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# BUSINESS PRODUCTIVITY AND ENERGY EFFICIENCY

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# INTRODUCTION AND EXECUTIVE SUMMARY

Energy affordability is one of the most critical issues facing manufacturing today. EEF's 2014 Executive Survey confirmed that rising input costs are perceived as the biggest threat to growth.<sup>1</sup>

Aging electricity-generating capacity is coming to the end of its life. Many coal generation sites are being forced to close. Our domestic fossil fuel and storage reserves are declining whilst overseas supplies are often located in areas with geopolitical issues, creating further uncertainty in terms of both security of supply and price stability. Furthermore, investment responses must be framed within a future of significant carbon restraint.

Combined, these factors are creating an unprecedented investment challenge for the UK's energy sector. It is estimated that between 2010 and 2020 the UK electricity sector will need around £110 billion of capital investment. Industrial electricity prices are rising as the cost of investment and policy impact are recouped through customer bills.

In 2012, UK industrial electricity prices were 94% higher than in 2002,<sup>2</sup> whilst industrial gas prices had risen by 122% over the same period.<sup>3</sup>

In the longer term, the government estimates that the growing cost of its green policies could add 49% to the electricity costs of medium-sized businesses by 2020 and 66% by 2030.

In parallel, in the wake of the Eurozone crisis, manufacturers are being driven to

explore new markets. The Chancellor's target of raising exports to £1 trillion by 2020 requires annual export growth of 9%. While positive, this is increasingly exposing manufacturers to competitive risks if costs are significantly higher than those borne by their overseas competitors. For many manufacturers, energy costs represent a significant cost to their business, and rising costs are eating into already squeezed margins.

**UK Manufacturing faces considerable challenges meeting rising energy costs in comparison to its major EU and other competitors.**

Even in Europe there are significant differences. Larger business users in countries including Germany, Denmark and Italy currently receive significant subsidies on energy taxes and low-carbon energy support.<sup>4</sup>

With this in mind, EEF and npower have surveyed nearly 200 manufacturers<sup>5</sup> to understand which energy issues are perceived as the most significant and, importantly, to understand how manufacturers are responding to these trends.

<sup>1</sup> EEF Executive Survey 2014.

<sup>2</sup> Comparison of ten-year period.

<sup>3</sup> DECC UK, Energy in Brief 2013.

<sup>4</sup> DECC (2013), Estimated impacts of energy and climate change policies on energy prices and bills.

<sup>5</sup> 192 manufacturers responded to the survey.

The challenge for manufacturers is how to manage a future of higher energy costs while maintaining international competitiveness. Our survey shows that these higher costs are driving companies to look again at opportunities for energy efficiency. The question remains whether savings through efficiency measures will offset spiralling bills.

Energy management recommendations are outlined in the conclusion of this report. But specialist support is needed. Our survey indicates that much of the low-hanging fruit has already been plucked.

Allowing manufacturers to make smarter and better informed decisions can help them remain competitive and meet our country's energy policy objectives.

Nearly a third of manufacturers are already looking for this expertise when seeking a supplier. More will inevitably look for this added value support in future.

The prize for getting energy management right for the UK manufacturing sector is significant, not simply because of the direct benefit of improving energy efficiency and improving our competitiveness within a global marketplace. It is the manufacturing sector that will develop the technologies and services that will help other parts of the economy improve their efficiency. From smart meters and energy-efficiency products to investment in a more efficient energy grid, the products that will feed into this market can be produced within supply chains based in the UK. With business support schemes now limited, energy suppliers such as npower have a key role in advising UK manufacturers on where savings can be made. By taking a lead in the development of these technologies and services, UK manufacturers are well placed to supply markets outside the UK as they develop.

# 1. THE RISING COST OF ENERGY

While it is true that some manufacturers are energy intensive – companies operating in sectors such as steel, cement, glass and chemicals – the picture across the whole of manufacturing is diverse, with consumption profiles differing according to size, location and sector. However, virtually all are expecting energy costs to be a major challenge over the next two years.

Gas is the dominant energy source for manufacturing and accounts for 60% of use. Many medium-sized and large companies consume more gas than electricity and smaller companies are typically more dependent on electricity.

Yet electricity prices are of particular concern because they represent the larger cost (Chart 1). 66% of utility spend is on electricity (Table 1). The median spend by companies we surveyed was £140,000 for electricity and almost £54,000 for gas.<sup>7</sup>

Since 2002, there has been a 122% increase in the price of gas for industry and a 94% increase in the price of electricity<sup>8</sup>.

We know electricity prices will increase further. Government's own figures show that by 2020 energy taxes will account for half of a manufacturer's electricity bill. At the extreme, in 2020 UK steelmakers can expect to pay over 280% more for the impact of government policies on electricity prices than American and Russian competitors.<sup>9</sup>

