

“Food For Thought!”

Sustainable Energy Efficiency – How to achieve it.

The topic of energy efficiency has been high on the agenda for many years within the food industry but few businesses have taken advantage of the substantial cost savings temperature and energy management can provide. Energy Efficiency has become one of the key drivers for Food Factories and Food Retailers as energy costs increase year on year and trading becomes more difficult during the current climate.

On the positive side any energy savings made go directly onto the bottom line and the savings increase every year as energy costs increase. Unfortunately unless energy use is monitored inefficiencies become a guessing game or more commonly ignored and therefore are not managed towards increased efficiency and profitability. One national food processor discovered a freezer coldroom at minus forty which when adjusted to minus twenty four degrees produced a £25,000 saving per degree adjustment, a total saving of £400,000!

Modern electronic refrigeration controllers have facilitated more innovative applications, which together with other products typically produce between 10% and 30%. If then a temperature monitoring and management system is installed additional inefficiencies are identified and resolved. Even without capital investment substantial savings can be made, as with time ideal settings drift for varying reasons and lead to poor performance, unreliability and inefficient and high running costs.

We're all aware that the cost of energy has a direct effect on profits and that by having planned maintenance of your refrigeration plant, you can be assured that it is running efficiently, or can you?

Kevin Joel of **bj**a Refrigeration Consulting Engineers says that “we shouldn't assume that just because coldstores and processors are achieving temperature, they are running as efficiently as they could. Refrigeration engineers are generally more ‘temperature focussed’ than ‘energy focussed’. This isn't a criticism of engineers, they are often under time and financial constraints. However, the controls of the refrigeration plant can drift over a period of time, away from their design parameters, with the result that more energy is being used than is necessary.

Refrigeration plant will undoubtedly use the greater proportion of electricity and as such, has the greatest potential for energy savings. Kevin added “recommissioning a typical 500kw plant resulting in a saving of just 10% will save around £15.k per year.”

Making better use of the equipment you've got makes sense as you should get instant returns without investing capital. Looking beyond that, there are a number of options available to save energy and controls are just one of them.

Only a few years ago the purchase price of the refrigeration equipment was the all dominant decision criteria and simple mechanical control solutions were generally preferred by most users. Today the situation is quite different with the best electronic systems for controlling refrigeration and utilities typically reducing the energy consumption by up to 30% and the cost of these systems is actually far from discouraging, the investment is typically paid back in 1-2 years.

bja have expertise in control management and offer surveys in order to identify inefficiencies and other equipment issues. Since **bj**a do not sell products or installation their impartiality enables them to select best value solutions for the client.

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