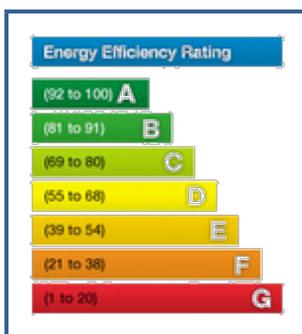




“Focus on Energy”

Energy use and conservation have steadily become the biggest concern for companies and organisation. With the burden of ever increasing cost in utility bills, the same question is being asked in every boardroom across the world. Where can we save money on our energy bills?

The installation of Building Management Systems (BMS) have proven track records in being a cost



effective way for users to cut their energy consumption, typically offering savings of 15-25%. But it doesn't stop there.

The truth is, the majority of BMS installations under-perform and the

results can be staggering. A recent study suggested most systems waste between 15-50%.

The most common reasons are:-

- Inappropriate control strategy
- Faulty field control devices
- Poorly positioned sensors
- Incorrect installation or commissioning
- Inadequate operator training
- Poorly maintained
- Systems not updated to suit change of use.

We offer a range of comprehensive services to suit your budget and circumstances that fall into the following categories:-

- Savings Identification
- System Optimisation
- Upgrades / Refurbishment

Savings Identification

We can offer levels of interrogation to suit your budget from a simple 'health check' to establish the scope of potential savings, right through to a dedicated associate energy efficiency audit, to examine all aspects of your building, from the materials used in its construction, plant equipment and lighting, as well as energy being used.

System Optimisation

Armed with analysis of your systems behavior, we can help you optimise its operation. Depending on the circumstances we can offer a range of solutions including:-

- Control Strategy Programming
- Commissioning
- Maintenance
- Operator Training

Upgrades / Refurbishment

Depending on the age or condition of your system, it may be time to consider total or partial refurbishment.

Alternatively we may be able to replace or upgrade certain aspects to harvest energy savings such as fitting inverter drives to motive loads, updating to new efficient components or integrating key services to your BMS.

Rest assured, we can help find a solution that suits you.

“How can energy control systems improve the efficiency of boilers”

Many companies are wasting energy through inefficient boilers. This is because typical boilers will often fire up and consume energy when it is not necessary to do so, instead of using the residual heat that is already available within the system.

This is known as 'dry-cycling' and can add more than 30% to the cost of the heating bill, yet many Building Managers and FM Providers are completely unaware of its existence.

But what exactly is 'dry-cycling' and surely it doesn't occur with 'modern boilers'.

Boiler dry cycling can occur with virtually all types of boilers. When the boiler is no longer firing, the temperature of the water in the boiler eventually falls below the boiler's internal set point due to natural “standing losses”. This triggers the boiler to fire, even when there is no actual requirement for heat from the building, and thus wasting energy. Even with well-insulated and low water content modern boilers (which may cool more slowly compared to older less insulated boilers), dry cycling may be less frequent – but will still occur.

Wait, doesn't my BMS already take care of that.

