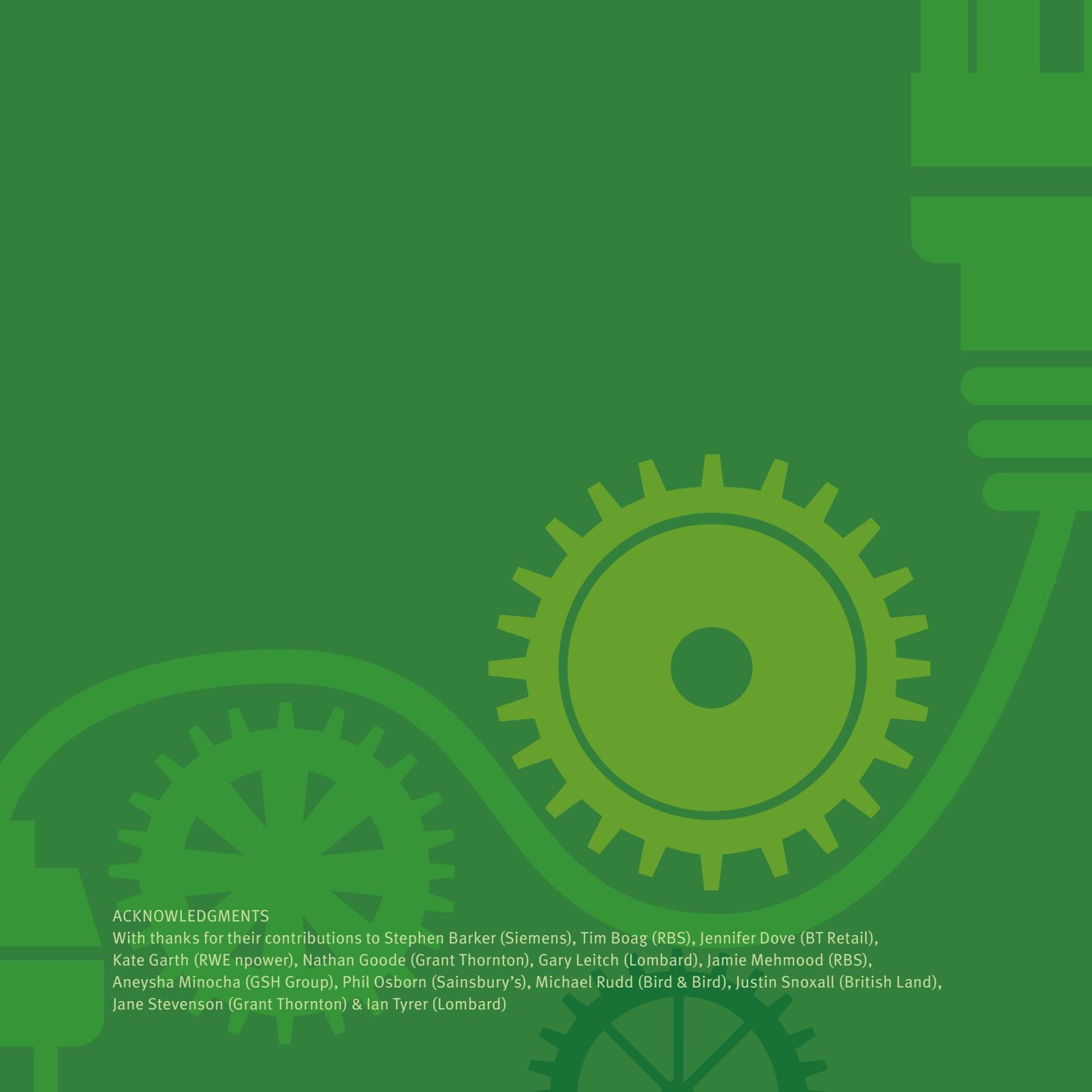


## Shining a light

Uncovering the business energy  
efficiency opportunity



The background is a solid green color with several stylized, semi-transparent gear and mechanical motifs. A large gear is prominent in the center-right, and another smaller gear is visible in the bottom-left. On the right side, there are vertical lines and a curved line that suggest a mechanical assembly or a gear train. The overall aesthetic is clean and industrial.

## ACKNOWLEDGMENTS

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# Executive summary

Energy efficiency has the potential to deliver a triple win for UK plc, the environment and the wider economy. Yet for far too long it has been the Cinderella of energy policy, largely in the shadow of the £110bn investment needed in energy generation over the next decade. But with the government's Electricity Market Reform programme now in the detailed design phase, and businesses starting to wake up to the threat of continually rising energy prices, an important opportunity lies ahead for both business and government to turn their attention towards energy efficiency – a chance that must not be missed.

The CBI carried out wide-ranging research for this report, which showed that many businesses are already recognising the clear and substantial benefits of using energy more efficiently. Better energy management can help firms to cut costs – shaving around 15% off large firms' energy bills – as well as enabling them to future-proof their business against long-term energy price rises and volatility. But beyond the savings to be made on the 'bottom line', plenty of businesses are approaching energy efficiency as a business growth opportunity, seeking to increase their competitiveness, grow their customer base and capitalise on new markets, both at home and abroad.

This business activity on the ground can translate to a material impact on UK growth and jobs, supporting a domestic market worth £17.6bn and employing 136,000 people across the country. Energy efficiency should also lead to a more secure, sustainable and affordable energy system in the UK, underpinning our long-term economic health.

But despite the clear benefits of energy efficiency, and the consistent improvements that many businesses have made, there remains a lot of untapped potential in the UK, with both technological and behavioural changes continuing to be overlooked by many. Indeed recent estimates show that some businesses are collectively paying £1.6bn more than they need to on their energy bills.

The reason for this wastage varies from business to business, however our research shines a light on several common challenges that all companies – even those at the cutting edge – have faced. A lack of awareness at all levels undermines business' attempts to better manage their energy use, and even when the will to make improvements exists, the necessary skills are often in short supply. This is compounded by a lack of joined-up working within and across firms, and further reinforced by difficulties in understanding and accessing finance. At the same time, our survey showed that businesses hold a dim view of government policy, with only 5% of respondents considering the current framework to effectively encourage energy efficiency.

Ultimately, if businesses want to overcome these challenges and get ahead of the curve, they must demonstrate commitment, innovative thinking and joined-up working. Firms that have led the way highlight the importance of leadership from the top of the organisation, as well as robust measurement processes in order to pinpoint exactly where improvements could be made.

Many businesses also found that they needed to draw on the skills and expertise of those in different parts of the organisation to develop a compelling business case, and cited the need for all staff to buy into the energy efficiency agenda, and to share in both the responsibilities and benefits. Those that have made significant strides have also looked beyond their own company borders to drive efficiencies down their supply chains and across sectors.

While it is clear that businesses do not need the government to guide individual investments in energy efficiency, policy-makers can and should set the parameters within which businesses are able to take action. As such, the CBI believes that the government must re-double its efforts to deliver a coherent energy efficiency policy framework. To do this, the Energy Efficiency Deployment Office must deliver meaningful progress in three key areas; effectively joining up energy efficiency policy across government, streamlining the existing policy landscape and ensuring any new initiatives add value, and stepping up its business engagement with regard to the design, implementation and communication of its policies.

Beyond the overarching landscape, there are instances where a more targeted approach is needed to plug specific gaps and support positive investment decisions. Importantly, this does not necessarily require new policies, but simply the further development and innovative use of existing levers. For instance, large users and energy-intensive industries could benefit from tailored support in financing long-term and high-cost investments, such as Combined Heat and Power, whereas mid-sized businesses often require help in managing up-front costs and understanding

the various initiatives on offer. A combination of long-term goals and targeted incentives could help overcome inertia in non-domestic buildings, and specific support may also be needed to facilitate the growth of the relatively immature energy efficiency products and services market.

The evidence points to the fact that both business and government still have a long way to go in order to fully unlock the energy efficiency opportunity – now is the time for both to step up to the plate and take energy efficiency out of the ‘too hard to tackle’ box. This report therefore argues that:

- **Energy efficiency can boost overall business and economic competitiveness**
- **But many businesses continue to overlook opportunities, while government policy has been hit and miss**
- **Businesses must take charge if they are to get ahead of the curve**
- **Government must step up its efforts to deliver coherent policies to support positive investments**

# Summary of recommendations

## RECOMMENDATIONS FOR BUSINESS

# 1

### **Demonstrate leadership at the top**

The senior management team should lead by example and set an overarching vision within which an energy efficiency goal may sit. This should be underpinned by an action plan, which must be owned and driven by the Board.

# 2

### **Measure and manage energy use**

Businesses should consider setting up systems to collect in-depth data of energy use across the business. This data could help to guide the selection of the most cost-effective solutions, as well as to assess the effectiveness of the energy efficiency measures chosen.

# 3

### **Develop a compelling business case**

An energy efficiency business case should use appropriately commercial language and demonstrate the full financial impact of the investment. Businesses could also look at blending a package of short and long-term investments together in order to present a more compelling case.

# 4

### **Make energy efficiency everyone's business**

Businesses should consider how to embed energy efficiency within business processes and share responsibility across the organisation for identifying and implementing improvements. Establishing employee awareness initiatives and investing in bespoke technical training for staff can also bring benefits to the business.

# 5

### **Drive efficiency down the supply chain and across sectors**

Businesses should work with the supply chain to encourage improvements in energy efficiency as these can reduce costs. By working with the supply chain, businesses can also foster innovative approaches that they can then apply directly.

## RECOMMENDATIONS FOR GOVERNMENT

### 1 Redouble efforts to deliver a coherent business energy efficiency policy framework

The Energy Efficiency Deployment Office should step up its efforts in three key areas:

- Joining up various strands of energy efficiency policy, particularly on heat and electricity
- Streamlining existing policy, with a focus on reporting requirements
- Setting out its business engagement plan in each of the design, implementation and communication phases.

