

Foreword

Meeting our climate change commitments means we must make a rapid switch away from fossil fuels, and businesses can play a vital role in the low-carbon transition.

I was lucky enough to be part of the Aldersgate Group team that formulated the strategy on electricity labelling: Enable the Label, The case for electricity labelling in the UK. We found that many companies wanted to support renewable electricity, but were confused by a bewildering variety of costs and schemes which made it hard to be sure of the carbon content of what they were buying.

Electricity is the highest carbon product that we buy and a clear label allowing companies to understand the consequences of their buying decisions will create change. Think how labelling has driven sales of the most energy-efficient devices, or how nutritional labelling allows shoppers to make healthier choices.

Government can also make a big difference. All the focus of policy to date has been on the supply side; the Renewables Obligation, the Feed in Tariff, Contracts for Difference, are all designed to make suppliers supply lower carbon electricity.

Policy has missed the other 50% of the market, the customers that buy that electricity. The customer can make a big difference if given the opportunity. We need to provide accurate information about the carbon emissions for which each customer is responsible, standardise reporting of electricity use and increase transparency.

Companies want to do the right thing but need clear solutions. Energy labelling, coupled with a greater awareness of the low cost and business benefits of renewable power, are set to take it mainstream. And the greater the demand from business the more we will see investment flow from fossil fuel generators to low-carbon renewables.

Richard Tarboton, Executive Director, EY

Executive summary

Leading corporations around the world are tackling climate change and driving progress toward a low-carbon economy by using renewable electricity to power all their operations.

Apple, Google, Nike and BMW are among the pioneers at the forefront of this global business trend, recognising that tackling climate change is vital to their future success and also brings powerful commercial benefits.

World leaders signalled the end of the fossil fuel age at the Paris Climate Summit when they agreed to limit climate change to a maximum 2°C. Fossil fuels currently generate about 70% of greenhouse gas emissions¹, so a rapid shift to low-carbon electricity is essential.

The private sector accounts for 77% of electricity consumption worldwide² and over 56% in the UK³ so it has a key role to play in meeting climate change targets and supporting a shift to renewables. This will require nearly half a trillion dollars of investment globally every year for 25 years.⁴

Switching to renewable power is surprisingly inexpensive. It adds less than 1% to power bills and brings powerful business benefits which give companies scope to extract far greater value than they invest.

- It is a quick way for companies to make big reductions in their carbon footprint. They can now count the renewable electricity they purchase against their carbon targets and reduce the emissions they report.
- 2. It can build investor confidence and support company valuations by demonstrating that an organisation is aligned with the drive towards a low-carbon economy. A £352 billion coalition of investors, including Aviva, one of the UK's largest insurers, is specifically calling on businesses to commit to 100% renewable electricity.⁵
- 3. It sends a powerful message to employees and can form the centrepiece of an energy-saving programme. Many organisations can save up to 10% on energy costs by investing 1-2% of energy spend on an effective employee engagement campaign, according to the Carbon Trust.⁶
- 4. It can help win customers. Almost four in five consumers are more likely to buy from a consumer brand with a positive approach to sustainability and two thirds would recommend a brand because it either invested in its own renewable energy projects or bought most of its energy from renewable sources, a survey of 1,000 UK consumers found.⁷

Leaders from every sector are now buying 100% renewable electricity in the UK, supporting a growing market and helping the country meet its climate change targets. They include pioneers like the real estate company Land Securities; the industrial Saint-Gobain; the multinational retailer Arcadia, and the University of London, the country's second biggest university.

In response to business demand, SmartestEnergy has developed a suite of renewable electricity products with the UK's first energy label, clearly stating source and carbon content. Low-carbon electricity powers 14.4% of industrial and commercial demand but energy labelling could drive rapid growth and see it supplying up to 48.3% by 2020, according to a report by the Aldersgate Group, which represents businesses with a collective turnover of over £300 billion.8

However, too many companies still have not woken up to the opportunities of renewable power. Although 74 FTSE 100 companies have set emissions reduction targets only 38 purchased renewable electricity in 2015.9 They risk damaging their brand at a time when there are increasing expectations that business should play an active role in finding solutions to climate change.

