



# The Energy Opportunity

Exploring how new approaches to energy  
can power business performance

# Rethinking energy – from cost to driver of value and growth

Organisations across the world are now operating in the face of unprecedented disruption and market uncertainty. The cost of doing business is escalating, resources are overstretched and the pressure to deliver efficiencies is unrelenting.

However, amidst this battle to drive down operational costs, there's one area that many firms typically overlook – energy management. With a more efficient approach to how you source, use and manage energy, you can drive cost savings that can actually fund growth.

In fact, a 20% cut in energy costs can represent the same bottom line benefit as a 5% increase in sales.<sup>1</sup>

Centrica Business Solutions' research with over 1,000 energy decision-makers globally found that more and more organisations are now starting to take control of their energy, with 1 in 3 exploring how energy can contribute to their business growth, drive deeper efficiencies and reduce business risk. And those firms who are leading the charge when it comes to the way they manage their energy are 2.5x more likely to be efficient and well-run, achieving strong financial performance – both in terms of growth and profitability.

So where does all this leave your business? And what can you do to avoid being left behind? We have looked closely at the approaches being taken by some of the most energy efficient companies to see what can be learned.

This report aims to explore how changing your approach to energy management can create new opportunities to boost the performance of your business.

And how advances in technology, new financing models and advisory services are making it easier than ever to turn energy from a seemingly fixed cost of doing business to real driver of value and growth.

## Rethinking the role of energy in your business

Organisations have been forced to ask themselves searching questions about the way they operate in recent years – with many aspects of what they do and how they do it coming under scrutiny in the drive to become more efficient and productive.

But for many, energy hasn't been an area that's warranted much attention. It's either dismissed as 'not core business' or put aside due to a lack of expertise, time or perceived cost versus potential return.

In fact, a recent survey by the Telegraph and YouGov showed nearly half of senior managers have no idea what proportion of their expenditure goes on energy costs.<sup>2</sup>

That's despite research by the Carbon Trust that shows a high number of companies surveyed across a whole host of sectors have huge scope for improvement when it comes to energy management practices.

So how can businesses open their eyes to the performance-enhancing power of energy?

