

Case Study for Burner Management Units at Andaz Hotel



The Green Consultancy Inc. Limited were engaged by the Director of Engineering at Andaz Hotel, Liverpool Street, London, Keith Large, to advise on how they could reduce the gas consumption at the hotel.

The recommendation of Mark Buckland at GCI was to install Burner Management Units (BMU) to their boilers.



This technology is designed to alter the firing pattern of the boiler to improve their energy efficiency, without impairing the performance of the boilers.

The BMU's used are the only BMU's in the UK which are certified by the Building Research Establishment (BRE).

The BRE conclusion after testing the units over several months, the BMU demonstrated savings on a test rig to in excess of 16% of gas consumption at low loads and high economy savings factors.

The actual savings are dependent on the nature of the load, the size of the system, heat emitters and boiler in relation to the load, the type of system that the boiler is serving and the type of boiler the BMU is fitted.

Andaz Hotel

As Keith is somewhat a sceptic with regards to the claims of some energy saving technologies, he was cautious as to the perceived savings the units would make.

As the units' self-test and store their savings reports, I advised Keith that the units would be able to demonstrate their savings, without the need for degree day and regression analysis.

We went ahead and installed the unit, after only a couple of months, Keith advised us that he was surprised that they had made such a difference in their gas bill.

He had actually checked their occupancy against previous years to double check that they had not had a much lower occupancy. In fact, occupancy rates had gone up. Yet impressive savings were made.

Keith was keen to see exactly how much the units had actually saved.

From the downloads we carried out, we were able to see that the units had saved between on average almost 20% across the three boilers they unit were installed on.

Three years after installation we were asked by Keith to come in and explain to an energy management company (EMC) who Andaz had engaged with, exactly how the units worked. The EMC insisted that they could replicate what the BMU's did, using their existing BMS, and improve on the savings the unit made.

Whilst on site we switched the BMU's off and a BMS engineer from Matrix set to work trying to replicate what the BMU's did. However, after 3 hours of trying, the best he could manage was savings of around 8-9%.

We then took a download from the BMU's to see, in comparison the average savings the BMU's had made. The average saving across the 3 boilers was 23.8%

On hearing this, Keith said in no uncertain terms "do not mess around with those boilers anymore and switch the Burner Management Units back on, turning them off is costing us money!"

Keith also said this about the Burner Management Units installed.

"I initially didn't think the Burner Management Units would make much in the way of savings, but as they were relatively cheap, I thought I would take a punt. I'm so glad I did the savings are excellent and the units have a very short ROI".