



RetailWeek
CONNECT

WHITE PAPER

In association with


British Gas

Sustainability to profitability

**Securing financial success in
a leaner, greener future**

INTRODUCTION: MAKING FINANCIAL SENSE OF SUSTAINABLE VISIONS

It costs nothing to turn off the lights. Yet Tesco estimates that, along with other small changes to staff routines, flicking off that switch could save £6m a year. Even for the UK's largest retailer, this is not a trivial sum.

But it might not be enough. Retailers are facing rising energy prices, increases in other input costs due to the weak pound, and a squeeze on consumer spending.

Taking further measures to cut energy consumption can be an effective way to maintain margins. Energy and sustainability advisor

Carbon Trust estimates that a 20% cut in retailers' energy costs represents the same bottom-line benefit as a 5% increase in sales.

Some retailers are eagerly pursuing these strategies to reduce consumption and are even investing significant sums to produce their own energy.

Ikea, for example, has already committed €2bn (£1.7bn) to sustainable energy. H&M Group says it will switch to 100% renewable electricity by 2030 – it has already achieved this in the UK and is 96% of the way there with it globally.

At the same time, an added bonus is that retailers can boost their reputation among consumers who are increasingly aware of how their choices can affect the planet.

The question for retailers in such straitened economic times is which combination of strategies will save the most money, while also reducing carbon emissions.

In this white paper, produced by Retail Week in association with British Gas Business, we review the challenges faced by retailers in navigating these choices.



These are uncertain times for UK retailers. Sales fell by 1.4% during the first three months of 2017 as shoppers were deterred by rising prices, according to figures from the Office for National Statistics.

Meanwhile, four out of five consumers fear price rises on household essentials, such as food, drink and clothing, according to a survey from market research analyst Mintel. In a period of weakening consumer confidence, capital expenditure will inevitably be put under the microscope.

DIY group Kingfisher, which operates B&Q and Screwfix, unveiled a five-year £50m renewable energy programme in 2015. It is ploughing cash into photovoltaic (PV) solar energy, an investment that might take more than seven years to pay off.

Some may question whether investments with long pay-back periods are wise in the current climate. But others say the opposite is true.

"It is an imperative," says Munish Datta, head of Plan A, the M&S sustainability programme. "There is no choice. [Investing in renewable energy and energy efficiency] is financially and environmentally responsible. Customers increasingly expect us to operate in that way."

However, putting together a compelling business case for sustainable energy investment can be challenging. Karol Gobjczynski, climate and energy manager at Ikea, says part of the battle in demonstrating the business benefits comes down to language.

"Facility management would often speak one language – kilowatt-hours – while management spoke another, that of the bottom line," he says.

"Together, we'd work on a business case that used both and made the business benefits clear."

British Gas Business senior corporate business manager Kirsten Tuchli says it is important to engage with the right stakeholders when developing a sustainability plan. "Energy can impact lots of parts of the business, from procurement to the landlords of your facilities. The right people need to be involved from the outset," she says.

Tuchli says it is imperative to understand and set goals and objectives. Suppliers like British Gas Business can work in partnership with retailers to deliver a bespoke energy package based on these objectives.

MAKING A BUSINESS CASE

Gobjczynski says the fact renewable energy costs are coming down makes the case easier to make.

"Today, when the cost of generating renewable energy is going down, we see that it can be more cost-efficient to generate renewable electricity on site than to buy it from the grid," he says.

"When it comes to heating, we see that carbon-free heating technologies like heat pumps provide the lowest cost of heat generation over the lifetime of the system, especially in European countries."

At Marks & Spencer, the business case starts before the products it sells reach the retailer. The retailer scores suppliers on sustainability, which includes energy efficiency. In logistics, it has improved the aerodynamics of its trucks and redesigned their interiors, which not only achieves a 30% reduction in fuel, but allows more stock to be transported on fewer journeys.

Working with its suppliers over the past 10 years, M&S has created the Plan A exchange, in which the cost benefits of various new processes and technologies are shared between retailer and supplier, and also within the supply base itself.

"In that way, we build a library of business cases to support these investments," Datta says.