The Paris Climate Agreement marks a turning point and the commitment to limit climate change to 2°C is driving a renewables revolution. Smart companies should rethink their energy supply and understand the benefits that switching to renewables can bring to their business, to the economy and to tackling the global threat of climate change.



Renewable electricity is the fuel of the future

Renewable energy pioneers are leading the way to a low-carbon economy

Many of the world's leading companies are committing to source their electricity exclusively from wind, solar and other renewable technologies. It is a global trend gathering momentum as more and more business leaders recognise that switching to renewable power is not just a vital move in the battle against climate change but also brings significant commercial benefits.

Apple, the world's second largest company, powers all its data centres with renewable electricity so it can say that all its software services, from downloading iTunes to updating Mac apps, are powered "by nature".¹⁰ The company now aims to power its global operations from 100% renewable energy. Similarly, Facebook has set a target to run half its global operations on renewable energy by the end of 2018, rising to 100%.¹¹

Google, Unilever, BMW and Nike are among 53 global brands (as of January 2016) who have joined the RE100 campaign and committed to using 100% renewable electricity across their global operations, to drive progress to a low-carbon economy. They come from a wide range of sectors including telecommunications, electronics, home furnishing, clothing, consumer goods, confectionary, IT, banking and insurance.¹²

Some 119 companies, including Sony, Pfizer and Coca-Cola, have set "science-based" targets to reduce their emissions in line with what is required to limit global warming to 2°C. 13 Investment in renewable energy use is one of the most prominent methods they are using.

It should be no surprise that these pioneers helping to build a low-carbon economy are also leaders in their sectors, because the ability to understand global trends and plan for the future is a key element of a successful business. Academic research shows that companies with high-scoring environmental, social and governance practices also deliver higher returns for investors.¹⁴

Businesses have powerful reasons to act on climate change

All over the world, businesses are waking up to the fact that climate change poses a direct threat to their activities. Companies are also under unprecedented pressure from politicians and investors to play their part in the transition to a low-carbon economy by switching to renewable electricity.

Climate change is the biggest threat to the global economy, according to the latest Global Risks report, a survey of almost 750 experts conducted by the World Economic Forum.¹⁵

Cecilia Reyes, Chief Risk Officer at Zurich Insurance Group, said: "Climate change is exacerbating more risks than ever before in terms of water crises, food shortages, constrained economic growth, weaker societal cohesion and increased security risks."

Burning fossil fuels for energy production generates about 70% of total global greenhouse gas emissions, ¹⁷ so tackling climate change will require replacing the highest carbon emitting sources of energy with zero carbon renewables.

Businesses have a huge role to play in the global effort to increase the share of renewable energy and deliver a better, healthier, more sustainable world. The private sector accounts for 77% of world electricity consumption, including industry, services, transport, agriculture and the energy sector, according to the International Energy Agency.¹⁸

The Climate Group, which leads RE100 with the Carbon Disclosure Project, has calculated that if the world's top 1,000 companies all switched to 100% renewable electricity, it would cut global carbon emissions by more than 3%. If the entire global private sector followed, that would cut global emissions by nearly 15%.¹⁹

IF THE WORLD'S TOP 1,000 COMPANIES ALL SWITCHED TO 100% RENEWABLE ELECTRICITY, IT WOULD CUT GLOBAL CARBON EMISSIONS BY MORE THAN 3%

World leaders reconfirmed their goal of limiting global warming to a maximum 2°C at the Paris Climate Summit. Almost every country in the world has published plans to reduce its emissions, and increased use of renewables features in 40% of these pledges, making it most popular energy-related measure. ²⁰ We can expect a new wave of regulations, including incentives and penalties for the private sector to shift investment into a low-carbon economy.

UN Secretary General Ban Ki-moon has called on global business leaders to double investment in wind and solar energy to \$600 billion a year by 2020, telling them to act decisively to hasten the transition to a low-carbon economy.²¹

"I call on the investor community to build on the strong momentum from Paris and seize the opportunities for clean energy growth," he told a UN investors' meeting. "I challenge investors to double – at a minimum – their clean energy investments by 2020."