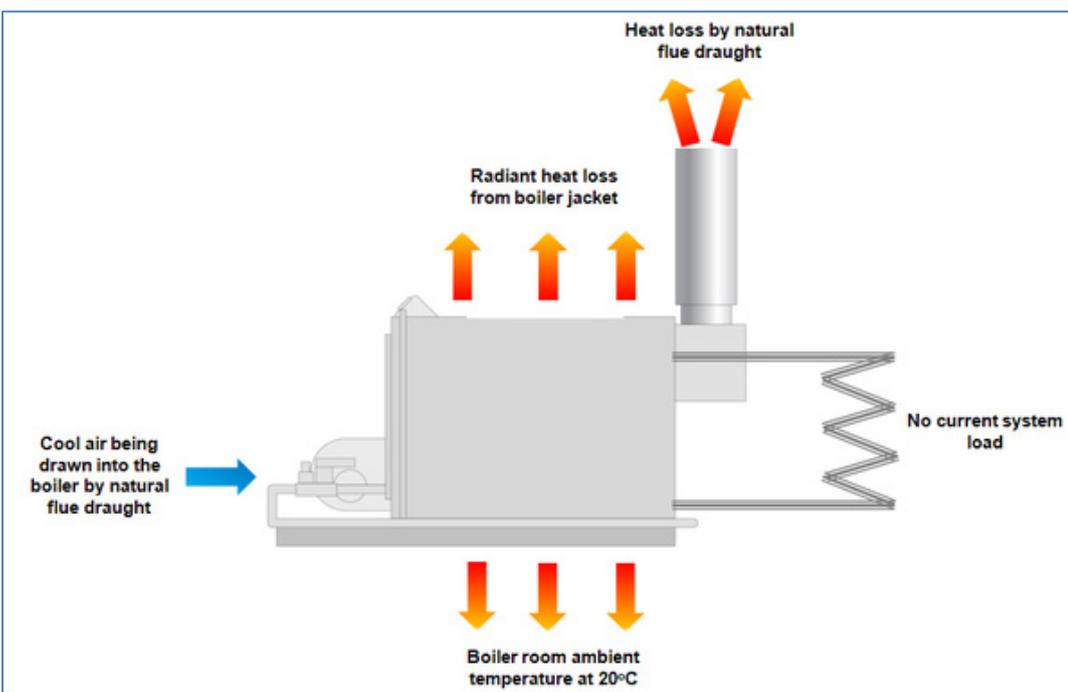
Typically a building management system (BMS) is programmed to manage the heating system as a whole by monitoring the blended water temperatures from all of the boilers rather than measuring the individual boiler(s). Consequently any energy wastage through boiler dry cycling at an individual boiler level is not always detected or prevented by the BMS.

As a result many companies are now offering 'black box' solutions to cater for 'dry-cycling' exploiting the preserved myth, that any BMS solution is cost prohibitive.



The truth is that in many cases, it is possible to configure the BMS to monitor and cater for 'anti dry-cycling', whilst maintaining the requirement of managing the system as a whole, all with very little capital expenditure.

In most cases it may require no more than the addition of flow and return monitoring sensors for each boiler and modifications to the existing controls programming regime. You may even find these sensors are already installed but not utilised.



So before taking the leap towards installing a 'black box' boiler solution, it's well-advised to first look at what is achievable via your existing BMS.

Palcon are able to recommend the best and most cost-effective way of modifying your system to reduce boiler running hours and thus their heating costs.

“Are you in control of your company’s energy and water consumption”

In order to get to where you’re going, you must first establish where you’re coming from.

Implementing a targeted energy reduction and management program is no different, and it’s essential not just to know just how much energy you’re using, but where and why as well.

Collecting meter readings is nothing new, but in recent years, advances in technology mean networkable meters are now common place.

By utilising industry standard communication protocols such as Modbus, M-Bus and BACnet, real time, detailed consumption information is available at your fingertips.

Conventional ‘pulse’ meters have not be left out of this revolution. Networked pulse collectors and accumulators can integrate with networked systems meaning ‘all’ the information is available via the same user interface.

Wireless and radio frequency transmitters also allow for automatic meter readings from remote locations, meaning no part of your site need be out of reach.

This harvested data can be fully integrated into your building management system (BMS) or processed further by a dedicated Energy Monitoring System. Information can also be passed directly to large display screens for educational use, helping foster energy awareness among the building’s occupants, and so promoting behavioral change.

“Understanding both where your energy is being used, and how much are key to unlocking any potential savings”

But real time energy metering and collection are just the starting point and what you do with this information is key to developing a successful regime.

At Palcon, we can help you interpret what to do with your collected data and how best to make this essential information benefit you most in helping to reduce your carbon footprint

Why invest in metering solutions?

Under the government’s Enhanced Capital Allowance (ECA) scheme, businesses can claim enhanced tax relief in return for investment in equipment and technologies that meet published energy saving criteria.

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Palcon Energy Services are an accredited Trend System Integrator, Open System Solutions and Synapsys Solutions Partner.