M&S has also been working to buy energy more wisely. This starts with understanding the energy profile of every single office, warehouse and store. Using smart meters, the retailer is able to get live data describing energy usage and build up an energy profile over long periods.

Although the data can be accessed online from anywhere, the most significant benefit comes from sharing the information with building users. "It raises awareness of energy usage and helps to bring about behaviour change," says Datta. "We back up the information with training and engagement campaigns. This was one of our early quick wins."

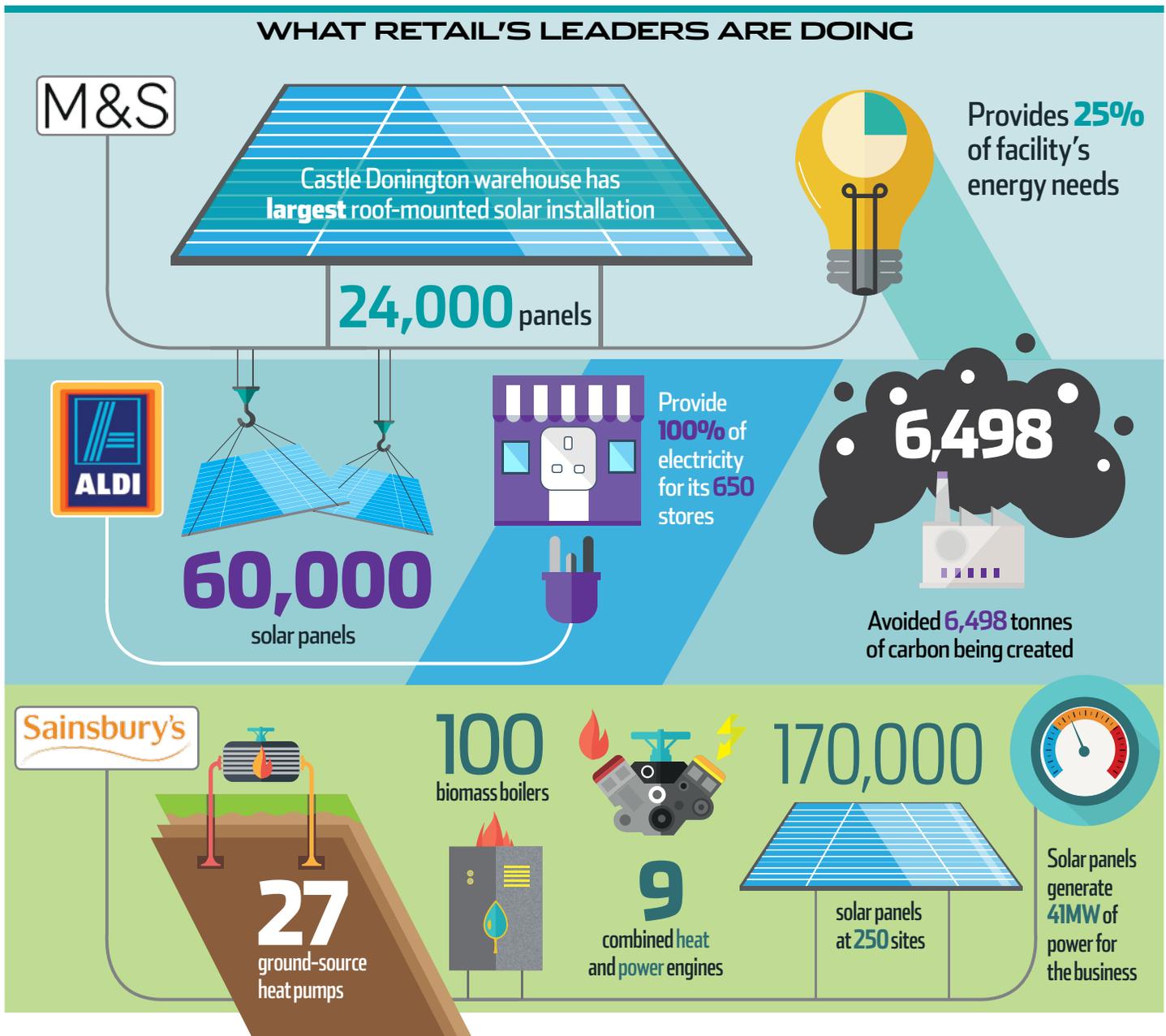
The next step was to use the data to better control energy usage through smart control of store facilities. "If there are spikes in energy usage, then you can interrogate that and see if there is something we can do to change it," says Datta.