More than 400 investors with \$24 trillion in assets signed the Global Investor Statement on Climate Change, pledging to work with companies they invest in to minimise climate risks and seek out opportunities to invest in renewable energy.²²

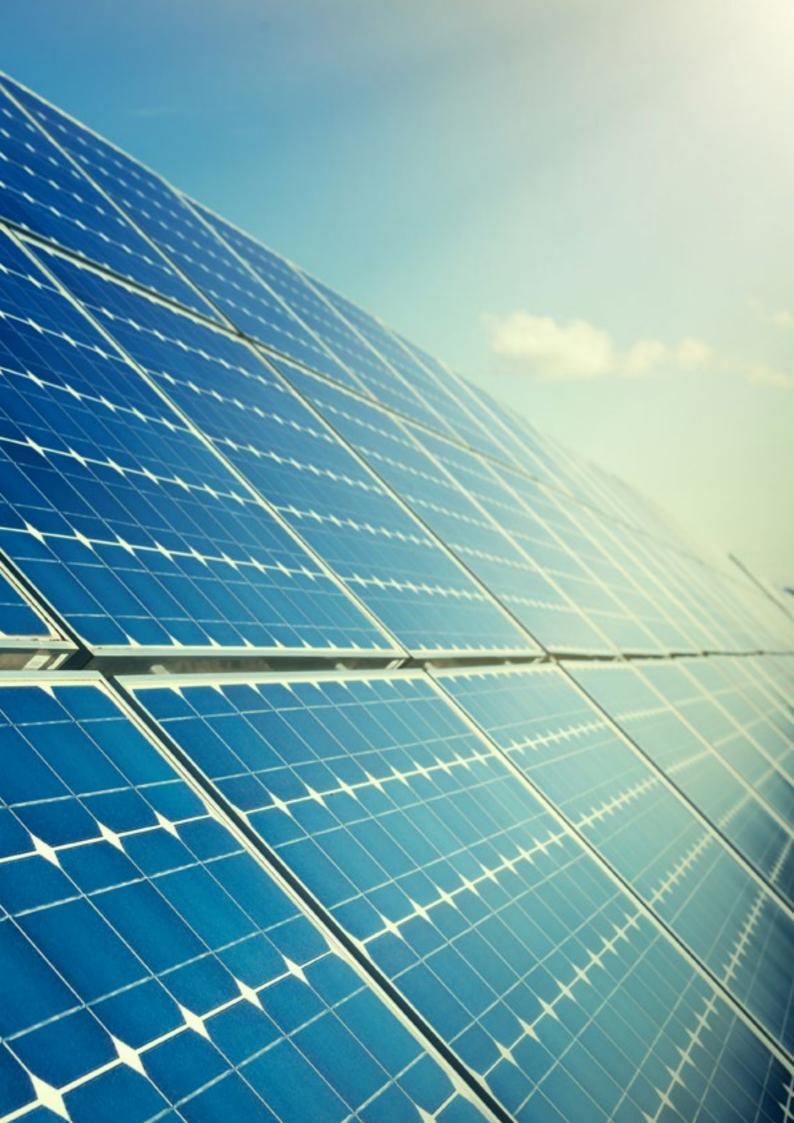
A £352 billion coalition of investors, launched during the Paris Climate Summit, is specifically calling on businesses to commit to 100% renewable electricity by signing up to RE100. Aviva, one of the UK's largest insurers, is one of 20 founding members, who include major public and private funds in the UK, Norway and France and are coordinated by the activist investor group ShareAction.²³

The scale of the transition cannot be underestimated. The International Energy Agency (IEA) has calculated a "Bridge Strategy" to meet the 2°C target, where renewables would account for 37% of global electricity generation by 2030, nearly double today's levels.²⁴

Growth in renewable electricity is accelerating. In 2014 a record 130 gigawatts of power plants came on stream making up 45% of all new power capacity globally.²⁵ Clean energy investment reached a record \$329 billion in 2015 with wind and solar becoming increasingly cost-competitive.²⁶ But it has been calculated that spending on renewables will have to average \$484 billion a year for the next 25 years to meet the 2°C target.²⁷

A £352 BILLION COALITION OF INVESTORS CALLS ON BUSINESSES TO COMMIT TO 100% RENEWABLE ELECTRICITY BY SIGNING UP TO RE100





Powering the transition to a low-carbon economy

Against this background, business is taking a leadership position on climate change. Progressive companies were an important voice at Paris, urging governments to take ambitious action, making big commitments of their own and calling on the wider business community to do more.

