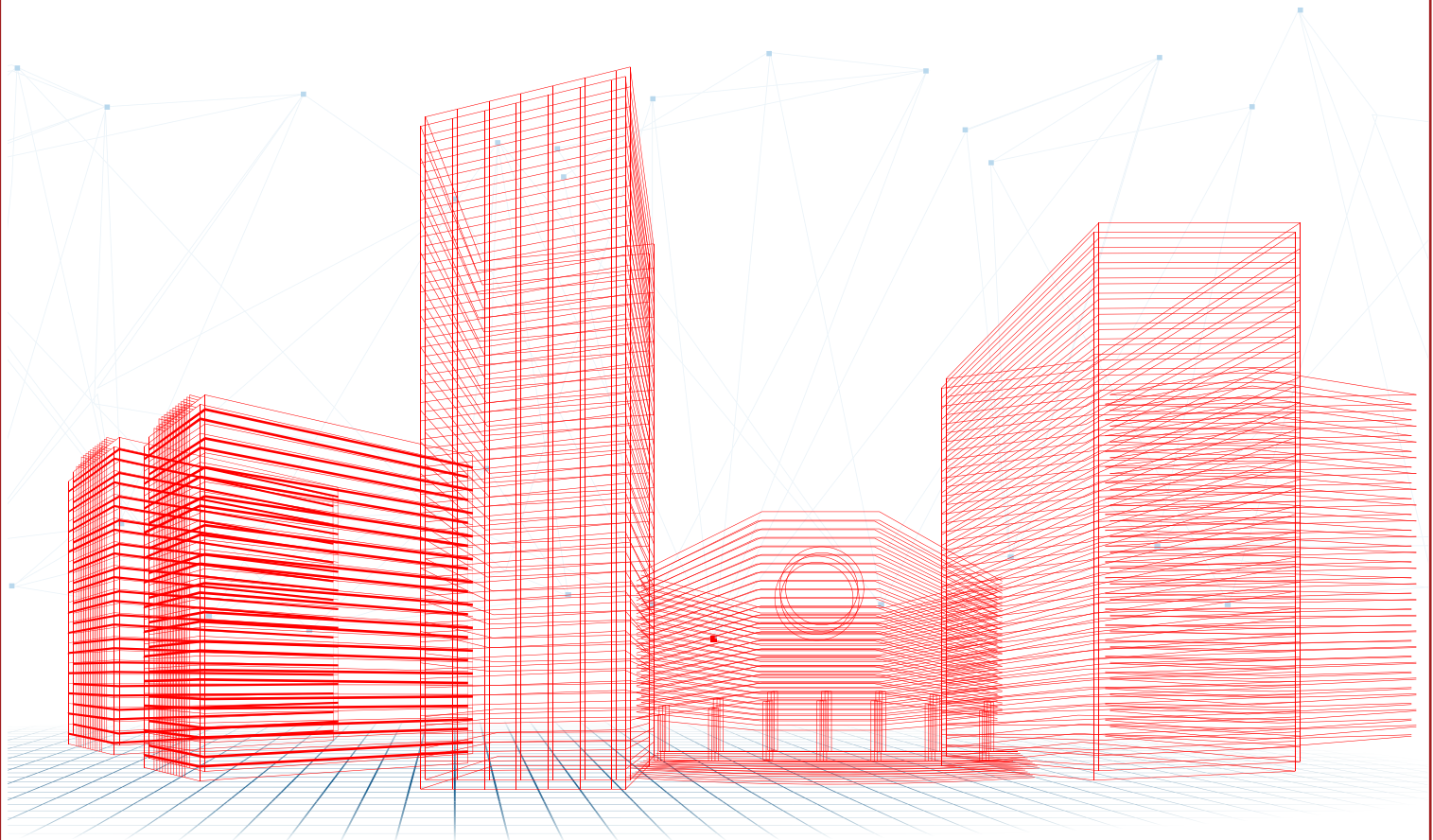


Ultimate Guide to:

# Reducing Energy Costs Across Your Business

*How to identify cost-saving opportunities and the  
technology available to help you reduce your outlay*



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# Managing your Energy Costs

*Energy can represent a significant outlay for businesses of all sizes, and this is only expected to continue as costs grow ever higher while demand is forecast to increase substantially in the coming years. Although this is potentially a worry for businesses, the good news is that energy is not a fixed cost and much can be done to reduce usage and therefore outlay.*

In recent years, the UK has experienced high volatility in the wholesale price of gas and electricity, resulting in record high gas prices in 2018. With both

domestic and international economic uncertainty hanging over many business, now is the time to look at ways to mitigate the effects of any on-going volatility.

thing from turning off displays at night to HVAC equipment that can regulate the operation of a heating and/or air conditioning system.