Having consumption data also helps M&S vary its energy usage to avoid periods of peak demand.

Tuchli says smart metering is the "first part of the puzzle" when it comes to a sustainability plan. "It's the first port of call. You can get data daily on your energy usage. That allows retailers to build awareness and set goals," she says.

Building understanding about energy usage in stores is particularly important, Tuchli adds. "Store

WHAT RETAIL'S LEADERS ARE DOING



managers are, of course, more focused on sales targets than the power they use. The education piece is very important," she says.

Sainsbury's has also been working on reducing consumption and buying energy more effectively. The retailer now uses 11.6% less electricity than in 2005, despite growing its store space by more than 50%, says head of sustainability Paul Crewe. "Our number-one goal is to reduce energy consumption, and we're making good progress," he says.

Sainsbury's also flexes its demand on the energy grid to avoid peak periods. To do this, it uses data analytics to forecast near-term usage and demand. "The system allows us to temporarily disconnect equipment to free up electricity for others. For example, our fridges may be able to temporarily shut off, while still retaining an appropriate temperature," says Crewe. "When there is less demand, equipment is switched on to make use

of the surplus. Not only does this help us reduce pressure on the grid and carbon emissions, but it also means we can avoid peak-time pricing, thus reducing our energy bills."

NEW TECHNOLOGIES

British Gas parent company Centrica sees three trends shaping the landscape: consumer attitudes, connectivity and clean energy.

These are creating a fundamental shift, opening up new opportunities for retailers and giving customers greater control.

John Hartley, head of propositions at Centrica Distributed Energy and Power, says: "The energy landscape is undergoing massive change, as new technologies like Panoramic Power sensors – which monitor the flow of electricity and can send information wirelessly in real time – are adopted and the market embraces innovation.

"Increasingly, customers tell us that they want affordable energy, choice and control. They want to reduce carbon emissions but, above all, they want simplicity. Progressive retailers now think about energy in an entirely new way: where once it was seen as a cost, they now see it as a source of value, resilience and competitive advantage.

"We are working to help customers turn their energy into an opportunity. In practice, retailers can take a more proactive approach to energy use and make it work harder for them."

Retailers can group energy projects into three areas: those taking the long view on ROI; easy wins they can bootstrap on to existing processes; and projects that spread the burden (see box, overleaf).

While improving energy efficiency can boost retailers' bottom lines directly, it can also be good business in other ways. It can help to gain and retain customers, as the next chapter explores.

THREE APPROACHES TO CUTTING ENERGY COSTS

THE LONG VIEW

This approach is capital intensive and requires upfront investment in initiatives such as renewable energy, as well as using ground-source heating and cooling to improve overall efficiency. Examples of retailers taking the long view include:

- **Marks & Spencer**, which has built the UK's largest roof-mounted solar PV installation in its Castle Donington warehouse. It boasts 24,000 panels and provides 25% of the energy needs of the facility.
- **Aldi**, which has 60,000 solar panels across 240 stores and distribution centres. Energy from these panels, together with a network of renewable electricity, provides all the electricity for its stores and has avoided 6,498 tonnes of carbon emissions to date across the UK and Ireland.
- **Sainsbury's**, which has installed nearly 100 biomass boilers and 27 ground-source heat pumps, as well as nine combined heat and power engines and 170,000 solar panels. Installed at more than 250 sites, at peak its solar panels can generate 41MW of power for the business.



Sainsbury's is taking a hard line on sustainability

BOOTSTRAPPING

This approach suggests small changes in processes can lead to significant cost savings. Tesco and Marks & Spencer, for example, have shown that small behavioural change among store and warehouse staff can add up. Sainsbury's also believes that awareness campaigns are an important part of the energy efficiency picture.