### 2 Support large and energy-intensive users in reaching the high-hanging fruit

In order to support longer-term and higher-cost investments for large energy users:

- The government must establish a more coherent and joined-up policy for Combined Heat and Power
- The Green Investment Bank should actively engage with the business community to market its investment offering in industrial energy efficiency.

### 3 Bring mid-sized businesses out of the policy 'blind spot'

The government could further support SMEs by:

- Using the Business Bank to deliver awareness of finance for energy efficiency projects
- Stepping up action to develop the non-domestic Green Deal
- Simplifying the Enhanced Capital Allowance process.

### 4 Help overcome inertia in non-domestic buildings

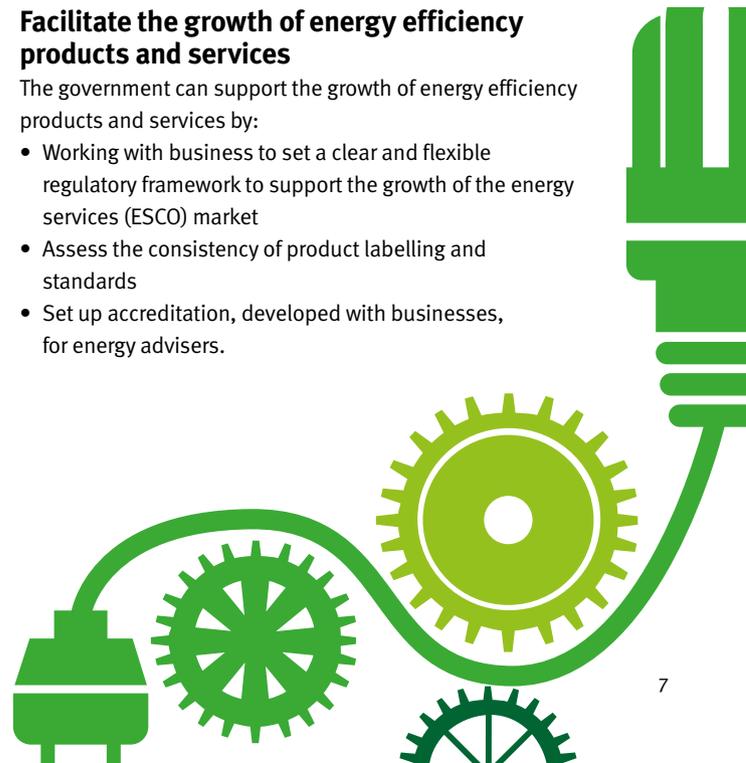
To improve energy efficiency in non-domestic buildings the government should:

- Provide certainty to the property sector by finalising Private Rented Sector regulations as soon as possible
- Consider the use of Business Rates as a lever to incentivise energy efficiency.

### 5 Facilitate the growth of energy efficiency products and services

The government can support the growth of energy efficiency products and services by:

- Working with business to set a clear and flexible regulatory framework to support the growth of the energy services (ESCO) market
- Assess the consistency of product labelling and standards
- Set up accreditation, developed with businesses, for energy advisers.



# 1 Energy efficiency can boost overall business and economic competitiveness

The CBI's research for this report (see **exhibit 1**) shows that many businesses are already recognising the clear and wide-ranging benefits of using energy more efficiently, with 80% of our survey respondents citing it as a priority for their company. Better energy management can help firms to cut costs – shaving around 15% off large companies' energy bills – as well as enabling them to future-proof their business against long-term energy price rises and volatility. But beyond the savings to be made on the 'bottom line', plenty of businesses are approaching energy efficiency as a business growth opportunity, seeking to increase their competitiveness, grow their customer base and capitalise on new markets, both at home and abroad.

This business activity on the ground can translate to a material impact on UK growth – together with energy efficiency in households, it could contribute to a 1% boost in GDP, as well as support a domestic market worth £17.6bn. Energy efficiency should also support a more secure, sustainable and affordable energy system in the UK, underpinning our long-term economic health.

## Exhibit 1 Report methodology

The conclusions in this report were drawn from a survey of 100 CBI members, in-depth interviews with over 20 members, and roundtable meetings with a small group of businesses. The participants covered a broad range of industry sectors – including energy-intensive industries (EIs), energy suppliers, retailers, financial institutions, energy efficiency product manufacturers and service providers, commercial landlords – and varied in size from small and medium-sized enterprises (SMEs) to multinational corporations. Our respondents also covered all regions of the UK.

## Many businesses are already seizing the energy efficiency opportunity

Using energy more efficiently (as defined in **exhibit 2**) can bring multiple benefits to businesses of all sectors and sizes, with many already investing in proven technologies to deliver consistent improvements. The CBI's survey showed that businesses across the board are looking seriously at what they can do to better manage their energy use. **Exhibit 3** shows that 80% of business respondents cite energy efficiency as a 'quite high' or 'very high' priority. The survey also found that 90% of firms had made energy efficiency investments within the last year, with the same number planning investments over the next 12 months.

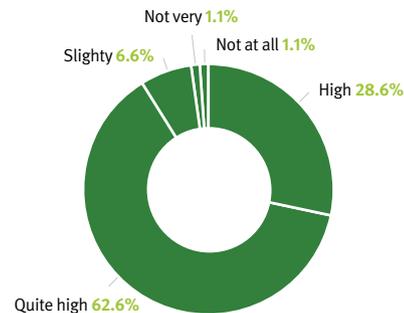
### Exhibit 2 Defining energy efficiency

Energy efficiency is at heart about getting more from the energy that we use (irrespective of the type), without reducing output. This can be achieved through no-cost technical or behavioural changes, such as optimising existing systems or turning equipment off when not in use, low to medium-cost measures, such as replacing lights, heating and air conditioning systems, and high-cost measures like full refurbishments or replacing entire production lines. In this report, energy efficiency is not used synonymously with energy intensity, which is a measure of how much energy is required to produce each unit of GDP. Energy intensity is a much broader term which is determined by a range of factors including the size and structure of the economy and the type of industry base.

### This can help businesses to save money and manage risks...

For many firms, particularly those for whom energy is a significant proportion of their operating costs, the primary motivating factor for investing in energy efficiency is to improve their 'bottom line' through reduced overheads and energy costs. A survey carried

### Exhibit 3 How much of a priority is energy efficiency for your business?



Source: CBI survey

out by the Carbon Trust in 2010 indicated that large firms could cut their energy bills by up to 15% through installing relatively simple measures. Furthermore, the Carbon Trust study showed that the investments required to achieve these savings can give an average Internal Rate of Return (IRR) of 48%, well above the minimum requirement set by most businesses.<sup>1</sup>

Not only can this help businesses to save money in the short-term, but it can enable them to mitigate the longer-term risk of rising energy prices – identified by 86% of our survey respondents as a challenge – resulting from a combination of wholesale price increases and the costs of government policies. According to figures published by the Department for Energy and Climate Change earlier this year, the average electricity bill for a medium-sized energy user

will go up by around 20% by 2020, while for energy-intensive industries the increase could be up to 30%.<sup>2</sup> Investing in energy efficiency improvements now can therefore put businesses on the front foot in the future.

### **...enhance their productivity, competitiveness and market position**

Beyond the savings to be made on energy bills, increased efficiency can boost productivity and competitiveness, particularly in the manufacturing sector. For example, a study cited in a recent report from the International Energy Agency (IEA) which analysed the impact of energy efficiency investments in five industrial plants in the US, showed that participating companies achieved an average of \$11,000 annual productivity benefits over and above the \$35,000 realised through energy cost savings<sup>3</sup> – capital which could then be re-invested to grow the business. Investing in sustainable solutions is also proven to improve asset values, with reports suggesting that a ‘green’ retrofit could increase property values by up to 8.2%,<sup>4</sup> as well as making buildings less exposed to business cycle volatility and less prone to occupancy risks.<sup>5</sup>

For some companies, energy efficiency will be incorporated into a wider sustainability plan as a means to enhancing a business’ corporate reputation and gaining a competitive edge within the market. While energy use may only make up around 5% of most business’ costs, it will account for the majority of their carbon emissions,<sup>6</sup> putting it high on the agenda for those whose motivating factor is to minimise environmental impact. Marks & Spencer’s ‘Plan A’ and Unilever’s ‘Sustainable Living Plan’ are good examples of energy efficiency being embedded within a wider corporate strategy which seeks to meet growing consumer demand, as well as shareholder pressure, for sustainable products and processes.

### **...and exploit new and growing market opportunities**

Many businesses are also taking advantage of the growing market for energy efficiency goods and services, both in the household and the non-domestic sectors. For example, the government’s flagship energy efficiency scheme, the Green Deal, aims to create a new market in retrofitting existing buildings, presenting opportunities for businesses to get involved in a number of ways – there are already over 20 companies registered as Green Deal Providers, including the likes of Carillion and Mark Group, with many more looking to become assessors, installers and financiers. Other businesses are tapping into the market to support public sector energy efficiency improvements. Centrica, for example, have been working with the Home Office to achieve a cash saving of £387,000 and emissions reduction of 17% (see **case study 1**).

### **This can contribute to overall UK growth...**

While individual businesses will reap the financial rewards of energy efficiency improvements, collectively this can make an important contribution to the UK economy as a whole. In line with the broader low-carbon economy, the energy efficiency market has defied the economic downturn, growing at just under 4% a year to reach sales of £17.6bn in 2010/11 and creating 136,000 jobs which are spread right across the country.<sup>7</sup> Growing the UK’s domestic market further will bring in more businesses and establish vital expertise that can then be exported to capitalise on a burgeoning global market. Indeed, exports from the UK energy efficiency sector were worth £1.8bn in 2010/11, with a significant proportion of this going to the emerging BRIC economies. China accounted for the largest amount at £105m.<sup>8</sup>

The impact of this on economic growth is clear. A recent report from the International Energy Agency (IEA) indicated that energy efficiency – in both businesses and households – could boost a country’s GDP by around 1% through increased spending due to



### CASE STUDY 1

#### **CENTRICA – DELIVERING AN INNOVATIVE NEW ENERGY EFFICIENCY SERVICE**

British Gas has been working with the Home Office to help them meet the emissions reduction targets for public buildings. The Home Office is meeting this through an Energy Performance Partnership (EPP), an innovative, energy efficiency solution offered by British Gas in partnership with Amey. An EPP consists of three phases:

##### **Phase 1 – Investment Grade Audit**

Used to baseline energy consumption and quantify potential savings to develop the commercial model and the metering strategy to support Phase 3 of the project.