## UK BUSINESS ENERGY SPEND

Annual figures, based on a Telegraph/YouGov survey of 760 managers



As with most areas of business the key to managing energy costs is monitoring and accountability. By making someone responsible for monitoring and controlling spend on energy as well as for researching and testing energy saving tools and techniques, you are likely to have a much better outcome. Having this level of accountability avoids the situation whereby no one is sure how much is being spent on energy, or how many savings can be made.

In these days of climate awareness and consumers increasingly only wanting to engage with companies that have strong green credentials, energy management is a relatively simple way to demonstrate your environmental awareness. The key is to ensure buy-in across an organisation and encourage staff at all levels to be aware of their energy use and how it can be reduced. This could be any-

## Energy management versus energy efficiency

First up, let's clarify what we mean by energy efficiency and energy management. Although the terms are often used interchangeably, there are differences between the two, and the most effective way to reduce energy use, and therefore costs, is to consider both.

According to the Carbon Trust, energy management is the use of technology to improve the energy performance of an organisation; it needs to be entwined with a company's wider management processes to be successful. Energy efficiency on the other hand means doing more with less and can refer to individual products such as light bulbs or entire buildings.



# Where to make savings

*According to the latest BEES report from the UK government, the areas with the largest potential savings are carbon and energy management, and lighting replacement and control. Let's take a look at each in more detail.*

**1. Carbon and energy management** - A good first step here is to create a carbon management plan that details your medium- to long-term strategy. Give yourself a target for energy reduction and highlight the strategies you will develop in order to achieve this. Many of the world's biggest corporates are moving ahead of governments and aligning their operations with the most ambitious parts of the Paris Agreement, so don't be afraid to be ambitious.

**2. Lighting replacement and control** – Investing in energy efficient lighting alongside control systems that adapt to occupancy levels in buildings can have a major impact in many sectors, especially offices, retail and hospitality. Where it can perhaps have the most impressive results, however, is in the field of manufacturing where facilities are less likely to undergo regular upgrades and improvements. As lighting typically consumes 20 percent of the electricity used in commercial and industrial buildings, the opportunity here is significant. But make sure you do your research; not all LEDs are created equally and, for example, if the wrong LED control software is installed the performance of the unit will be inferior so always employ a trusted supplier.

In addition to these two key areas, there are a number of other steps that businesses can take to reduce their energy bills, including:

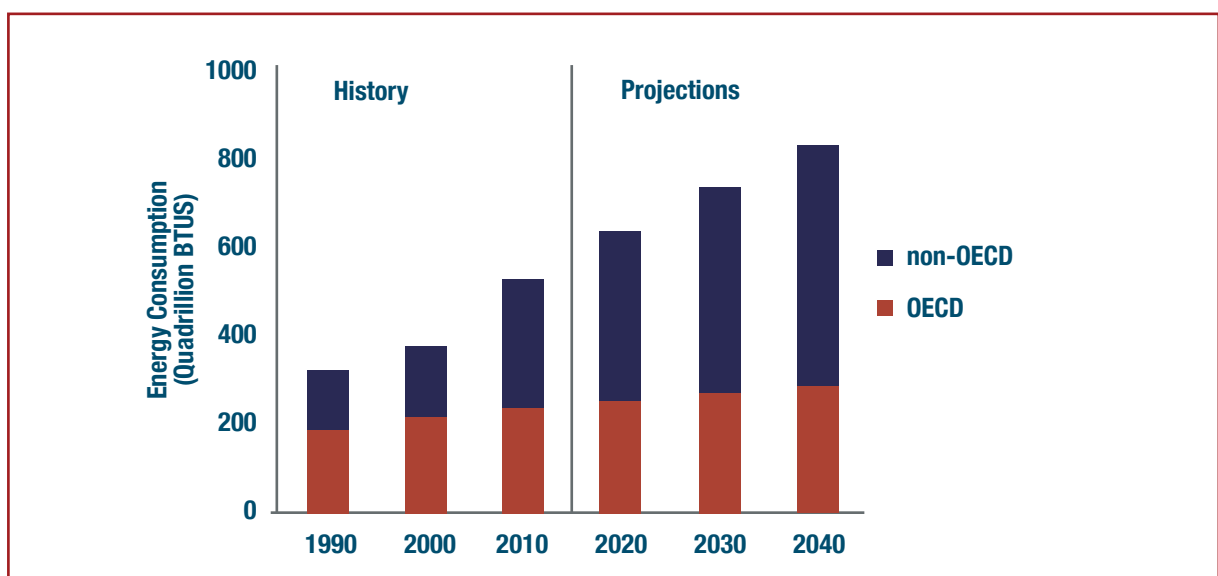
- Turn off any equipment when it's not in use
- Take advantage of natural sunlight where possible
- Use motion detectors in areas such as corridors and meeting rooms where lights don't have to be on all the time