Paul Crewe, head of sustainability at Sainsbury's, says: "Our Greenest Grocer programme was an internal campaign to help colleagues in store reduce their energy use. By encouraging people to take simple actions – like closing fridge doors and turning down ovens – we've saved nearly 8,000 tonnes of carbon emissions and cut £2m from store budgets."

Elsewhere, Sainsbury's has installed efficient lighting in stores and introduced LED lighting in more than 670 stores, depots and support centres – nearly half its estate. Retailers and analysts agree that LED lighting, although a popular choice, is still underused. The payback period is between two to three years – faster than for renewable energy projects.

SPREADING OUT

Dispersing sustainability efforts to customers and supplier operations can also help to develop new business models. Aldi is among the retailers that have looked to its supply base to help reduce costs and emissions.

Mary Dunn, communications director at Aldi UK and Ireland, says: "Our efficient supply chain helps us to reduce emissions across the business, not just in stores. We source produce from the UK wherever possible, which cuts down on travel time. Sticking to a carefully selected range allows us to better predict stock levels and only deliver what is needed. This reduces the amount of surplus needing to be removed from stores, further shrinking the carbon footprint of our distribution infrastructure."

Meanwhile, Marks & Spencer has even collaborated with customers and employees to help fund its renewable energy schemes. Through the M&S Energy Society, it offers them the opportunity to invest in solar PV programmes through green bonds with a 5% return.



CHAPTER 2: DRIVING INNOVATION

The UK's largest retailer, Tesco, made its position clear in May 2017 when it committed to using 100% renewable electricity by 2030.

The target comes with what Tesco terms "tougher science-based" carbon-reduction goals, specifically designed to help combat climate change and reflect the 2015 Paris Agreement to limit global warming to 1.5°C.

Tesco has already achieved a saving of around £200m per year through energy and refrigeration efficiency. Similar savings can be achieved in the manufacturing stages of the grocer's supply chain, according to Tesco head of climate change and sustainable agriculture Kené Umeasiegbu.

Ikea's Gobjczynski says its sustainable initiatives also drive real cost savings. "We spend hundreds of millions of euros on energy each year. Energy is the second largest cost in our stores, so investing in our own energy supply makes good business sense as it protects us from fluctuating energy prices," he says.

But it is not just about saving money. These energy-saving programmes also help to build customer loyalty.

CUSTOMER CONSCIOUS

"We have performed customer research that shows the vast majority of Ikea customers are interested in sustainability and want us to help

them live a more sustainable life at home," Gobjczynski continues.

"They also want to purchase from a company that is responsible. We strongly believe that sustainability should be for the many, not just the few who can afford a premium price."

Sainsbury's Crewe agrees that sustainable initiatives provide goodwill in both customers and staff.

"Given our commitment to sustainability, we've built a good reputation among our customers and colleagues alike. We know that people want to shop with companies who are doing the right thing, so it's important for us to demonstrate that we're doing this," he says.

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Paul Crewe, Sainsbury’s

Environmental credentials are especially important as millennials begin to make up a significant proportion of potential customers.

This age group is made up of particularly socially conscious shoppers, says Jenny Davis-Peccoud, a partner at management consultancy Bain & Company.

“The drive is coming from consumers – including millennials – who are more sustainability conscious. Around a third are looking for retailers to make a positive impact on the world, while half say they look at packaging for information about sustainability,” she says.

M&S sees its role as helping consumers and employees to improve the environment and fight climate change by proxy.

Datta says: “From a staff morale and traction point of view, our people take a great deal of pride in Plan A.

“At the same time, customers want to do good, but they have incredibly busy lives. They want to make a difference, and brands like M&S make it easier for them to do so.”

CONSUMER PERCEPTION

Market prominence is also an important benefit of sustainable energy investment. Start-up electric vehicle manufacturer Tesla, with its charismatic chief executive Elon Musk, has overtaken traditional manufacturers such as General Motors and Ford as the most desired US car brand.