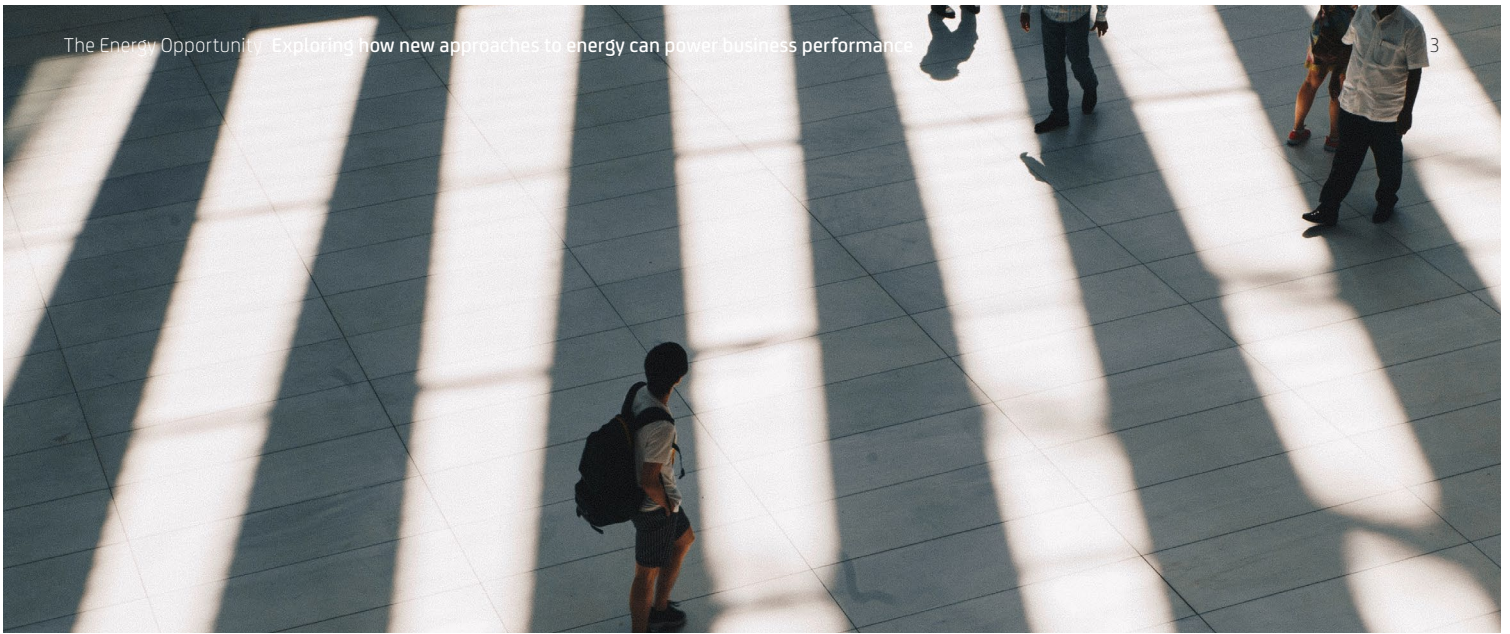


Cut in energy costs can represent the same bottom line benefit as a 5% increase in sales<sup>3</sup>

1. Better Business Guide to Energy Saving, Carbon Trust [http://www.brentwood.gov.uk/pdf/pdf\\_1229.pdf](http://www.brentwood.gov.uk/pdf/pdf_1229.pdf)

2. <https://www.telegraph.co.uk/business/energy-efficiency/which-solutions-does-your-company-have/>

3. Carbon Trust



## Breaking down the misconceptions about energy efficiency

Many businesses put energy efficiency on the back burner because of the same common misconceptions.

### It's too risky – we don't want to commit to 'new' technology that requires a long-term commitment when our business needs are constantly changing

So-called 'new' technologies really aren't that new. Solutions like Combined Heat and Power are already proven, while others such as Solar and Battery Storage are becoming widely available and easy to install.

### It's too expensive – we don't have the capital to invest in such a solution when we don't know the ROI

There are various flexible financing opportunities available, some of which can help you extract the maximum value from energy saving and revenue generating technologies – with no upfront costs. So there's no need to take capital away from core operational activities.

### It's too complex and we haven't got the time, resources or expertise to manage it

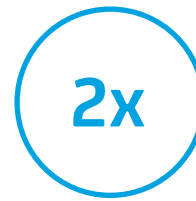
Managing energy technologies can be less time-consuming than you think. Even in the largest and most energy-efficient companies, energy management isn't always a full time role. An energy partner can work with you to define your energy strategy and the right fit solutions for you. They can also operate and maintain your energy solution on your behalf to optimise its performance and availability – ensuring you receive maximum cost savings and resilience.

### How do we choose a supplier we can trust?

Energy efficient companies are more likely than less energy efficient companies to see their energy provider as a partner, rather than just a supplier. By choosing a partner with the right energy credentials, knowledge and experience, a business can put their energy efficiency in the hands of experts while they get on with the running of their own operation.



Energy efficient organisations are 2.5x more likely to see how an energy strategy contributes to their business being efficient and well run



Energy efficient companies are twice as likely to recognise the role an energy strategy plays in contributing to financial performance

# The Energy Opportunity

The real energy opportunity is about much more than saving costs or boosting your resilience – it's about giving your business more independence and flexibility for the future, and fuelling cost savings that can fund growth and innovation.

Here are 4 compelling opportunities to re-think the way you manage your energy to boost your business performance.



# Opportunity 1

Use energy data  
to unlock insights  
and improve  
operational  
efficiency

# The insights

## The business case:

Do you know how much energy your business is really consuming? If so, you're one of a minority – in fact, only a quarter of organisations say they assess energy use continuously. Most others measure energy use annually, or even less frequently.

But if you don't know your energy consumption, how can you drive improvements in operational performance?

Energy efficient companies already understand the importance of collecting data and intelligence on energy consumption.

## The solution:

Continuous energy monitoring enables you to build an understanding of where your true costs really lie. Energy Insights from Centrica Business Solutions uses smart, low cost wireless sensors attached to your energy-using equipment and connected using IoT with an online analytics platform. The data this produces can give you real-time, granular visibility of your power usage. By using this intelligence, you can compare consumption across different sites, machinery and equipment at different times of day, allowing you to optimise performance and, just as importantly, spot potential equipment failures before they happen.

## The benefits:

Predictive analytics can help you adjust operational processes to minimise costly downtime, reduce waste, enhance agility and increase productivity. Our own research shows that measuring your energy use also opens the door to improved working practices.

Greater visibility of your energy use can quickly be turned into savings that help deliver immediate financial benefits and build the case for future investment. Saving energy costs also means being able to free valuable resources to directly invest in other pressing growth initiatives to accelerate your transformation.

24%

of organisations say they assess energy use continuously<sup>4</sup>

58%

of the most energy-efficient companies use three or more different measures to manage their energy<sup>5</sup>

£26<sup>k</sup>

savings achieved in the first year

FUJIFILM

## Energy Insights in action

### Ink specialist enjoys real-time energy insight

FUJIFILM installed 22 sensors at its manufacturing site to drive energy efficiency and fund continued product innovation.