##### **Phase 2 – Construction**

The installation of equipment, refitting of new technologies, upgrades of existing aged assets and optimisation. This phase can also include employee engagement and staff training programmes.

##### **Phase 3 – Monitoring and savings verification**

The measurement and verification of savings using international standards and well as the maintenance of the plant to ensure the savings are maintained.

As a result of the project, the Home Office partnership has already achieved a cash saving of £387,000 which has contributed to an overall saving of £1 million across the entire department. The project also delivered a 17% reduction in emissions which exceeds the government's average reduction of 14%.

lower bills, improved productivity and investment in equipment and services<sup>9</sup> – a small, but not insignificant figure, particularly given the current economic climate. Importantly, some of these benefits can be realised immediately. Unlike many of the energy supply projects in the pipeline, some of the smaller energy efficiency investments, such as building insulation, lighting replacements or boiler installation, are 'shovel ready' and can be implemented relatively quickly. As noted in the CBI's 2012 construction policy brief, this kind of repair, maintenance and improvement (RMI) work can act to bridge the current construction activity gap, thus aiding the economic recovery.<sup>10</sup>

#### **...and make our economy more secure and sustainable over the longer-term**

Importantly, greater energy efficiency should ensure a more secure, sustainable and affordable energy system, which is a major growth enabler and crucial to the UK's long-term economic health. With global energy prices having been on an upward trend for the past decade, and becoming increasingly volatile, energy efficiency at an economy-wide scale can reduce our dependence on, and therefore our exposure to, global energy markets. Just as a forward-thinking business could improve its market position by hedging against future costs, a more energy efficient UK would find itself well-placed compared to its international competitors.

Energy efficiency also presents one of the most cost-effective routes to meeting the UK's long-term goal to cut emissions by 80% on 1990 levels by 2050. Alongside energy efficiency's direct contribution to emissions reduction, it can also reduce energy demand and thus the required future investment in energy generation. To put that in context, DECC has estimated that there is enough energy efficiency potential to reduce energy generation by the equivalent of 22 power stations by 2020<sup>11</sup> – therefore improving the 'bottom line' of the UK economy.

## 2 But many businesses continue to overlook opportunities, while government policy has been hit and miss

Despite the clear benefits of energy efficiency and the consistent improvements that businesses have made, there remains a lot of untapped potential in the UK. With both technological and behavioural changes continuing to be overlooked by many, estimates show that some businesses are collectively paying £1.6bn more than they need to on their energy bills.

The reason for this wastage of course varies from business to business. However, our research identified several common challenges that all companies – even those at the cutting edge – have faced. A lack of awareness at all levels undermines business' attempts to better manage their energy use, yet even when the will to make improvements exists, the necessary skills are often in short supply. This is compounded by a lack of joined-up working within and across firms, and further reinforced by difficulties in understanding and accessing finance. At the same time, our survey showed that businesses hold a dim view of government policy, with only 5% of respondents considering the current framework to effectively encourage energy efficiency.

The evidence points to the fact that both business and government still have a long way to go in order to fully capitalise on the energy efficiency opportunity – now is the time for both to step up to the plate and take energy efficiency out of the 'too hard to tackle' box.

### **A lack of awareness undermines attempts to improve energy efficiency...**

While the majority of respondents to the CBI's survey cited energy efficiency as a priority, this masks one of the major challenges uncovered during the in-depth interviews – the fact that energy efficiency is not necessarily on everyone's radar within the company.

Most interviewees cited Board level awareness as vital to instigating improvements, but claimed that this was often the most challenging to achieve, making it extremely difficult to implement organisation-wide change. For some at the top, energy is simply not a material cost to the business therefore they may be less concerned about the risks posed by rising energy prices. For others, they may not be fully aware of the return on investment they can get from making improvements. Indeed, a survey carried out by the Carbon Trust revealed that the CFOs they questioned underestimated the returns for energy efficiency investments by around half their actual value.<sup>12</sup>

This could result in finance not being made available for projects if they are not seen as business-critical, or if they do not meet the expected 1-3 year payback period, making it challenging to incorporate energy efficiency investments into long-term planning. As demonstrated in **exhibit 4**, although a large percentage of respondents reported that they would be investing in energy efficiency in the next 12 months, this figure declines for medium and long-term investments. While it is perfectly understandable for business leaders to focus on 'quick wins', there may be significant opportunities further down the line that are being overlooked.

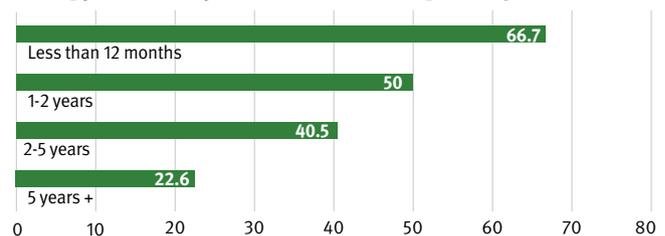
**15%** could be saved by large firms on their energy bills with better energy management

Even where energy efficiency has been prioritised at the top, awareness is sometimes only found amongst the staff working directly on energy efficiency projects, and even then, staff can lack an understanding of the technologies and services available to help improve efficiency. One retailer reported that, having identified that their lighting system was due for an upgrade, it hadn't occurred because the maintenance team was not aware of the latest systems available. More broadly, without company-wide understanding, basic behavioural changes to cut down on energy use, such as simply switching off lights and computers and using technology and processes properly, will also be missed.

### ...and even where awareness exists, the necessary skills are not always available

Many businesses have found that even when the will to make energy efficiency improvements exists, often the skills to implement them do not. Basic skills, such as those needed to plan and understand how equipment should be set up to function across the whole organisation are often in short supply. One manufacturer reported that several pieces of equipment in their plant had been set up incorrectly which resulted in an initial *increase* in energy use. In some companies, they may lack the technical staff trained to ensure equipment and processes run consistently at the most efficient levels. One major retailer found that their maintenance team did not monitor the efficient running of equipment regularly and would only make adjustments or repairs when a fault was uncovered, rather than proactively seeking to optimise the system. Some firms, such as Michelin (see **case study 2**) have sought to overcome these challenges by sharing

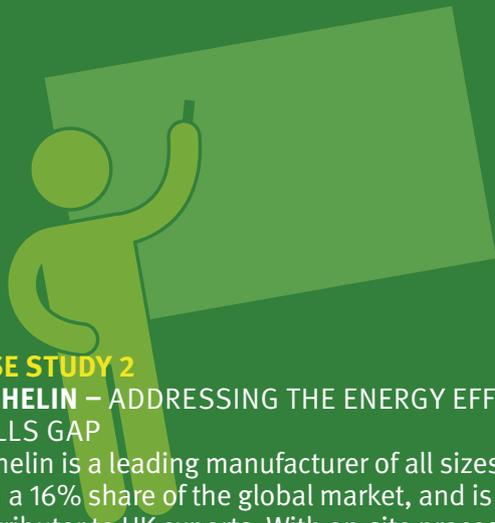
### Exhibit 4 Do you have any investment planned in energy efficiency over the following time periods? (%)



Source: CBI survey

best practice across their sites and encouraging staff to 'own' their part of the production process.

However, the skills gap is not just in technical staff, but reaches right across the corporate structure, often including those whose job it is to make the business case for energy efficiency investments. To be able to do this effectively, teams need to understand how to develop financial, as well as simply environmental, cases that fully capture the return on investment. One company reported that this was a significant block to investments until they learned how to build in a strong financial emphasis to their business case. Businesses also reported concerns over the legal skills required to draw up contracts that account for the efficient running of products. This was particularly relevant when contracting out facilities management services, where the majority of contracts only focus on securing the lowest cost from the contractor, without including a requirement to ensure the efficient



## CASE STUDY 2

### MICHELIN – ADDRESSING THE ENERGY EFFICIENCY SKILLS GAP

Michelin is a leading manufacturer of all sizes of tyres, with a 16% share of the global market, and is a major contributor to UK exports. With on-site processes that are very energy-intensive, Michelin is sensitive to the cost of energy and aware of the benefits of energy efficiency. In the last few years the company has instituted a global, top-down campaign to reduce energy use and carbon emissions.

Since 2010 Michelin has compared all of its sites across the globe in standardised terms of energy use per unit of manufacture. This means that the drive to reduce energy use is just as great for sites in low energy cost areas, such as North America, as it is in the UK. It also means that there is greater scope for information and best-practice sharing between sites around the world.

This comparative approach illustrates the importance of energy efficiency skills to successful energy use reduction. Employees across the company are encouraged to ‘own’ their part of the production process and to be proactive in suggesting efficiency improvements, be they technical improvements or ways of working. This has led to increased energy efficiency skills across the board and greater integration of energy efficiency into everyday decision making, increasing productivity and reducing energy use.

running of equipment. Many businesses lack these skills in-house and cannot afford to seek external expertise, although even those seeking outside support have had variable experiences due to the fact that the market is still immature, and consistently high standards are not yet prevalent across all areas.

### **This is compounded by misaligned incentives...**

If a business is not joined up internally, it can often be the case that there is no incentive for a team to make energy efficiency investments that won't directly affect them, even if the investment would have a highly beneficial impact on the business as a whole. For example, one manufacturing member reported the difficulty they had in funding a new heating system because the investment fell within the remit of the sustainability team, but the reduced running costs would benefit the facilities department. As they would not receive the direct benefits from the investment, the sustainability team instead pursued an investment in a renewable energy project that had a lower return on investment, but for which they would receive the financial benefit.