Jeremy Parsons, head of energy and renewables at Kingfisher, says it is important to be seen to be sustainable where possible. For



M&S says shoppers want retailers to improve the environment on their behalf

example, in its retail outlets in southern France, the DIY group positions solar PV cells on top of its carports.

“Not only do they generate electricity, but cars don’t get so hot in summer or wet in winter,” he says. “The customer becomes more aware of what we are doing. They see the benefit and get an improved shopping experience.”

Laura Timlin, director of business services at Carbon Trust, says: “If people see making energy-efficient and environmentally sustainable lifestyle choices as exciting and something they want to aspire to, then that is a good thing. We want people to engage with these ideas. I’ve seen

what Tesla is doing and it is very exciting. Let’s hope they deliver on what they say they will do.”

However, she warns that businesses who present an image of environmental sustainability without being able to support it in the way they run the business could be putting themselves at risk.

“Credibility is crucial. You need to be able to back up or verify any claims that are made,” says Timlin.

However, retailers also face risk in rising energy prices, which improved efficiency and on-site renewable generation may be able to mitigate, as the next chapter demonstrates.

BRITISH GAS ACTION POINTS

- **Customers care** And not only in the premium market. Consumers from all backgrounds increasingly look for evidence of ethical and sustainable business practices from their retailers of choice.
- **Doing good through business is good business sense** As well as attracting and maintaining consumer loyalty, the move towards more – and more detailed – voluntary and mandatory reporting schemes means businesses with a better understanding of their sustainability position will save time, effort and money on compliance. It could also be a deciding factor for winning more business.
- **Stand out from the crowd** A strong sustainability agenda presents an opportunity to differentiate your place in the market. Make sure your culture mirrors your targets.
- **Let the actions do the talking, not the rhetoric** But still shout about your actions.
- **Don’t make false claims** In today’s world, it is very easy for journalists – and the general public – to research and gather information on what is really happening. Greenwash doesn’t wash.
- **Are you accountable?** Being a member of a voluntary sustainability verification scheme, such as ISO 14001 or The Planet Mark, can help prove your credentials. Credibility is crucial.



CHAPTER 3: EMBRACING EFFICIENCY

Energy prices have been on the rise throughout 2017 and this trend is likely to continue. The price of electricity is set to double between 2014 and 2034, according to figures published by the National Grid, the network responsible for the UK's energy supply.

British Gas Business' Tuchli says increased investment in energy production is driving up costs. In 2010, 31% of energy costs was made up of non-commodity costs. However, this figure is now 50%. By 2019, British Gas expects this to increase to 63%.

Retailers concerned about the impact of rising energy costs can take practical steps to reduce consumption and make operations more efficient.

Walmart plans for half of its power to come from renewable energy sources by 2025. In the UK, leading retailers, including Tesco and Marks & Spencer, are setting similar precedents.

Tuchli points out that on-site energy generation may only be possible for the biggest retailers: "Distributed Energy may not be suitable for high street stores.

However, those that have distribution centres or large warehouses could look at ways of making use of that space by investing in an array of technologies, which could generate an additional revenue stream for them."

Carbon Trust's Timlin agrees that there is still a lot smaller retailers can do.

"If a retailer has done very little on sustainable energy and energy efficiency, there are plenty of quick wins.

"It comes down to best practice, good housekeeping and employee engagement. You can build it into a routine at the end of the day:

understanding which equipment and lights to switch off and when."

Tuchli says Panoramic Power can help retailers maximise savings. This brings together wireless sensor technology and cloud-based analytics to provide actionable insights into energy usage.

She says this is a low-cost solution and British Gas Business is "flexible" in terms of pricing, billing clients over a time period that suits them.

Because savings through energy efficiency come after costs, they have a direct impact on the bottom line – a quick win for retailers, adds Timlin.

OFFSETTING RISK

However, larger retailers are looking to take back control of energy costs, which can change dramatically due to fluctuating commodity prices, by generating their own energy.

M&S, Tesco, Sainsbury's, Aldi and Kingfisher have all made major investments in renewable energy, especially PV solar panels, which have a return on investment period of seven years or more, according to Carbon Trust.