In Britain, the private sector accounts for the majority of electricity consumption: industrial and commercial businesses account for over 56% of total UK electricity demand.²⁸ It is already playing a key role in meeting national climate commitments and driving growth in demand for renewables, but there is scope to do much more.

The Confederation of British Industry has called on the Government to deliver a clear policy framework to unlock investment in renewables and other low-carbon energy projects.²⁹

Nearly a quarter (23.5%) of Britain's electricity is already generated by renewables ³⁰, and the government is committed to reaching 30% by 2020.³¹ But PWC has calculated that in order to meet its climate change commitments, the UK may need to source half its electricity from renewables by 2020.³²

SmartestEnergy supplies renewable energy to 475 corporate organisations

contracting around 4.2 terawatt hours in 2015. These customers represent 2.8% of total UK industrial and commercial energy demand and the renewable power they purchased last year avoided 2.24 million tonnes of carbon dioxide, equivalent to taking nearly one and a half million cars off the road.³³

Most companies now understand the need for action on climate change. But not enough understand that sourcing 100% renewable electricity is one of the quickest and cheapest ways of reducing their emissions and can bring direct business benefits.

Some 99% of FTSE 100 companies now report their direct carbon emissions from their facilities.³⁴ Three-quarters have gone further, setting emissions reduction targets. And more than half are now reporting broader emissions, beyond their facilities, such as business travel.

However, only 38 FTSE 100 companies have purchased renewable electricity. That is up from 25 companies in 2012, but there is still a long way to go. Companies which ignore this issue are missing commercial opportunities and risk damaging their brand at a time when there are increasing expectations that business should play an active role in finding solutions to climate change.

INDUSTRIAL AND COMMERCIAL BUSINESSES ACCOUNT FOR OVER 56% OF UK ELECTRICITY CONSUMPTION



Renewable electricity offers powerful business opportunities

Renewable electricity is surprisingly inexpensive

Businesses are often surprised by how little it costs to switch to 100% renewable electricity – less than 1% on power bills.

The price large business customers pay for their electricity is made up of four main components: the cost of the electricity; the cost of using the National Grid's system to receive that electricity; industry taxes and levies; and supplier service costs.

Buying renewable electricity requires a certificate to guarantee its origin, and this currently adds only a small increment to these generic costs. This means buying renewable energy makes commercial sense for many organisations when taking into account a range of other business benefits.



Customer story: Saint-Gobain

Saint-Gobain is one of the first industrials to switch to 100% renewable electricity. It is a world leader in the design, production and distribution of construction materials, delivering innovative products and services including insulation, plasterboard and glass.

Linda Burgess, UK Purchasing Manager, said: "Buildings have a big impact on our planet and society at large. Saint-Gobain has a vision of being leaders in sustainable habitat and construction. Buying renewable power is in harmony with that vision."

Saint-Gobain has been working with SmartestEnergy for five years because of its renewable product, relationships with independent generators and innovative approach.

Linda said customers wanted to know whether they used renewable electricity, and the decision had also a positive impact on staff.

"Sourcing 100% renewable power at a marginal cost increment can be justified to do the right thing, and it links to our strategy of reducing embodied carbon in our products with the subsequent improved impact on the built environment. We are doing something good that internal and external audiences want to know about."

Renewable electricity cuts your carbon footprint

Switching to 100% renewable electricity helps to reduce demand for fossil fuels which contribute to pollution and climate change. Companies can now count the renewable electricity they purchase against their carbon targets and reduce the emissions they report, thanks to a change in guidelines.³⁵

All UK companies listed on the main market of the London Stock Exchange are required to measure and report greenhouse gas emissions from their various activities, such as manufacturing, travel and electricity consumption.³⁶

The most common global carbon reporting standard is the Greenhouse Gas (GHG) Protocol Corporate Standard, which includes "Scope 2" emissions from purchased electricity. Until recently, companies were only allowed to report average emissions from the National Grid, rather than emissions from the source of the electricity they purchased.