Misaligned incentives are also commonly found in rented properties, where the landlord may be reluctant to make energy efficiency investments for which the tenant, as the bill payer, will be the main beneficiary. Even when the landlord is willing to invest, challenges can arise, particularly in multi-tenancy buildings. One commercial landlord reported a case where an improvement to the fabric of the building that would have reduced energy bills by 10% could not go ahead because just one of the 15 tenants refused to agree to it.

### **...and further reinforced by difficulties in understanding and accessing finance**

Another hurdle reported by many companies is finding the finance for energy efficiency investments – a problem encountered in different ways by businesses of all sizes and sectors. Some businesses may have access to internal funds, however developing a business case that meets the right criteria, particularly when set payback periods are required, can be challenging. This is particularly difficult when seeking funding for large-scale projects, such as new facilities or on-site generation units, where the payback periods are very often beyond those required by most businesses. For multinational companies, they may also have to compete geographically for internal finance – one global energy-intensive manufacturer found that funds were being increasingly allocated to higher margin markets in Asia and North America, rather than the UK site.

For a large number of businesses, external finance is the only option available to fund their investments, but given the current financial climate, accessing these funds has been a challenge for some, particularly small and medium-sized enterprises (SMEs). For example, a mid-sized white goods company reported difficulties in obtaining capital to replace a broken lighting system with a more energy efficient alternative, resulting in them buying a cheaper system which was more inefficient and costly in the long run. With limited balance sheets, many businesses struggle to find readily available external finance, and have to give up on such investments altogether.

When finance is available, the range of options can be vast and confusing. One manufacturing member found that trying to match

the right kind of finance with the purchase they wished to make was time consuming and expensive, and the investment was eventually abandoned as a result. Many banks, such as RBS (see **case study 3**), are now working with their customers to support them in this decision-making process.

### **At the same time, government policy has proved to be very hit and miss**

Beyond the internal challenges that they face in making energy efficiency improvements, businesses also had dim views about the impact of government policy on their ability to make positive investment decisions. Only 5% of respondents consider the current framework to effectively encourage energy efficiency. In addition, almost 90% of responses were mixed to negative when asked about how government works with business to improve energy efficiency. Moreover, many respondents felt that, to date, energy efficiency has too often been neglected by government in favour of a focus on energy generation.

However despite this perceived lack of attention, the past five years has seen a proliferation of different policy initiatives aimed at business energy efficiency and carbon reduction (see **exhibit 5**), which have come in for mixed reviews; we saw a similar response to the government's green taxes regime in our research on the subject from 2012.<sup>13</sup> Measures such as Climate Change Agreements (CCAs) – whereby companies receive an exemption from the majority of the Climate Change Levy (CCL) if they achieve a set energy efficiency target – have been reported as largely successful in driving improvements in energy-intensive industries, resulting from its relative simplicity together with its ability to raise awareness at the



### CASE STUDY 3

#### ROYAL BANK OF SCOTLAND – SUPPORTING BUSINESSES IN CHOOSING THE BEST FINANCE OPTION

Building upon over twenty years of experience in providing finance for renewable energy projects, RBS has launched an initiative to help its corporate customers benefit from energy efficiency savings, both by raising awareness around the financial and non-financial benefits of energy efficiency measures and providing funding for energy efficiency projects. Financing options range from traditional bank loans to more structured solutions and include debt or asset finance from its Lombard business. A similar energy efficiency initiative for SME customers is currently being piloted.

RBS has also launched a £200m Carbon Reduction Fund to help UK corporates finance their sustainable energy projects – both in terms of energy generation and energy efficiency. This Fund utilises the UK government's Funding for Lending Scheme and so provides corporate customers with reduced cost funding.

RBS acknowledges the importance of improving energy performance through its own stretching operational targets, including a 15% reduction in energy and associated CO<sub>2</sub> emissions in the three years to 2014.

right levels within a business. However, companies have found other policies, such as the Carbon Reduction Commitment (CRC), to be overly complex, bureaucratic and costly, without actually having any impact on business behaviour or investment decisions.

While individual policies have been hit and miss, the helicopter view of the energy efficiency landscape is one of a complex web of overlapping policies, which could be described at best as inconsistent and at worst, incoherent. The often siloed approach towards developing these schemes has created considerable duplication whereby some businesses are captured by multiple policies, taxes and regulations, leading to significant extra administrative and cost burden. Indeed, earlier CBI analysis suggested that the cumulative impact of all low-carbon policies could add £50/MWh to wholesale energy prices by 2020.<sup>14</sup> For companies that are both energy-intensive and trade-exposed, this could seriously undermine their ability to remain competitive as UK-based businesses, while for the majority of firms, this will dent their profits at a time of fragile growth. More broadly, businesses reported an overall lack of confidence in the stability and longevity of government policies, as well as a similar lack of understanding of their impact on business operations.

The establishment last year of the Energy Efficiency Deployment Office should have marked a new era for energy efficiency policy, putting it in the spotlight and providing a chance to bring together the disparate policy strands into a coherent framework which works with the grain of the market. However, its Energy Efficiency Strategy published last autumn represented a missed opportunity – while its analysis was sound, it lacked a clear vision of what success would look like and a robust action plan to deliver it, thus falling well short of business' expectations.

## Exhibit 5 Key government policies within the existing energy efficiency landscape

POLICY	DESCRIPTION
EU Emissions Trading System (EU ETS)	The EU ETS creates a financial incentive for business to reduce emissions by generating an EU-wide carbon price through a market-based 'cap and trade' scheme.
Carbon Price Floor (CPF)	A domestic mechanism to guarantee a minimum price of carbon for UK-based businesses by levying a 'top-up' tax on the EU ETS.
Climate Change Levy (CCL)	A tax on energy delivered to non-domestic users.
Climate Change Agreements (CCAs)	Targets-based scheme for energy-intensive businesses whereby they are exempted from the majority of the Climate Change Levy if they achieve emissions reduction targets agreed at a sectoral level.
Carbon Reduction Commitment Energy Efficiency Scheme (CRC)	A mandatory scheme aimed at improving energy efficiency and cutting emissions in large non-energy intensive public and private sector enterprises whereby participants must purchase allowances to offset their emissions.
Energy Performance Certificates (EPCs)	Universal A-G rating scheme for the energy efficiency of building fabric. EPCs must be presented whenever a property is constructed, rented out or sold.
Mandatory Greenhouse Gas (GHG) Reporting	Requirement from October 2013 for large businesses to report their GHG emissions in the annual Director's Report.
Green Deal	Market-based finance scheme to provide up-front funding from private providers for domestic and non-domestic energy efficiency improvements. This is paid back over a period of time through the savings made on the customer's energy bill.
Enhanced Capital Allowances (ECAs)	The scheme offers 100% first year tax allowance in certain products and technologies, allowing companies to write off 100% of the cost against that year's taxable profits.
Feed-In Tariff (FIT) and Renewable Heat Incentive (RHI)	Financial incentives for on-site renewable electricity (FIT) and heat (RHI) generation.
Green Investment Bank (GIB)	Government funded financing vehicle for low-carbon investments, with £3bn start-up capital and as much as £1.3bn additionally made available for the 2015/16 spending period.

# 3 Businesses must take charge if they are to get ahead of the curve

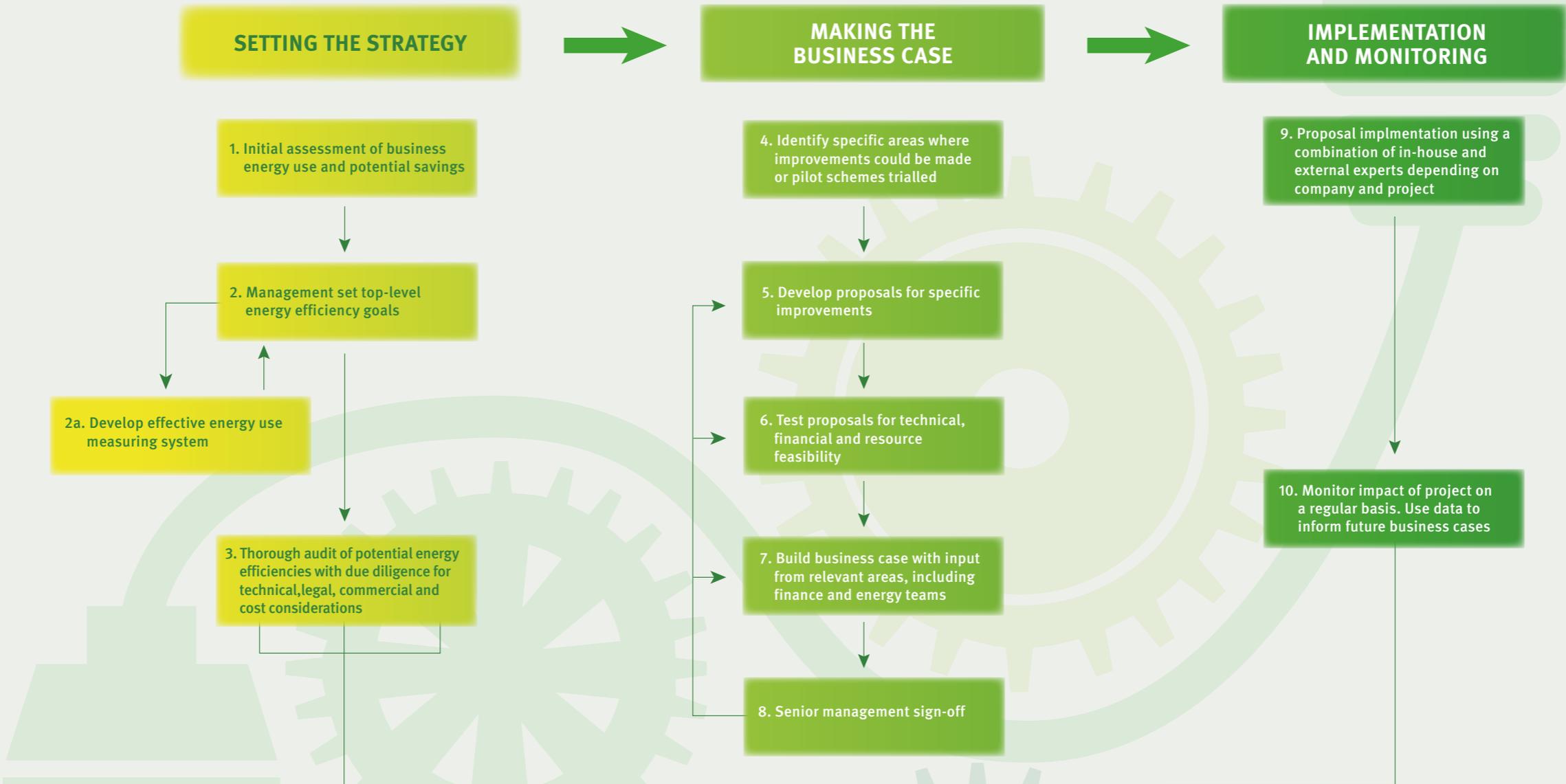
Ultimately, if businesses want to overcome these challenges, they need to get out ahead and learn from those that have already demonstrated success.

