

Energy Saving - Heating

Around 15-20% of a pub's energy cost lies in heating. Typically heating is provided by burning gas in a boiler to heat water which is circulated round radiators and to heat hot water for taps or showers.

Heating in this way is the biggest consumer of gas in a pub. Heating can also be provided by electric heaters or by air heat pumps found within air conditioning systems.

The most significant energy saving opportunities within gas heating systems are:

BOILER UPGRADE

Fact: Only 46% of pubs have upgraded their boilers to efficient condensing boilers.

Did you know: A condensing boiler can use 10-15% less gas than an old style non-condensing boiler. Replacing your boiler can result in savings of £500 per year.

How does this apply to me: To find if you have a condensing boiler look for the make and model on the boiler. A simple internet search for the boiler manual will allow you to find the boiler gross efficiency. The saving can be calculated by:

Saving = $(92\% / \text{gross efficiency (\%)} - 1) * 0.7$

Multiply this saving by your annual gas bill cost to see how much money you could save.

How do I make the saving: A large number of companies offer replacement boilers. These will typically payback in 4-5 years. If you are a tenanted pub check to see if your pub company offers a funding solution.

HEATING & HOT WATER TIMERS

Fact: 73% of pubs do not have a heating and hot water schedule set.

Did you know: Your boiler uses fuel even when there is no demand on the system, as it keeps itself warm and ready to provide heat. Additionally, setting a schedule will prevent the building being heated at times when it is not required. Setting a schedule can save over £200 a year.

How does this apply to me: Does your heating system have a time clock? If so, this saving can be made straight away. If not, don't worry a heating engineer can install one cheaply.

How do I make the saving: If a time clock is in place all you need to do is set a schedule. Think when the building does and does not need to be heated.

If you are stuck, the manual can usually be found by searching for the make and model on the internet. If no time clock is installed, contact a heating engineer to fit one. The cost of installation will be paid back in 1-2 years.

AIR CONDITIONING DEADBANDING

Fact: If you have heating and air conditioning (AC) systems set with close setpoints, they can both run at the same time, cancelling each other out.

Did you know: Heating and air conditioning systems should be set 4°C apart. So if the heating is set to 18°C then the AC should be set to a minimum of 22°C. Ensuring this deadband between the two setpoints exists can save you £50 per year.

How does this apply to me: If you have air conditioning and heating systems in the same room then this applies to you.

How do I make the saving: Check the setpoints on each system. What temperature is your heating thermostat set to? Is the AC set 4°C higher? If not then correct it.

If you want your AC system to run colder in the summer then ensure heating is turned off or down on the thermostat to maintain the 4°C deadband.

TRV'S AND HEAT ZONING

Fact: 23% of pubs do not have temperature regulating valves (TRVs) fitted to radiators.

Did you know: TRVs allow you to control how much heat the radiators put out in different areas of your pub. This not only saves money but improves customer experience. Areas such as semi-used function rooms or the managers flat should have the heating "zoned" so it can be separately controlled. This means it does not have to be set to the same heating schedule as the pub. Installing TRVs can save £100 per year.

How does this apply to me: Check to see if you have TRVs installed. They are fitted to one end of the radiator and have a twist top that allows you to set the heat output of the radiator.

How do I make the saving: If TRVs are fitted, make sure they are set correctly. Look to see if people open windows next to a radiator as this is a good sign it is too hot. If you don't have any TRVs then they can be fitted by a heating engineer. Typically, installation will payback in 3-4 years.

HOT WATER SYSTEM INSULATION

Fact: 37% of pubs do not have adequate levels of insulation on heating and hot water systems.

Did you know: Insulating heating and hot water systems can save £50 per year.

How does this apply to me: Check your hot water pipes and storage tank, are they insulated?

How do I make the saving: Hot water tanks should be jacketed and pipes should be insulated. This can be done cheaply by buying pipe insulation, or a tank jacket from a hardware store. A heating engineer can also insulate you system but this will cost more. The DIY approach will payback in under a year.