New "market-based" accounting now allows companies which buy renewable electricity to report the reduction in their carbon footprint, provided the renewable electricity is rigorously sourced and certified.



Customer Story: University of London

The University of London is Britain's second biggest university by number of students. The central university purchases energy in a consortium with five other universities and colleges and has a sustainability target of purchasing 100% renewable electricity.

John Bailey, Sustainability Manager, said: "The cost of paying the extra for renewables was so small in comparison to our annual bill it was pretty much insignificant. It was incredibly cheap."

He said that flexible purchasing offered by SmartestEnergy had saved the group hundreds of thousands of pounds in comparison with their previous fixed price contract. Combined with the 100% renewable product it was generating a lot of interest from other universities.

John also said there was a big reputational benefit, sending a strong statement to students and staff that the university was committed to sustainability.

"It is a good story. When we produce our carbon figures, we are now talking about the fact that we're only buying renewable energy. It's such an easy thing for people to understand."

Renewable electricity can build investor confidence

A strong sustainability strategy demonstrates that an organisation is aware how climate change and other global trends may affect its business, that it is taking action to future proof its strategy, and that it is part of the drive towards a low-carbon economy.

Stock markets are now highlighting sustainability pioneers through initiatives such as the Dow Jones Sustainability Index and the Carbon Clear FTSE100 "Top 20 Performers".

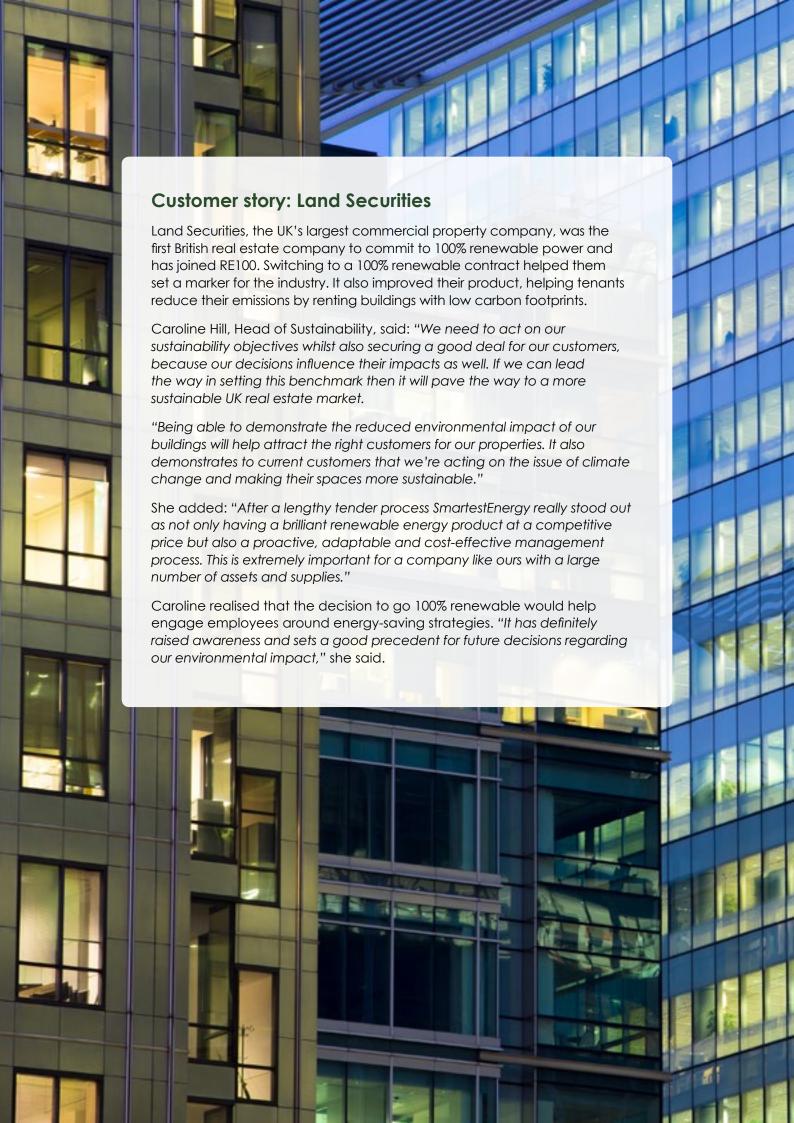
Investors are increasingly aware of these issues, and are putting increasing pressure on companies to adopt low-carbon policies (see previous section). A decision to switch to renewable electricity can send a clear signal that boosts confidence and supports company valuations.