Our research shows that, while each business is different, there are several commonalities in the approaches taken by those leading the way. Firstly, our interviewees highlighted the importance of leadership from the top of the organisation, and the need for the senior management team to ‘walk the walk’ on energy efficiency in order to set the direction of travel for the rest of the organisation. Secondly, to understand the size of the prize, businesses have established robust processes to measure their energy use – with methods ranging from state of the art systems to simple spreadsheets.

Many firms also found that to get the go-ahead for a project, they needed to draw on the skills and expertise of those in different parts of the organisation to develop a compelling business case which sets out the full growth opportunities of the investment as well as the cost avoidance impact. They also reported that implementing change on the ground required all staff to buy into the energy efficiency agenda, and to share in both the responsibilities and benefits. Finally, those that have made significant strides have also looked beyond their own company borders to drive efficiencies down their supply chains and across sectors.

Much of this is not rocket science, but requires commitment, innovative thinking and joined-up working. **Exhibit 6** presents some simple best-practice steps taken by market leaders in this area.

Exhibit 6 Best practice guide for energy efficiency investments



# £17.6BN

Supporting a domestic market worth £17.6bn, there are major benefits to be gained from understanding energy efficiency

## Demonstrate leadership at the top

The overwhelming majority of our interviewees reported that leadership from the top of the company is absolutely vital if a business is to fully realise the benefits of energy efficiency. By demonstrating personal commitment and taking an active role in implementing change, senior management can set an example for the rest of the organisation, as well as the expected level of dedication from members of staff and others working with the business. For example, Unilever is linking sustainable business goals to remuneration for a growing number of managers, the CEO being one of them.

Showing leadership means setting a clear vision and strong ambition which provides a direction of travel for the business, and there are plenty of cases where this has been very successful. Tesco, for example, has a vision to be a zero-carbon business by 2050, while Pepsico UK & Ireland has a Path to Zero plan, in which energy efficiency is embedded. Beneath the high-level vision, an action plan should be put in place through which to consider energy efficiency investments. Where plans have proven successful, oversight has sat at Board level, with specific objectives set departmentally to drive awareness throughout the business. In Sainsbury's, a member of their Operating Board is responsible for each of the five values within their 20x20 sustainability plan and also sits on their Corporate Responsibility Steering Group, which is chaired by the CEO. This kind of practice sends a clear message to the rest of the business of the strategic importance of energy efficiency and also ensures that it does not slip out of the senior management team's sight.

To keep the strategy relevant, many businesses, such as BskyB (see **case study 4**), not only focus on current areas of growth but also future growth opportunities and risks by mapping them out against the areas into which they plan to expand. This means that capital is not wasted on areas that will decline in importance to the business, and allows the full potential from growth areas to be realised more effectively.

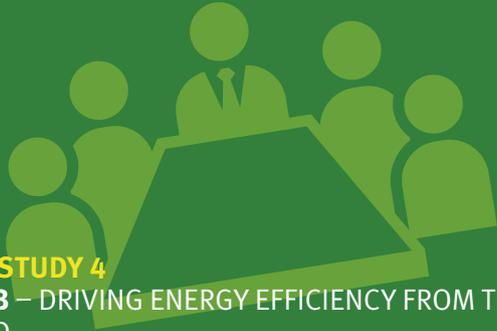
## Recommendation 1

The senior management team should lead by example and set an overarching vision within which an energy efficiency goal may sit. This should be underpinned by an action plan, which must be owned and driven by the Board.

## Measure and manage energy use

The common mantra for energy and carbon efficiency is 'what gets measured gets managed', which can serve as a useful guide to those looking to up their game on energy management.

Businesses that have led the way on this have been able to pinpoint exactly where energy use is at its highest, and where it can be most reduced. Key to this has been improving the measurement of energy use across the organisation, as businesses such as Sainsbury's have found, achieving a 17% efficiency improvement by setting up effective monitoring systems (see **case study 5**).



#### CASE STUDY 4

#### BSKYB – DRIVING ENERGY EFFICIENCY FROM THE BOARD

BSkyB is taking seriously the role of business in showing leadership on energy efficiency. In 2010 the company drew up a ten year energy use and carbon emissions reduction strategy, mapping these against expected company growth and energy ‘pressure points’ over the decade to 2020. The company’s focus on energy efficiency and carbon reduction has been led from the top, with active oversight from directors, especially the CEO.

Strong leadership has resulted in positive results: BSKyB became “carbon neutral” in 2006 and the company achieved a 31% reduction in carbon intensity by 2012 with absolute emissions falling by 10%. As a result they have set further targets to halve emissions by 2020. Strong business leadership has had other positive effects. The company has used its position as a market leader to raise awareness of energy efficiency among its suppliers and customers too.

Although good progress has been made, BSKyB’s next steps will require greater continued investment over longer periods. The company is already introducing investment strategies to implement energy efficiency projects, such as on-site combined cooling and heating power generation and wind generation.

Businesses that have made substantial savings have set up teams to manage the data as close to real time as possible, and have made extensive use of energy management systems, sub-metering and smart meters. Tesco, for example, has developed a system which monitors energy usage 24/7 across their UK stores from a centralised control centre, with the ability to correct inefficiencies remotely. They’ve estimated that this led to savings of £3.9m on their energy bills in 2012. Of course, the sophistication of the measurement system and process will depend on a company’s resources, but, as the Carbon Trust has pointed out, for those with limited funds and manpower, this could be as simple as a spreadsheet developed in-house.<sup>15</sup> Setting up the right internal reporting structures has also been important to ensure that the right people within the organisation have the right information at their fingertips.

After establishing a more comprehensive measurement system and internal reporting process, businesses will be in a much better position to decide what action is needed. There are likely to be a wide range of options available, including no-cost ‘housekeeping’ measures, such as optimising existing systems or turning equipment off when not in use, low to medium-cost measures, such as replacing lights, heating and air conditioning systems, and high-cost measures like full refurbishments or replacing entire production lines. In choosing the right course of action, firms could consider using the ‘energy management hierarchy’ (see **exhibit 7**) developed by Carbon Connect, which provides a simple framework through which to guide a business’ decision-making process.

Where possible, a system should also be in place that enables the effective measurement of the success of the chosen investment, which will allow businesses to continually hone the approach they take.

## Recommendation 2

Businesses should consider setting up systems to collect in-depth data of energy use across the business. This data could help to guide the selection of the most cost-effective solutions, as well as to assess the effectiveness of the energy efficiency measures chosen.

### CASE STUDY 5

#### SAINSBURY'S – REAPING THE BENEFITS OF EFFECTIVE MONITORING SYSTEMS

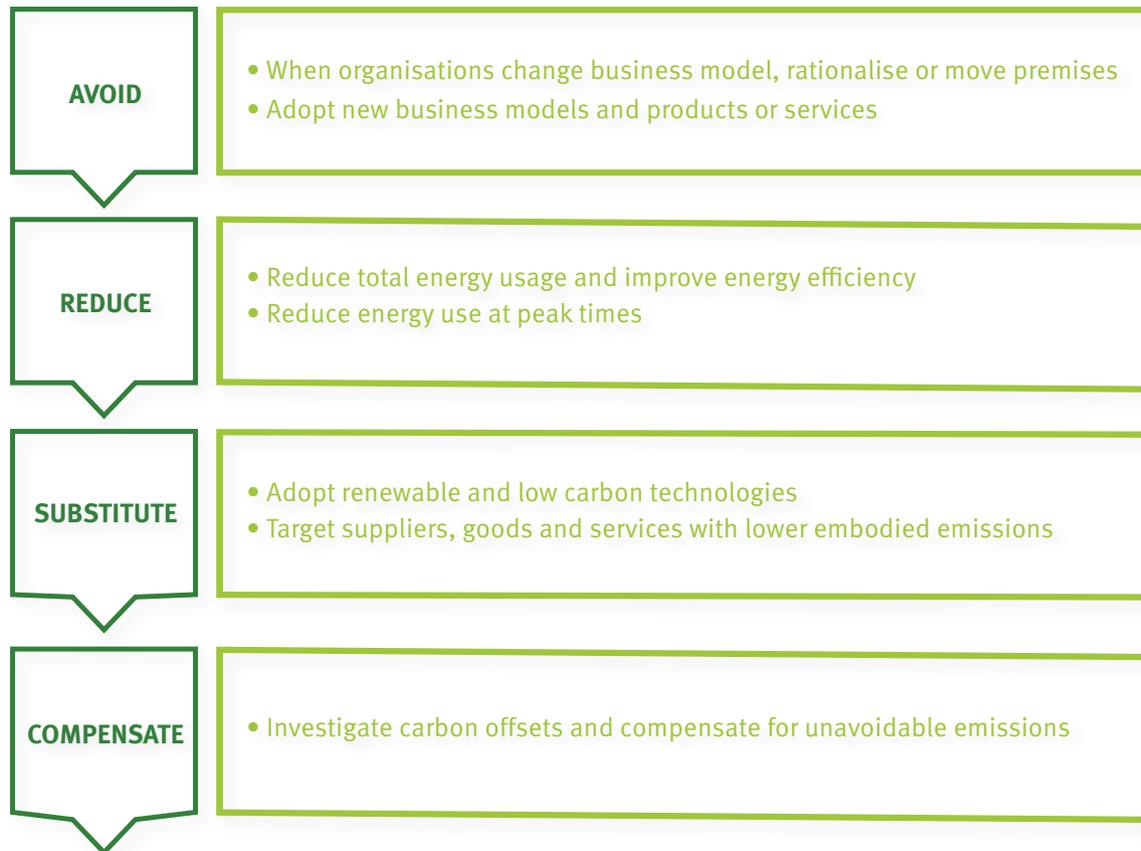
Sainsbury's operates over 1,100 supermarkets and convenience stores, each of which requires an intense amount of energy. They use nearly 1% of the UK's energy in total.