The payback for solar investment may be long term, but it is reliable and can offset risks in the energy supply market, says Kingfisher's Parsons.

"We've done a reasonable roll-out on solar PV and have a lot more coming online. By the end of the year, all our UK distribution centres will be fitted out with it," he says.

Kingfisher is also set to introduce battery storage to distribution centres to consume solar energy harvested in the day while operating overnight. "The challenge with distribution centres is that they operate 24/7, but you only generate PV energy in the day," says Parsons.

"With battery storage, we could potentially take 45% of the energy from on-site sources, rather than the grid. For a distribution centre, that is amazing."

Tuchli adds that battery storage has the benefit of being relatively easy to install and maintain.

In 2015, Kingfisher secured board approval for a £50m investment programme in renewable energy over three to five years. Parsons estimates the payback for the PV component could be eight to 10 years, but the investment also means the company will avoid risks further in the future.

"We're looking as much as 20 years down the line," he says. "We need to protect the business and there is a huge amount of uncertainty in energy prices. The government is expecting severe energy price increases over the next 10 years, because of a move to renewable energy and grid reinforcement."

As a result, the Kingfisher board was interested in avoiding these long-term risks as well as projects with more immediate payback periods.

"We have a portfolio of investment in efficiency and renewables. In certain investments, even though the payback is longer, the investment is low risk," Parsons says.

"It comes down to best practice, good housekeeping and employee engagement. You can build it into a routine: understanding which equipment to switch off and when"

Laura Timlin, Carbon Trust

BRITISH GAS BUSINESS ACTION POINTS

- **Be data driven** Understanding the data is crucial. For those that want the greatest control, tools like Panoramic Power enable individual assets, such as chillers or air-conditioning plants, to be monitored and optimised for running cost and system performance.
- **Get online** There are free and low-cost online tools to assist sustainability managers, so take advantage of this. For example, The Planet Mark provides online sustainability toolkits and British Gas Business' 360 platform helps track and analyse energy consumption to target cost savings.
- **Make it, manage it, store it** Distributed energy and energy storage technologies give retailers an incredible opportunity to manage consumption patterns to avoid the highest pricing and deliver substantial cost benefit.
- **Carry on building** Once you've tackled the things that are easy, make sure you clearly communicate the benefits derived. This helps gain support to focus on more difficult projects.



CONCLUSION: KEY TAKEAWAYS

Retailers facing rising input costs and suppressed consumer confidence might look to energy projects as candidates for cuts. But they may be making a grave mistake.

Energy efficiency need not be capital-intensive. Even small changes to employee behaviour can have a significant impact on the bottom line.

Smarter energy consumption, with real-time metering, can also quell demand, as can the transition to energy-efficient LED lighting, both of which require some investment.

Renewable energy projects require serious consideration and significant capital investment. However, after a bedding-in period, they can

provide strong returns, improve retailers' traction with consumers and guard against energy price volatility long into the future.

Retailers faced with developing energy efficiency and renewable generation programmes might ask if they can afford to take them on. The real question, though, is if they can afford not to.

PARTNER COMMENT

It is important to remember that a sustainable business is one that not only protects the environment, but also looks after the human and economic impacts of its operations.

The introduction of the Modern Slavery Act 2015 has shifted the position of retailers, who are now held accountable for the treatment of workers by their agents and partners further down the supply chain.

As information becomes increasingly easy to access, it is only reasonable to assume that this spotlight will eventually, either in law or public consciousness, extend to other aspects of ethical business, such as environmental performance. We at British Gas Business are proud to work with retailers to support their sustainability targets.

Our Distributed Energy team has already helped a number of organisations to reduce both cost and carbon emissions.

Our energy buying teams work to support businesses contracting for renewable electricity and green gas, purchased when the market is optimal to keep costs low.

Lastly, our experienced energy management advisors can help businesses identify and reduce excessive consumption and avoid consumption during expensive periods.

Together, we can form a powerful partnership with any retailer and help make a real difference.

Kirsten Tuchli, senior corporate business manager, I&C energy, British Gas Business



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