ShareAction coordinates the £352 billion coalition of investors calling on businesses to commit to 100% renewable power. Chief executive Catherine Howarth said: "I think it's going to hugely accelerate the pace at which big corporates around the world commit to transitioning their businesses to using renewable energy for electricity.

"When shareholders – particularly when working collectively – get right behind something that also makes good business sense it really accelerates the pace at which businesses' boards look seriously and move on something." ³⁷

STOCK MARKETS ARE NOW
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Renewable electricity builds brand reputation

Sustainability messages resonate with consumers who are increasingly concerned about the environment, and want to reflect their concerns in the products they buy. Committing to sustainability can tell a compelling story which enables a company to stand out from the crowd and builds brand loyalty.

The world's biggest survey of public attitudes to climate change last year found that nearly four fifths of global citizens were very concerned about climate change.³⁸

A survey of 25,000 UK consumers by business consultancy Future Thinking found that a commitment to using renewable energy wherever possible was one of the most important messages companies could send about their sustainability, cited by 37% of people.³⁹

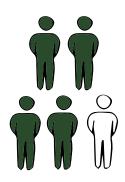
"Not only do shoppers want to see more sustainable actions, they believe that a brand who demonstrates active and positive participation will be a brand they feel closer to and are more likely to see as leaders in their field," said Claudia Strauss, Managing Director of FMCG and Shopper, Future Thinking.

A survey conducted for SmartestEnergy ⁴⁰ found that almost 4 out of 5 consumers (77%) were more likely to buy from a consumer brand with a positive approach to sustainability, and would select greener brands as a way of improving their own environmental impact (74%).

Two thirds said they would recommend a brand on the basis that it either invested in its own renewable energy projects (67%), or purchased most of its energy from renewable sources (68%).

Strong sustainability credentials can also help businesses win corporate clients. Sustainability leaders are increasingly going beyond the measurement of their own emissions, to those of their suppliers and customers. Many companies in the retail sector in particular are "engaging directly with suppliers to encourage use of renewable power where there is a strong business case," according to The Climate Group.⁴¹

ALMOST 4 OUT OF 5 CONSUMERS WERE MORE LIKELY TO BUY FROM A CONSUMER BRAND WITH A POSITIVE APPROACH TO SUSTAINABILITY



Renewable electricity can power money-saving energy-efficiency programmes

A commitment to 100% renewable electricity can form the centrepiece of an energy-saving strategy with the potential to generate savings that far outweigh the costs of the investment.

The process of switching to renewable power can be an opportunity for organisations to review electricity consumption across their operations, identifying best practice energy-saving products, appliances and practices.

Many organisations can save up to 10% on energy costs by investing 1-2% of energy spend on an effective employee engagement campaign, according to the Carbon Trust.⁴²