**10-20%**

Amount EON believes companies can save off their total energy bills through good energy management  
Source [EON](#)

# Where to begin?

*The starting point on any journey towards more efficient energy management is to monitor energy consumption. Once you have an idea of how much energy your organisation is using, you will be able to identify where any wastage occurs. You will also be able to identify patterns in energy use, any spikes that occur during the working day and how much energy is being used during downtimes such as evening and weekends. A Building Energy Management System can be a valuable tool when measuring and analysing usage.*



Historical and projected world energy consumption of OECD and non-OECD countries between 1990 and 2040 (OECD: organisations for economic cooperation and Development) Sources: BP Statistical Review of World Energy June 2014 and Energy Information Administration (EIA) International Energy Outlook 2013

## What is a Building Energy Management System?

A Building Energy Management System (BEM) is an integrated system for monitoring and controlling energy-related building services such as heating, ventilation and air conditioning, lighting, power and more.

By monitoring energy through a single, centralised system it is possible to have greater

control over energy use, something which can translate into significant savings.

Used properly, buildings should be able to reduce their energy use without compromising the comfort of inhabitants. However, in order to achieve this, BEMs must be installed, managed and assessed properly.

**4%**

Of people think that energy management is important in keeping the business they work in operating effectively

Source **EON**

# Barriers to energy efficiency

*While it's difficult to make an argument against using energy more efficiently across a business, that doesn't mean it's always easy to achieve. In fact there are a number of common barriers that organisations face when initially implementing such a plan. These include:*

## Lack of management buy in

With all the pressures involved in managing a business, energy often isn't seen as something that needs to be discussed at board level. However, this is exactly where any company-wide initiative should begin. Not only does this demonstrate the importance of the initiative, it also makes it easier for company-wide changes to be made, such as gaining approval for any resource or funding that may be needed to implement changes. In addition, seeing management buy in can encourage employees to get on board with changes.

### The five largest sectors in terms of energy consumption (non-domestic)



## Short-term thinking

While there is no denying that improving energy efficiency results in cost savings, it can be difficult to convince management to make the initial investment necessary to create these savings as the results will not be seen until the medium to long term. In this scenario it is important to highlight the many opportunities and advantages gained by becoming more energy conscious – and this involves a lot more than simply reducing costs.

## Confusion and uncertainty

When it comes to energy efficiency, there isn't one single solution or technology that can meet all your goals in one go. Energy management is an ongoing practice and it can take time to garner the benefits an organisation expects. This can lead to concerns that it's not being implemented correctly or that efforts are being wasted. To counteract this uncertainty make sure energy management is seen as a continuous process rather than a quick fix.

## Behavioral barriers

Even if your management team are moving full steam ahead with policies and practices intended to lower energy consumption, if this isn't communicated and explained to all staff, things are unlikely to change to the extent that they should. For example, if all you do is put the onus on staff to turn off machines or lighting, some will forget or simply choose not to follow these new guidelines. Communicating the benefits and/or creating energy champions can help, although the simplest solution is often to automate processes so there's no room for human error. For example, a building energy management system can be employed to monitor and control energy-related equipment such as HVAC systems, lighting and power.

# Four benefits of energy management

*In addition to reducing costs, investing in energy management brings a number of other key benefits.*



## 1. Reducing risk

In recent years there has been growing volatility in global energy markets and the International Energy Agency only expects this to continue. As the population grows and demand for energy increases, prices are set to continue to fluctuate. Investing in renewable energy sources is one way to avoid the uncertainty surrounding oil and gas.



