in litres of fuel per degree day per guest of **10,380 or 21.3%**, representing a saving in that period of **£5242**. The Client has now engaged OH4 to assess the other buildings in their estate.

Carbon Saving:

In addition to monetary saving, The Priest House Hotel has reduced its CO2 emissions from their heating system. The hotel has seen a reduction of **10,380 litres of fuel**, which is equivalent to **22.3 tonnes** of carbon.

Collected Data:

Date Range	01/08/23 - 31/05/24	01/08/24 - 31/05/25
Litres of fuel used	65,617	63,630
Litres of fuel used (adjusted for cooking)	48,617	46,630
Degree Days	2366	2591
Guest Numbers	13,259	14,142
Adjusted litres of fuel used	48,617	38,237
Cost of fuel used	£24,552	£19,309