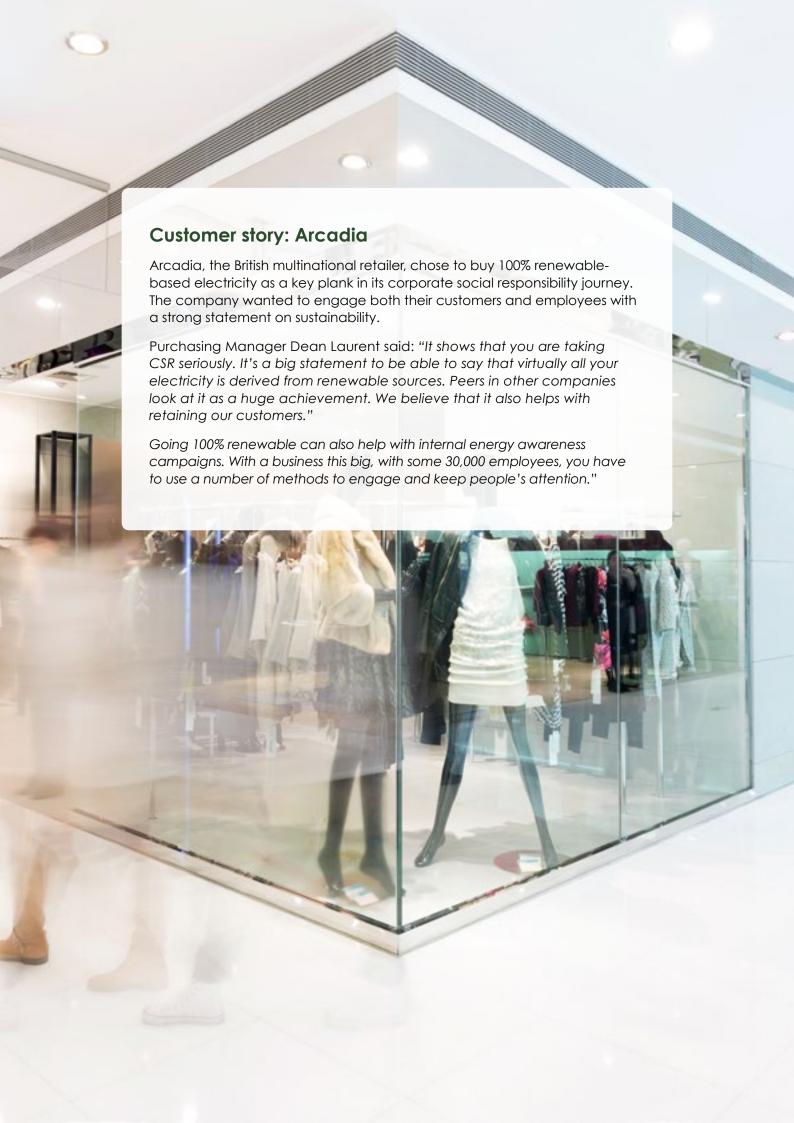
When Marks & Spencer launched Plan A in 2007, the plan to boost sustainability throughout its operations was expected to cost £200 million over five years but it saved the company £320 million instead. The plan, which included energy saving actions like installing low-energy lighting and introducing more efficient refrigerators, cut the retailer's carbon footprint by 23% over the period.⁴³

Chief Executive Mark Bolland said at the time: "In the long-term, for this company to stay in the hearts and minds of customers, shareholders and all stakeholders, the brand needs to be built around trust and Plan A builds strongly around trust."

Switching to renewable power is an example of a bold, company-wide policy which can emphasise for staff that it is committed to sustainability from the top down. Employees are much more likely to be receptive to energy-saving messages and do their bit if they feel that the organisation they are working for is also committed to sustainability.

Many employees also want to feel proud of the company they work for. With concern for climate change and sustainability growing, a strong carbon cutting strategy can pay dividends in attracting and retaining staff.

SWITCHING TO RENEWABLE POWER IS AN EXAMPLE OF A BOLD, COMPANY-WIDE POLICY WHICH CAN EMPHASISE FOR STAFF THAT IT IS COMMITTED TO SUSTAINABILITY





Growing the renewable electricity market

The private sector and the renewable market

The renewable energy industry is now a fundamental part of the UK economy. The low-carbon and renewable energy sector employed 233,000 people in 2014, across more than 96,000 companies, which collectively exported goods and services worth £4.8 billion.⁴⁴

The private sector consumes more than half the electricity in the UK and can play a critical role in building this market. Many big companies are investing directly in wind, solar and other on-site renewables to meet their carbon reduction targets. As of 2014, UK businesses had developed some 560 megawatts of on-site renewable energy. 45 Others are contracting direct power purchase agreements with renewable energy generators. However, these solutions are not suitable for every organisation.

SmartestEnergy aims to build the UK's clean energy sector by stimulating and responding to corporate demand to buy renewable power. The company is Britain's leading purchaser of electricity from independent generators. It buys directly from nearly 500 UK electricity generators, and supplies it to 475 customers, including some of the biggest brands on the UK high street.

SmartestEnergy has developed a 100% renewable electricity product for

corporate customers with an energy label clearly stating the source and carbon content. The label is similar to those which show energy efficiency, and companies can use it to demonstrate their commitment to customers, employees and stakeholders.