Sainsbury's aim to be the UK's greenest grocer and have committed, through their 20x20 Sustainability Plan, to reduce absolute operational carbon emissions by 30% by 2020, compared to 2005. To date, they have achieved a 9.1% absolute reduction in electricity since 2007/08, whilst growing space by 25%.

This has been achieved by increasing energy efficiency, whilst sourcing more energy from renewable sources. Through the 'reset' project, Sainsbury's improve the efficiency of existing stores through 30 initiatives, including changes to lighting, optimising compressors on refrigeration and installing variable speed drives on fans. These measures helped to achieve on average 17% efficiency. Key to this success is closely monitoring performance after the changes to ensure the effectiveness of the work. This also allows Sainsbury's to calculate savings and build a stronger case for future investment.

### Exhibit 7 Energy management hierarchy

The energy management hierarchy provides a set of sequential steps for businesses to follow in order to improve energy efficiency and cost-effectively reduce emissions.



### Develop a compelling business case

When the right investment option has been chosen, it has to be sold effectively within the business in order to get the go-ahead and secure funding. This very often proves to be a stumbling block for many businesses, and if they fail, even energy efficiency investments with high returns will most likely lose out to other projects across the business.

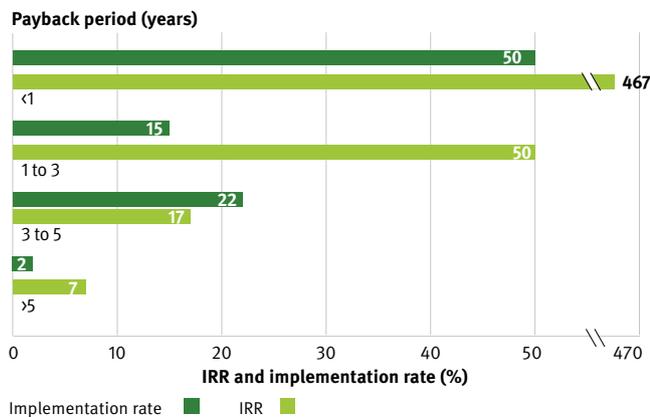
To have the desired impact, the business case needs to demonstrate a strong financial justification and include the right commercial language. It was broadly agreed that presenting the rate of return should become standard practice, as opposed to simple payback calculations, which can be common among many businesses. This is important in terms of overcoming misconceptions among decision-makers – as noted in the previous section, senior managers have been known to drastically undervalue energy efficiency investments if they are not judged to be business critical. But even when the financials stack up, it may be difficult to get senior managers to implement the options beyond those with immediate returns. As illustrated in **exhibit 8**, implementation rates can fall considerably once payback periods reach three years, despite these projects providing perfectly acceptable returns on investment. To address this challenge, one suggestion from a company in the banking sector was for business cases to blend a collection of short and long-term and high and low-cost investments in order to offset lower returns from specific measures with those providing a higher return.

The business case should also look to set out the broader growth opportunities of investments, as opposed to just the cost avoidance impact that they will have on the ‘bottom line’. Setting out how investments may boost the company’s ‘top line,’ eg growing their customer base by providing more efficient products, may stop them losing out to so-called ‘profit-making’ investments elsewhere.

### Recommendation 3

**An energy efficiency business case should use appropriately commercial language and demonstrate the full financial impact of the investment. Businesses could also look at blending a package of short and long-term investments together in order to present a more compelling case.**

### Exhibit 8 Energy efficiency project implementation rates (%)



Source: The Carbon Trust<sup>16</sup>

### Make energy efficiency everyone's business

To achieve the widespread impact needed, everyone in the company must be engaged in the energy efficiency agenda and should share in both the responsibility for implementing it, as well as the benefits. Accountability should not lie solely with the sustainability team or the energy manager, but awareness should be spread across all employees – from the Boardroom to the finance department, everyone needs to play their part.

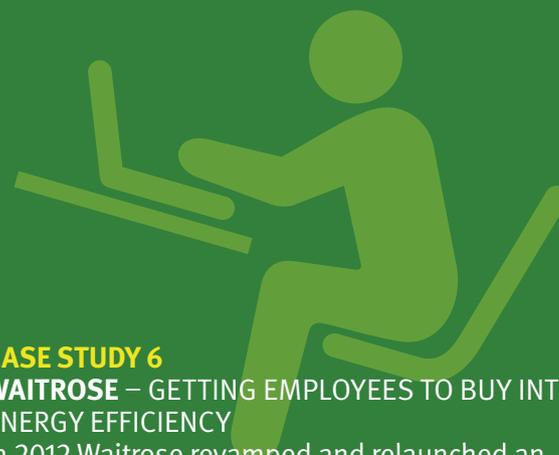
Partly, this can be done by embedding energy efficiency into existing business processes, as John Lewis has done by ensuring that this is considered when making any investment case across the business. There will also be instances where more specific training is required, particularly when complex systems or equipment are in place which need to be fitted to maximum efficiency and must be maintained on an on-going basis.

But a crucial factor will be getting employees bought into the change, and in this respect a variety of approaches have been taken. Some businesses have raised awareness of energy efficiency across staff by appointing 'local champions' in different parts of the business to model the right behaviours, such as switching lights and computers off when not in use. Waitrose, as outlined in **case study 6**, took this one step further by holding a competition for staff to provide proposals for ways to improve energy efficiency, giving prizes for the best suggestions. Tapping into employees' ideas in this way can generate greater innovation in the 'how' of energy efficiency. For example, in 2012, Sainsbury's received over 250 recommendations on sustainability issues as part of its 'Ask Justin' scheme, which invites all staff to send ideas to its CEO, Justin King, on how they can improve the business.

Taking a more collaborative approach where contractual arrangements are in place can also yield results, and help overcome misaligned incentives. For example, the Better Buildings Partnership has developed a toolkit for ‘green leases’, whereby both landlords and tenants are obligated to minimise their environmental impact.

#### **Recommendation 4**

Businesses should consider how to embed energy efficiency within business processes and share responsibility across the organisation for identifying and implementing improvements. Establishing employee awareness initiatives and investing in bespoke technical training for staff can also bring benefits to the business.



#### **CASE STUDY 6**

##### **WAITROSE – GETTING EMPLOYEES TO BUY INTO ENERGY EFFICIENCY**

In 2012 Waitrose revamped and relaunched an environmental portal for all Waitrose stores. Since then, store environmental champions have been able to log on and share best practice about saving energy, find tips and ideas, as well as monitor how much energy they are using and how much they are saving.

One store champion held a competition for Partners last summer and asked them for ideas for energy-saving initiatives with a prize for the best suggestion. The store has since implemented some of the winning ideas, such as reducing the time settings of lights in the car park and getting stock levels down to such an extent that all chilled stock can now be fitted into just two chillers instead of three, allowing the third to be turned off. The store uses the portal to check progress and has reduced consumption and improved their position on gas relative to the rest of their regional group of stores.

Another store has used the portal for inspiration and has put posters up encouraging Partners to save energy by turning lights and air-conditioning off when not needed as well as reducing the temperature of water in the boiler.

### **Drive efficiencies down supply chains and across sectors**

In this day and age, no business is an island, therefore if companies are to truly maximise their energy efficiency potential, they must look beyond their internal operations and consider those of their supply chain. Indeed, a recent survey done by the Pew Centre<sup>17</sup> showed that of those companies that measured their energy footprints, the majority found that energy use in their supply chains was greater than their internal use. Addressing this issue could not only help meet growing consumer demand for more sustainable supply chains, but could help shave overall business costs.

Businesses have taken different approaches towards tackling this issue. BSKyB has instituted a competitive league table of suppliers' energy use and carbon emissions to encourage them to pursue reductions. They are also active in sharing best practice through annual supply chain conferences, where they report on their own investments and experiences over the year, and provide practical advice for suppliers. As a result, they and their suppliers have benefitted from cost savings, higher productivity and improved working relationships. Another company in the energy efficiency products sector runs an academy to disseminate technical knowledge and skills relating to energy efficiencies. Through this scheme they have improved the technical expertise of their suppliers and regular contractors while positively raising their brand profile.

It is not just vertically that best practice can be shared. But businesses can also share information horizontally, within and across sectors. There is a potential role here for trade associations to help facilitate the spread of information, which can help sectors to reduce costs, innovate further and increase international competitiveness.