FUJIFILM Speciality Ink Systems is a global leader in the development and manufacture of UV inkjet inks for wide format and other printing sectors. Continuously finding ways to improve efficiency in its operations enables the company to remain competitive and to invest in the development of future technology.

Centrica Business Solutions installed 22 sensors at the FUJIFILM facility in Broadstairs, Kent. The wireless, self-powered sensors monitored the flow of electricity and delivered energy information to an online analytics platform.

Within six weeks the Energy Insights solution had unearthed two major issues. It discovered a fault with the air compressor units was causing them to continue running during the weekend while the site wasn't operational. This was costing £330 every weekend – an annual saving of £17,000.

Secondly, specific chillers on the ink production line were also kept running after production stopped. By optimising these chillers and looking into operational efficiency, FUJIFILM achieved a saving of £26,000 per annum.

The payback period for the investment was just three weeks. Centrica Business Solutions has since been invited to extend the solution to FUJIFILM's customer site in South Africa. FUJIFILM is also looking to extend energy monitoring to other UK sites.

22

sensors providing real-time energy data

5%

solution cost 5% of the total savings

3

weeks for return on investment

## Opportunity 2

Improve your energy efficiency – reducing energy costs through the application of innovative technology



# The insights

## The business case:

Two-fifths of companies have seen significantly reduced energy costs after investing in advanced energy solutions.<sup>6</sup>

But you don't need to go big straight away. There are quick wins to be had. Simple solutions like Commercial LED (Light Emitting Diode) Lighting can make considerable savings and pay for themselves quickly. Benefits can be more than just financial – employee productivity is increased, as is employee awareness, which in turn drives energy efficient behaviours.

## The solution:

Lighting a typical office overnight wastes enough energy to heat water for 1,000 cups of tea. Given forecasts that by 2025 lighting could account for 45% of the average energy bill<sup>7</sup>, there are compelling reasons to invest in energy efficient lighting right now.

Commercial LED Lighting is a technology that replaces existing lighting installations and reduce your energy consumption. LED lights are a much more efficient way of lighting your commercial building as LED light fittings are up to 90% more efficient than traditional lighting. A huge 95% of the energy in an LED lamp is converted into light and only 5% is wasted as heat, whereas with a more traditional lamp this is often the opposite.

## The benefits:

Commercial LED Lighting delivers improved standards of lighting, they also carry some of the longest life ratings and highest energy-efficiency options available in a lighting system.

LED lighting fixtures also provide you with a much greater degree of control over the light output so you can create the ideal lighting for your work environment – contributing to the health and productivity of your employees<sup>7</sup>.

40%

of companies have seen significantly reduced energy costs after investing in advanced energy solutions<sup>8</sup>

95%

of the energy in an LED lamp is converted into light

LED

delivers improved standards of lighting

6. Centrica Business Solutions The Energy Advantage Report

7. Carbon Trust – [http://www.brentwood.gov.uk/pdf/pdf\\_1229.pdf](http://www.brentwood.gov.uk/pdf/pdf_1229.pdf)

8. Centrica Business Solutions The Energy Advantage Report



# Commercial LED Lighting in action

## Shining a light on energy efficiency in the NHS

### Cutting energy costs in a complex environment

As one of the busiest and most successful NHS foundation trusts in the UK, Guy's and St Thomas' Hospital has a large and complex estate and an annual budget of almost £1.5 billion. Centrica Business Solutions was appointed by the hospital trust to install a comprehensive £1 million replacement lighting programme, featuring the latest smart LED lights, movement sensors and remote-control technology.

The energy savings achieved resulted in an extension to the lighting programme, with Centrica Business Solutions commissioned to begin replacing lights in more complex locations not included in the original phase. This required bespoke solutions, sensitive project management and innovative working methods to ensure service continuity and uninterrupted movement by staff, patients and visitors.

The first phase of lighting replacement has produced annual energy savings worth £85,000. The second phase of lighting replacement is currently forecast to provide a further £95,000 of savings. Alongside the savings are significant reductions in carbon emissions and more efficient and cost-effective repair and maintenance regimes. For example, the latest LED fittings can last up to 4.5 times longer than traditional fluorescent luminaires. Sensors and remote-control technology ensure that lights are only switched on when absolutely necessary.

Application of new technology means that the new and extended programme is projected to achieve a payback target of less than six years on an investment of up to £500,000, by carefully targeting remaining areas in which the lighting has the highest run times or have the least efficient existing luminaires.