It is the first product of its kind in the UK, and was developed in response to calls from business for energy labelling. The Aldersgate Group, which represents businesses with a collective turnover of over £300 billion, calculated that the measure could lead to low-carbon electricity providing nearly half of industrial and commercial sector needs by 2020, up from 14.4% to 48.3%.46

"SmartestEnergy's work in taking forward the development of an electricity label is welcome. This should incentivise more businesses to buy renewable electricity by increasing transparency and enabling more informed decisions," said Sarah Williams, Policy Manager, Aldersgate Group.

Defra has said: "It is possible that a very significant increase in long-term contracts for the purchase of renewable energy could incentivise new investments in renewables which would not have happened otherwise."⁴⁷

SmartestEnergy's product has been designed to meet the strict criteria which allow customers to use purchases of renewable power to report reduced emissions. Every megawatt hour of renewable electricity supplied is backed by UK-recognised origin certificates, which are tracked and allocated using SmartestEnergy's Emissions Factor Model. The model calculates the cradle-to-grave carbon emissions associated with each electricity supply product and has been certified by Carbon Trust Certification as capable of generating footprints compliant with the GHG Protocol Product Standard. The model also calculates Scope 2 carbon emissions and the fuel mix of generation sources included.

"This new service from SmartestEnergy, supported by the Carbon Trust's expertise in carbon footprinting, is providing exactly the kind of transparency required to ensure that suppliers of electricity are not contributing to double counting or under reporting of corporate emissions, by enabling certificates to be tracked and attributed to specific tariffs or customers," said Tom Delay, Carbon Trust Chief Executive Officer.

Robert Groves, Chief Executive Officer at SmartestEnergy, said: "If businesses are going to choose renewable electricity they deserve to be fully informed about where it comes from, so we've built this product to bring transparency to the market - and it's exciting to see it resonating with so many organisations."

SmartestEnergy also responds to demand from companies that want to go further and align their brands with their sustainability ambitions. It provides a Natural Renewable product that only supplies renewable power generated from wind, sun or water. It can even supply electricity sourced directly from specific locations or projects with its Specific Renewable product.

"We recognise that different companies have different reasons for buying renewable electricity and being able to select the type or location of generation is valuable as long as we can provide confidence in its authenticity," said Mr Groves.

SmartestEnergy's customers are already making a significant contribution to Britain's climate change targets. In 2015 its renewable customers represented 2.8% of total UK industrial and commercial electricity demand. The 4.2 terawatt hours of renewable power they purchased avoided 2.24 million tonnes of carbon dioxide, equivalent to taking nearly one and a half million cars off the road.⁴⁸

SMARTESTENERGY AIMS TO BUILD THE UK'S CLEAN ENERGY SECTOR BY STIMULATING AND RESPONDING TO CORPORATE DEMAND TO BUY RENEWABLE POWER

Ensure your switch to renewable power delivers maximum value

Climate change should concern every business. It poses the single greatest threat to the global economy and threatens activities of companies all over the world. World leaders have committed to limiting warming to 2°C, and now investors, customers and staff are looking to businesses to take action.

Pioneers like Apple, Google, Unilever and BMW understand the benefits that switching to renewables can bring to their business, to the economy and to tackling the global threat of climate change. When leading companies from all sectors are committing to renewable power, all businesses should take note and rethink their energy supply.

Switching to 100% renewable electricity is arguably the quickest and cheapest move a company can make to reduce its carbon footprint, particularly when coupled with a wider energy efficiency strategy. It adds less than 1% to power bills and can bring a range of business benefits which can be worth far more.

These include:

- Building investor confidence;
- Brand-building with consumers and corporate customers;
- Engaging staff on money-saving energy efficiency programmes.

We call on companies to:

Compare the cost of your current electricity contract with renewable power

Review your energy needs and the potential for savings

Assess the full range of **business benefits** from going renewable

Plan your switch to renewable power to **deliver maximum value**

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We would like to acknowledge our customers for their kind contribution to this report.

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We take our environmental responsibility seriously, therefore we have only printed a small number of copies of this report. Please download the report at smartestenergy.com/renewablesrevolution