### **Recommendation 5**

**Businesses should work with the supply chain to encourage improvements in energy efficiency as these can reduce costs. By working with the supply chain, businesses can also foster innovative approaches that they can then apply directly.**

# 4 Government must step up its efforts to deliver coherent policies to support positive investments

While it is clear that businesses do not need the government to guide individual investments in energy efficiency, it can and should set the parameters within which businesses are able to take action. As such the CBI believes that the government must re-double its efforts to deliver a coherent energy efficiency policy framework, which businesses have so far been lacking. To do this, the Energy Efficiency Deployment Office must deliver meaningful progress in three key areas; effectively joining up energy efficiency policy across government, streamlining the existing policy landscape and ensuring any new initiatives add value, and stepping up its business engagement with regard to the design, implementation and communication of government policies.

Beyond the overarching landscape, there are instances where a more targeted approach is needed to plug specific gaps and support positive investment decisions. Importantly, this does not necessarily require new policies, but simply the further development and innovative use of existing levers. For instance, large users and energy-intensive industries could benefit from tailored support in financing long-term and high-cost investments, such as Combined Heat and Power, whereas mid-sized businesses often require help in managing up-front costs and understanding the various initiatives on offer. A combination of long-term goals and targeted incentives could help overcome inertia in

non-domestic buildings, and specific support may also be needed to facilitate the growth of the relatively immature energy efficiency products and services market.

## **The government must redouble its efforts to deliver a coherent business energy efficiency policy framework...**

Just as leadership from the top is a crucial element for business' success in implementing an energy efficiency strategy, the same is also true for government. While it has done a good job to date of leading by example with regard to the efficiency of its estate and operations, similar leadership is also needed on the policy front, where our research indicates that government remains wide of the mark.

The Energy Efficiency Deployment Office (EEDO) was set up last year to be the energy efficiency champion within government and to support the coherent delivery of policy. However, it has yet to fulfil this ambition with many of our interviewees feeling that energy efficiency remains in the shadow of supply-side policy. In order to deliver on its potential and become a truly effective body, EEDO should step up its efforts in three key areas, setting out its plans within its forthcoming strategy update. Firstly, it must deliver on its mandate to ensure that energy efficiency policies are joined-up across government – for example, it remains the case that heat and electricity policies sit in different teams with little crossover, and EEDO could help to bridge that gap and break down long-standing siloes.

Building on this, it should seize the opportunity to streamline existing policy and ensure that any new initiatives are valuable investment drivers. As identified in section two, business has too often been hindered rather than helped by overly complex policies which often overlap, adding extra cost and burden with little environmental benefit. While the government has made some attempts to improve individual policies, for example by seeking to simplify the Carbon Reduction Commitment, there is much further to go. With new policies in the pipeline in the form of Electricity Demand Reduction and the Energy Saving Opportunity Scheme (see **exhibit 9**), the government should commission a comprehensive evaluation of the entire business energy efficiency policy framework, in order to understand its effectiveness in driving efficiency, and ensure that new policies add value to the landscape. Of particular importance is the need to streamline reporting requirements for the various instruments, including the CRC, Climate Change Agreements and the forthcoming GHG Emissions Reporting and energy audits. EEDO must not miss this opportunity to tie up existing reporting methods and create a universal approach that allows businesses to collect and report the data in the same way, thus minimising administrative burden and ensuring that these policies are useful investment tools.

### **Exhibit 9 Energy Saving Opportunity Scheme (ESOS) and Electricity Demand Reduction (EDR)**

As a result of EU legislation (Energy Efficiency Directive), all Member States must introduce energy audits for large companies. DECC is currently consulting on the implementation of energy audits, under the name of the Energy Saving Opportunity Scheme, ahead of the transposition of the Directive next year. Although there is leeway on how they must be implemented, audits must be carried out by qualified or accredited experts, they must be supervised by independent authorities under national legislation and Member States must set out minimum criteria for the audits. The audits can be carried out in-house provided Member States have a scheme in place to check quality.

Domestically, DECC has also set out plans for a market-wide Electricity Demand Reduction (EDR) scheme. Following a public consultation this year, the government announced in May 2013 its decision to take forward the proposal to include Electricity Demand Reduction in the capacity market, and a clause to this effect has now been included in the Energy Bill which is currently making its way through Parliament. Funding for an Electricity Demand Reduction pilot scheme was set out in the June 2013 Spending Round.

Finally, EEDO should look to strengthen its engagement with business during each of the design, implementation and communication phases of the policy process. When developing policy, it could further ‘commercialise’ its approach by putting in place a formal mechanism by which to ‘stress test’ any new initiatives or changes to existing measures with businesses in order to fully understand their impacts. Beyond this, the government should ensure it is communicating its policies as widely as possible to the business community, so that they understand both the ‘sticks’ and ‘carrots’ which may impact on their investment decisions. This may be particularly relevant for smaller and medium-sized companies, for whom energy efficiency may not be on their radar. To do this the government could explore the possibility of running a series of energy efficiency roadshows to raise awareness.

## Recommendation 1

The Energy Efficiency Deployment Office should step up its efforts in three key areas:

- Joining up various strands of energy efficiency policy, particularly on heat and electricity
- Streamlining existing policy, with a focus on reporting requirements
- Setting out its business engagement plan in each of the design, implementation and communication phases.

### **...and look to plug specific gaps to support positive investment decisions**

Beyond the overarching landscape, there are instances where a more targeted approach is needed to plug specific gaps and support positive investment decisions. Importantly, this does not necessarily require new policies, but simply the further development and innovative use of existing levers. As part of our research, the CBI has identified four broad market segments where a more tailored approach may be required. As such, the government should:

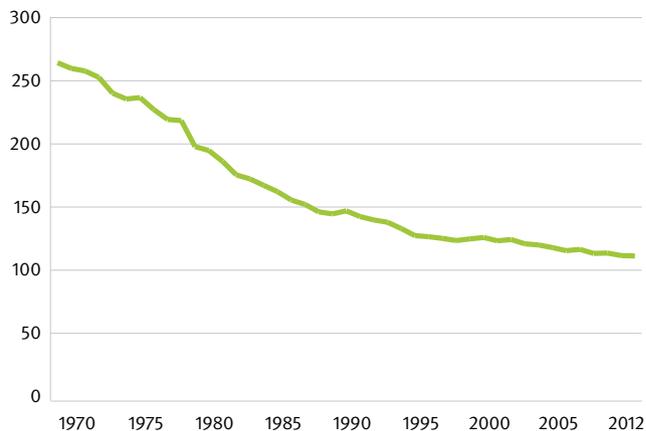
### *Support large and energy-intensive users in reaching the high hanging fruit*

For large energy users, the need to manage their energy input is already high on the agenda as increases and fluctuations in energy prices can have a major impact on their operations. Many of these businesses therefore have long-established plans to improve energy efficiency, and have made great strides as a result. For example, analysis shows that the industrial sector reduced its energy intensity by almost 70% between 1970 and 2011 (see **exhibit 10**) due to innovative technologies and processes. However, progress has slowed in recent years, with the Committee on Climate Change recently stating that investment in new plant and equipment had fallen in 2012, and there was limited evidence of energy efficiency improvement as a result.<sup>18</sup>

With much of the low-hanging fruit having already been picked, further progress will often require larger and more costly investments. One such option is Combined Heat and Power (CHP) which provides an important opportunity for some large energy users to improve their efficiency and cost-competitiveness. However, several businesses have reported that the current policy framework is not conducive to investing in this technology following the announcement of the removal of its exemption from the Climate Change Levy (CCL) in Budget 2012. This, together with the additional cost of the recently introduced Carbon Price Floor, means that the savings in running costs from using CHP will often no longer outweigh the higher capital cost of installing it. Finding

### Exhibit 10 Energy intensity of UK industry

Energy intensity (1990 = 100)



Source: Department of Energy and Climate Change<sup>19</sup>

a solution to this is made all the more difficult due to the fact that CHP seems to fall between the policy cracks of the heat and electricity teams within government, whereby the heat team owns the policy area but the team working on Electricity Market Reform controls the policy levers which may impact upon it. A much more joined-up and coherent approach is therefore needed if we are to fully realise the benefits of this technology.

With the lifetime of some of these technologies and equipment running upwards of twenty years, a further challenge lies in accessing large-scale and long-term finance for such investments. Beyond internal and commercial funding, the Green Investment Bank (GIB), which has now been operating since November 2012, could be a helpful alternative source to plug specific finance gaps, with a mandate to provide up to 50% of funds needed for a range of projects. Having identified industrial energy efficiency as one of its priority areas, the GIB has taken the right steps by employing staff with not only financial but also industry experience. It is important that the bank capitalises on this expertise by engaging extensively with the business community in order to market its products and support viable projects.

## Recommendation 2

In order to support longer-term and higher-cost investments for large energy users:

- The government must establish a more coherent and joined-up policy for Combined Heat and Power
- The Green Investment Bank should actively engage with the business community to market its investment offering in industrial energy efficiency.

### *Bring mid-sized businesses out of the policy 'blind spot'*

For growing mid-sized businesses, having the ambition of a larger company but the resources of smaller one means that they can often find themselves in a policy 'blind spot' when considering energy efficiency improvements. This is particularly evident when trying to finance their projects which, as shown in **case study 7**, can sometimes be a struggle for those looking to make substantial investments but lack the necessary capital.

While greater support could be helpful to these types of businesses, there are plenty of existing vehicles through which to deliver it. For example, the recently established Business Bank, which provides a one-stop-shop to direct SMEs to appropriate finance solutions, will play a crucial role in simplifying the current alphabet soup of business support. As the bank develops, it could look to focus on specialist areas such as energy efficiency, giving a helpful route to finance as well as raising awareness among mid-sized businesses of the benefits to their business.

The government's Green Deal is another initiative which could potentially help these firms to overcome the capital cost hurdle, by enabling private sector companies to provide up-front loans for energy efficiency investments, which could be repaid with the savings made on their electricity bills. However the government's focus to date has been on getting the Green Deal for households up and running, with the non-domestic scheme having been left waiting in the wings. It should now start to step up action in the non-domestic sector, learning the lessons from the current experience, particularly with regard to marketing, incentives and interest rates.