£180<sup>k</sup>

savings per annum  
across two phases

5.5<sup>k</sup>

lights replaced over  
two phases

6

projected payback  
within six years

## Opportunity 3

Reduce your reliance on the grid – and protect your business from volatile energy prices – by generating your own power locally

# The insights

## The business case:

The cost of an energy-related failure can total as much as 17% of annual revenues. When you consider that, alongside our research findings below, the case for reducing your reliance on the grid becomes clear.<sup>9</sup>

81% of businesses have experienced at least one energy-related failure in the last 12 months.<sup>10</sup>

45% of energy decision-makers believe they will experience an energy-related failure within the next year.<sup>11</sup>



36%

**of energy decision-makers say their organisation is not prepared for a disruption to their energy supply from a temporary grid failure<sup>12</sup>**

## The solution:

For those who have already achieved the quick wins like LED Lighting, distributed energy technologies can deliver deeper efficiencies and contribute to growth.

Advances in the distributed energy technology that enables off-grid generation mean there's now an opportunity for organisations to reduce reliance on the grid. According to PwC, 17% of industrial respondents to their survey will produce all, or almost all, of their own power within the next 5 years<sup>13</sup>.

Combined Heat and Power (CHP) is a highly intelligent and efficient process that works by converting gas into both electricity and heat in a single process on your own site. Rather than heat going to waste, it can provide free sustainable heat for use across your site.

According to the Carbon Trust, CHP is for many organisations “the measure that offers the most significant single opportunity to reduce energy and improve environmental performance.”

## The benefits:

CHP can increase the resilience of your on-site energy supply and reduce your energy costs by up to 40%. Right from the day your CHP system is up and running, you can achieve savings by generating electricity at significantly lower cost than your current supply contract.

You can also lower your company's carbon footprint significantly by using methane rich biogas – created from organic food or liquid waste by a process called anaerobic digestion (AD) – as a combustion fuel for your CHP. The methane in biogas is completely consumed by the CHP combustion process, and there is a zero increase in CO<sub>2</sub> emissions.

Generating your own power gives you greater independence and flexibility in your energy supply. In combination with on-site battery storage, you can store the energy generated and use it at times of peak demand on the grid when energy is more costly.

You can also participate in demand side response programmes and generate revenue, not just electricity. Over a third of companies involved in self-generation are already selling excess capacity back to the grid.

Off-grid generation also gives your business greater resilience. It's often only when an energy-related failure occurs that the operational vulnerabilities of a business become exposed and the need for a secure energy source becomes essential. If a business is to operate without risk, it needs a secure and stable energy supply in place.

9, 10, 11. Centrica Business Solutions The Energy Resilience Report

12. Energy Resilience – Building the Business Case, Centrica

13. <https://www.pwc.co.uk/industries/power-utilities/insights/disrupting-utilities/the-smart-energy-business-revolution.html>



RPH  
ROCHESTOWN PARK  
HOTEL

## CHP in action

### CHP meets future energy needs for Cork hotel

#### Fulfilling expanding energy requirements

Rochestown Park Hotel in Douglas, Cork has 149 guest bedrooms, a health club, swimming pools and 12 conference and banqueting suites, with the capacity to cater for 700 guests. Recent expansion at the hotel, adding 50 new bedrooms, a new bar, restaurant and a larger reception area, has meant that its energy requirements have increased significantly. Centrica Business Solutions was consulted to review the hotel's CHP system.

Centrica Business Solutions in conjunction with its partner, Temp Technology, installed a natural gas trigeneration system. This allowed the hotel to benefit from simultaneously producing electricity and heat with the additional transfer of thermal energy to provide cooling for practical uses.

Heat generated from the CHP was converted using an absorption chiller to provide cold water to cool the building.

By adding the absorption chiller into a CHP system, the user can increase the equipment's operational hours, maximising the utilisation of the energy and reducing dependence on the more costly electrical air conditioning.

The new trigeneration solution resulted in reduced running costs, with estimated annual energy cost savings of around €115,000 for the hotel.

Payback for the project was approximately two years following the CHP installation, based on the energy savings and an approximate investment of around €240,000. A reduction of 33% on the hotel's emissions resulted in a decrease of 278 tonnes of CO<sub>2</sub> – the equivalent of removing 150 cars from nation's roads each year. As the Rochestown Park Hotel generates a large amount of its electrical demand on-site, it can also rely on a constant supply of electricity, even in the event of grid power outages in the region.