## 2. Complying with guidelines and legislation

In order to reduce the impact of this volatility, many governments have encouraged consumers to reduce their energy use. For example, the UK's Climate Change Act 2008 established the world's first legally binding target for reducing greenhouse gas emissions (initially 80% reduction by 2050 compared to 1990 levels). Earlier this year, the government extended this, to 'net zero' whereby emissions from homes, transport, farming and industry will have to be avoided completely or - in the most difficult examples, offset by measures that will remove CO2 from the atmosphere, such as planting trees.

To reach these targets, the government is encouraging organisations to invest in low carbon technologies and reduce their energy demand. Those that choose to do so sooner will almost certainly be in a better position when the

**53%**

Total average floor area within premises without any energy management resource

Source [BEES](#)



expected tougher regulations come into force – there is already talk of introducing mandatory operational energy ratings, such as Display Energy Certificates, for all commercial buildings so there’s no harm in being ahead of the curve on this one.



### 3. Improved working

As well as benefiting the bottom line, energy management can play a central role in creating an optimum working environment for employees. For example, you only have to walk into the average office to experience how heating and cooling systems often compete against each other in different areas, and often temperature is managed only by one or two individuals who happen to be near the control interface. A properly installed and maintained HVAC system that automatically adjusts to changes in temperature can lead to significant reductions in energy use.



### 4. Enhanced reputation

A robust energy management plan can form a key part of your organisation’s Corporate Social Responsibility (CSR) initiative. Being seen as a leader in energy efficiency and management can be a major benefit in today’s increasingly environmentally aware world, and provide a USP if you’re going above and beyond what others in your sector are doing.



# How to better manage your energy usage

With energy costs showing no signs of falling and with the clear operational benefits it offers, there is undoubtedly business benefit to better managing your energy use. The question is, where to start?

As mentioned, monitoring and analysing current use levels is step 1. This could include asking your energy supplier to audit your current use or opting for a cloud-based analytics tool that can provide you with actionable insights into your usage.

While doing this, think about the easy wins you could achieve throughout your business. For example, turn lights off when rooms aren't in use, make it company policy to power down computers, monitors, printers and other devices each evening, and open blinds to take advantage of natural daylight where possible.

If you haven't already, upgrading to energy-efficient lighting is also recommended. As well as saving energy they also have a longer lifespan than older generation bulbs, making them a good long-term choice.

Also when it comes to lighting, consider installing motion detectors so lights only power up when someone is using a particular space.

Consider alternative and renewable energy sources. This could either mean buying from a green energy supplier or if you own your premises installing renewable energy technology, such as solar panels. While the latter is clearly a longer-term investment, both options can shelter your business from the uncertainty around fossil fuel prices, making it easier to plan your energy usage and needs. It also means you won't have to pay the Climate Change Levy, and it may be possible to receive subsidies depending on how extensive your plans are.

# Conclusion

You may think that your business is already doing its bit when it comes to energy efficiency, but there is always more work to be done as technology advances and legislation develops.

The key to successfully implementing an energy monitoring and management plan is understanding your energy use and the associated costs, encouraging everyone in your business to strive to reduce them and ensuring that your BMS energy management equipment is installed, commissioned and maintained in the correct manner, providing optimal building performance.

There are a number of non-invasive and affordable tools available to help you meet and exceed your energy management plans, so contact us today to find out how we can help your business operate more efficiently, e-mail us [enquiry@syscombms.com](mailto:enquiry@syscombms.com) or phone us on (+44) 01784 435125.

## Average energy consumption UK

### Electricity

<b>5-15k, kwh pa</b>	<b>Micro Businesses</b>	With an average annual gas bill of £1062
<b>15-30k, kwh pa</b>	<b>Small Businesses</b>	With an average annual gas bill of £2038
<b>30-50K, kwh pa</b>	<b>Medium Businesses</b>	With an average annual gas bill of £3146

### Gas

<b>10,000 kwh pa</b>	<b>Micro Businesses</b>	With an average annual gas bill of £430
<b>25,000 kwh pa</b>	<b>Small Businesses</b>	With an average annual gas bill of £856
<b>45,000 kwh pa</b>	<b>Medium Businesses</b>	With an average annual gas bill of £1424

Source: [Smarter Business](#)



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