Additionally, existing fiscal incentives such as Enhanced Capital Allowances (ECAs) could be improved and promoted alongside policies like the Green Deal. ECA's allow businesses to offset the purchase of equipment against their tax bill. However, many find the process overly complex and time consuming, putting off those with more limited resources or a need to conclude a transaction within a reasonable time period. It also requires a level of technical understanding in order to choose the right equipment. The government should therefore look to simplify the process by providing clearer information to businesses which will allow them to decide quickly if ECA eligible equipment is right for them.

### Recommendation 3

The government could further support SMEs by:

- Using the Business Bank to deliver awareness of finance for energy efficiency projects
- Stepping up action to develop the non-domestic Green Deal
- Simplifying the Enhanced Capital Allowance process.

### CASE STUDY 7

#### STEETLEY DOLOMITE – OVERCOMING FINANCE CHALLENGES

Steeley Dolomite, with an annual turnover of £35m, is one of the leading producers in the world of dolomitic products which are used in a number of markets including steel, glass, agriculture and asphalt filler. With exports making up 50% of their business and energy accounting for around 40% of total costs, they are focused on how to improve efficiency and remain competitive internationally, especially with government policy adding additional costs.

To improve energy efficiency and reduce costs, Steeley Dolomite is investing in a preheater for the rotary kiln. Although this will bring major benefits, they had difficulty raising the £8.5m needed to finance the project. Their previous bank would not provide them with the funds and they then had to delay the investment to shop around for some time before moving to another bank which was willing to put up the loan needed. They also received no support from the Regional Growth Fund which rejected their application with no explanation and had difficulties getting planning permission from Derbyshire Council which was reluctant to help.

Now that they have secured funding, the project will become operational this year. It should payback within three years as it will reduce energy use by 30%, saving as much as £2m in energy costs each year. On top of that, the more efficient process will increase output and should add as much as £5m onto annual turnover. Given the substantial benefits, this will allow Steeley Dolomite to compete more favourably internationally.

### *Help overcome inertia in non-domestic buildings*

Despite the fact, as outlined in section one, that property values are expected to start reflecting both energy efficiency and carbon intensity in the coming years, there remains considerable inertia and misaligned incentives among owners of non-domestic buildings to make substantial energy efficiency investments. Indeed, the Committee on Climate Change's recent analysis indicated that there had been no improvement in the energy performance of buildings last year at all, with only 8% of properties receiving an Energy Performance Certificate (EPC) rating of B or above.<sup>20</sup>

In order to encourage improvements in private-rented buildings, the government introduced provisions in 2011 whereby landlords would have to ensure that their properties adhere to a minimum energy performance standard. This was a welcome step, yet little progress has since been made or communicated to businesses. It is important that the government now develops, consults and finalises these regulations as soon as possible to provide sufficient lead time to deliver the intended improvements.

While such 'sticks' may be necessary to drive activity, the government should also consider the range of 'carrots' at its disposal to kick-start a market-led response. For example, one of the challenges cited by businesses is that increasing the value of the property through energy efficiency – and wider low-carbon

improvements will result in the owner having to pay higher Business Rates, which may act as a deterrent to those considering significant investments. Therefore, rather than creating perverse incentives that prevent action, the government should consider the use of such fiscal levers to encourage these investments. In the short-term, Business Rates for empty properties could be waived for those undertaking a refurbishment which would improve the energy efficiency of the building, while over the longer-term, the government could explore more innovative options such as varying rates to reflect a building's energy performance.

### **Recommendation 4**

**To improve energy efficiency in non-domestic buildings the government should:**

- Provide certainty to the property sector by finalising Private Rented Sector regulations as soon as possible
- Consider the use of Business Rates as a lever to incentivise energy efficiency.

# 136,000

The energy efficiency market already employs 136,000 people across the country

### *Facilitate the growth of energy efficiency products and services*

While the energy efficiency goods and services market is already growing at 4% a year, there is much more potential both in the UK and internationally.

For those that do not have the resources or expertise within the business, energy services companies can provide an excellent route towards energy efficiency improvements, with companies such as GSH Group (**case study 8**) supporting customers in achieving £17m in energy cost savings. However the energy services (ESCO) market (see **exhibit 11**) remains very immature and largely unknown in the UK, therefore the government can help by working with business to start to develop a clear and flexible regulatory framework to support its growth. The framework should set the parameters for the market and provide certainty and stability, but it should remain flexible to account for the huge variations in the different forms of ESCOs and the structures and finance options they use.

Energy efficiency service providers could also benefit from evolving and integrating the existing European and international energy efficiency databases towards measuring the actual performance of energy efficient buildings and investments. This would enable stronger confidence in energy saving forecasts based on the results of actual installations of energy efficiency products.

To further support the market, the government should assess the clarity and consistency of energy efficiency product labelling and standards, and look to include running costs. Spreading awareness of robust energy efficiency savings forecasting, monitoring and verification tools will assist financing, and by setting up accreditation for energy advisers, the government can provide a strong framework to underpin this market.

### **Recommendation 5**

The government can support the growth of energy efficiency products and services by:

- Working with business to set a clear and flexible regulatory framework to support the growth of the energy services (ESCO) market
- Assess the consistency of product labelling and standards
- Set up accreditation, developed with businesses, for energy advisers.



### CASE STUDY 8

#### **GSH GROUP – GROWING THE MARKET FOR ENERGY EFFICIENCY GOODS AND SERVICES**

GSH provides energy management services which offer a holistic, risk managed energy and carbon reduction solution for national and international businesses. Customers have benefited from over £17m in energy cost savings and a reduction of 31,600 tonnes of carbon dioxide achieved through consumption reduction in excess of 300 million kWh.

GSH take a service-led approach to maintenance which optimises the energy efficiency and lifecycle of key assets through the forensic evaluation of the asset condition and demand, building environment, controls strategy and risk. Reducing the carbon impact from plant and equipment will, in turn, lead to future cost avoidance from reduced energy consumption.

Energy solutions are underpinned by leading edge technology which enables GSH to undertake 3D dynamic thermal and energy simulations for properties; and an in house control centre has the ability to monitor and target energy consumption through remote diagnostics. This makes it possible to predict energy usage, CO<sub>2</sub> emissions, operating costs and occupant comfort in order to understand where energy is being wasted in corporate, office and commercial buildings. As a result GSH are able to offer clients guaranteed carbon savings thereby providing them with a totally risk free solution.

#### Exhibit 11 **What is an ESCO?**

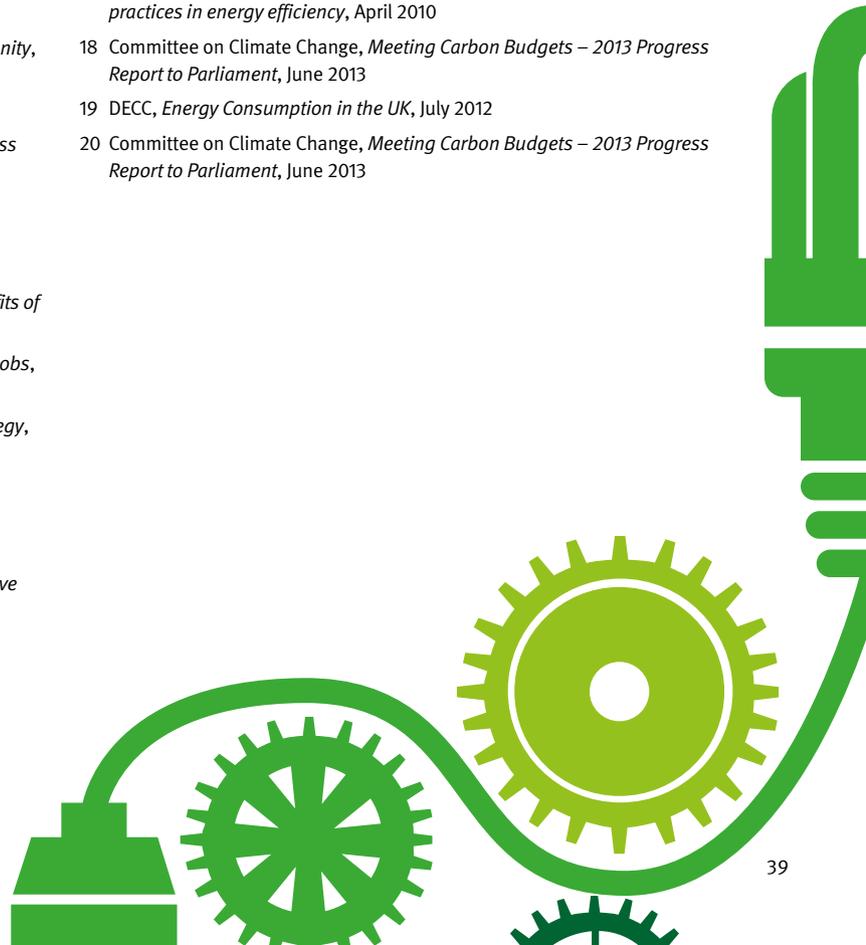
ESCOs are an important stakeholder in the energy efficiency goods and services market. The term stands for energy service company but it is really a catch-all term that covers a broad range of enterprises with no definitive meaning.

The “ESCOs” concept originated in the USA but has spread and evolved in different forms across the world. ESCOs range from SMEs to multi-nationals each offering a focused or broad range of measures including energy performance contracts, energy supply contracting, specific technology solutions (such as grid balancing technologies or automated home and commercial building solutions), strategic consultancy advice (often provided through bespoke data capture and analysis tools) and energy procurement and contract management services.

Increasingly, ESCOs can also provide innovative financing methods for energy efficiency improvements with funders developing tailored funding techniques in response to the opportunity. A consequence of the shape of the ESCO market and the sectors that ESCOs service is that there is a diverse regulatory framework governing ESCOs, their client base and other key stakeholders, with light regulation for some and heavy regulation for others.

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