278


tonnes carbon  
emission reduction  
a year

€115k

annual energy  
cost savings

2

year payback  
on investment



# Opportunity 4

Strengthen your  
brand reputation  
through a more  
sustainable approach  
to energy management

# The insights

## The business case:

More than a third of consumers are now actively choosing to buy from brands with robust eco credentials.<sup>14</sup>

According to the Deloitte Resources 2018 study, 7 in 10 businesses say customers demand they procure a certain percentage of their electricity from renewable sources.

As Deloitte comments: “Growing consumer demand for environmentally responsible products and services, along with residential consumers’ interests in managing their own consumption, is driving more businesses toward sustainable energy sources and prompting many to take a leadership role in implementing clean technology.”

It’s evident there’s a big financial opportunity for companies to meet demand from increasingly environmentally-conscious customers wanting to buy from companies who care about their impact on the environment.

## The solution:

Solar is a renewable source of electricity generation that works by absorbing sunlight and converting it into electricity.

The power generated can be used directly on site, with an option to store for later use by adding Storage capability to lower energy costs during peak times or, in some cases, fed back into the grid to create an additional revenue stream. It is 100% sustainable, reliable, and cost-effective – ideal for businesses that want to reduce both energy costs and carbon emissions.

## The benefits:

A sustainable approach to energy does more than improve your bottom line – it can also improve your brand reputation. At a time when consumers are becoming more and more environmentally conscious, this can bring significant advantages when it comes to attracting and retaining customers.

Then there’s attracting the talent you need to take your business forward. Like consumers, employees are more attracted to brands that are seen to be environmentally aware.

### Point of view

The environmental case. There’s also a bigger picture at play – the challenge of global warming and our responsibility as businesses. The switch to renewables isn’t just good for business, it’s good for everyone’s long-term health, wellbeing and affluence, and those of generations to come. Global and local legislation is aimed at nudging firms in the right direction, but a proactive stance can clearly deliver positive business benefits aside from helping do the right thing.

Energy efficient companies are more likely to see a link between sustainable energy and brand image or company values<sup>15</sup>

Energy efficient companies are much more likely to see being low carbon as important to their use of energy<sup>16</sup>



## Solar in action

### Using the sun to power a plant

5% of the energy used at one of Toyota's production plants is now generated by Solar

Toyota wanted a partner to create a turnkey project for the UK's largest factory-connected solar PV installation. This was to help power their first European Model Sustainable Plant at Burnaston. We were responsible for the full development of the site including environmental studies and planning support. During the 10-week construction programme we installed:

- 17,000 PV modules
- 240 inverters
- 140km of cabling and associated HV works

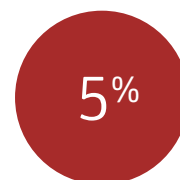
The PV system is now providing 5% of Toyota's site energy consumption, helping to cut costs and reduce their carbon footprint.

The good news is that continuous technical innovation, as well as increasing adoption and government subsidies, has significantly reduced the costs of implementing more energy efficient strategies.

Many businesses don't want to spend capex on energy solutions, so look to their energy suppliers to come up with innovative ways to fund them from operational expenditure or energy budgets.



PV modules installed



of the plant's energy now powered by the sun



from commission to completion



# Let's make it happen

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## How we can help

Centrica Business Solutions can help you take advantage of the changing energy landscape, providing innovative end-to-end energy solutions to help you perform better – from expert advice, installation, maintenance and management.



## Global player in the energy markets

We're always looking ahead. Our investment in innovative businesses and deployment of the latest breakthroughs in energy technology are geared to ensuring our customers know that, whatever their vision for the future, they'll be able to fuel it. It's why we hold leading positions in many national markets across the US and Europe.

Our range of commercial contracts and funding options are designed to help manage cost with a future-facing commercial strategy.



## Breadth of portfolio

Our broad portfolio and end-to-end capabilities enable you to take control of your energy and we work with you to find the optimum energy solution for your business, making sure you benefit from maximum savings and efficiencies.



## Financial stability and de-risked financial proposition

Centrica Business Solutions is an established, leading player in the global energy industry. As a FTSE 100 company with £28 billion in annual revenue, our enduring stability means that we are in no danger of disappearing when times get tough. We can help businesses to improve the performance of their energy assets, while minimising commercial risk and providing financial confidence.

Our committed investment in emerging technologies globally keeps our customers at the forefront of innovation.

We use our experienced, proven and respected company-wide resources to build Energy Efficiency strategies that ensure improved business performance.

We should talk about making your energy work for you

**The rationale for a more energy efficient business is compelling. But we understand that businesses need support in evaluating their best options and to develop the business case for change within their organisation.**

**To take the next step in taking advantage of the energy opportunity, visit** [centricabusinesssolutions.com](http://centricabusinesssolutions.com)

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