**TABLE 1** PROPORTION OF SPEND ON ELECTRICITY AND GAS

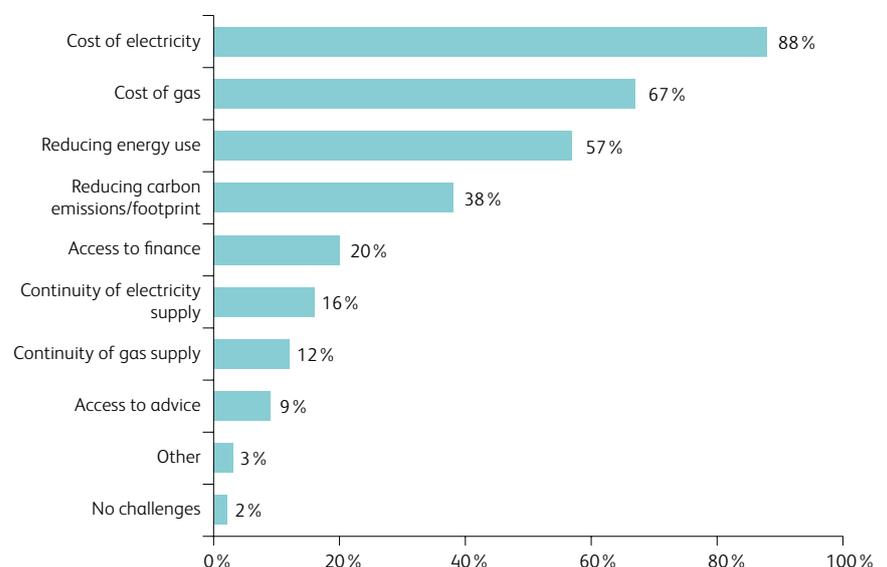
Proportion of spend on electricity and gas in the last 12 months

Size of consumer	Electricity spend (% of total)	Electricity consumption (% of total)	Gas spend (% of total)	Gas consumption (% of total)
<b>Total</b>	<b>66</b>	<b>40</b>	<b>34</b>	<b>60</b>
Small	72	54	28	46
Medium	75	50	25	50
Large	64	39	36	61

Source: EEF Energy Efficiency and Challenges Survey, 2013

**CHART 1** ANTICIPATED ENERGY CHALLENGES OVER THE NEXT TWO YEARS

% of companies selecting options (multi select)



Source: EEF Energy Efficiency and Challenges Survey, 2013

Already for energy-intensive industries, electricity costs in the UK are among the highest in Europe and are significantly higher than the costs faced by competitors in China, India, the US and Russia. While the government has put a compensation package in place for the UK’s energy-intensive manufacturers, it only partially covers some of the additional costs that these companies face. In addition, it is only guaranteed until 2015, creating significant uncertainty for affected companies.

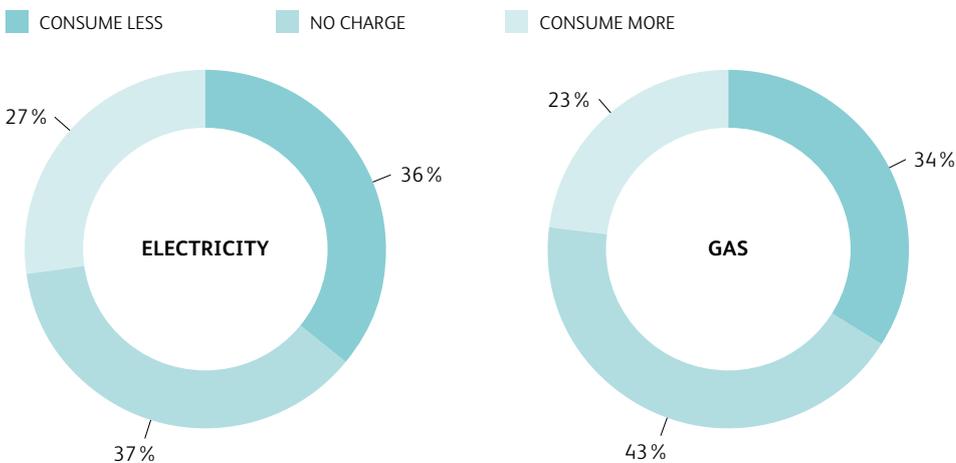
For other manufacturers, costs are also rising. Unless this increase can be absorbed by the business or passed on to the customer,

then rising energy costs risk damaging UK manufacturing’s international competitiveness.

Over half of manufacturers think reducing their energy use will be the key energy challenge over the coming two years. In the short term, driven by rising costs and climate change legislation, over a third of manufacturers are planning to consume less (Chart 2). But many plan to hold consumption steady because planned efficiency measures will only offset any expected increased consumption resulting from growth. Less than a quarter expect to use more gas, and only slightly more are expecting electricity consumption to increase.

**CHART 2** EXPECTED CONSUMPTION

Expected utility consumption over the next 12 months, % of respondents



Source: EEF Energy Efficiency and Challenges Survey, 2013

<sup>6</sup> DECC (2013), Energy Consumption in the UK: Chapter 1 – Overall energy consumption in the UK since 1970.  
<sup>7</sup> See Annex 1 for data on energy spend. We have calculated that manufacturers paid an average implied price (the implied average price is calculated by dividing spend by consumption for both gas and electricity) of £97.43 per MWh for electricity and £42.67 per MWh for gas in the last 12 months.  
<sup>8</sup> DECC (2013), Quarterly Energy Prices: June 2013.  
<sup>9</sup> ICFI & BIS (2012), An international comparison of energy and climate change policies impacting energy intensive industries in selected countries – Final Report.

## 2. DRIVERS TO IMPROVING EFFICIENCY

Energy efficiency is not new to the manufacturing sector. Any reduction of a business' cost base will help that business find a competitive edge in its market.

Over the last two decades, manufacturers have improved their energy efficiency and also helped to reduce greenhouse gas emissions by almost 40% whilst maintaining the same level of output.<sup>10</sup> In energy-intensive industries the pursuit of saving energy dates back even further. The steel sector, for example, has made significant improvements over the last 60 years. One of our members remarked that they had attended their first workshop on energy efficiency in 1979.

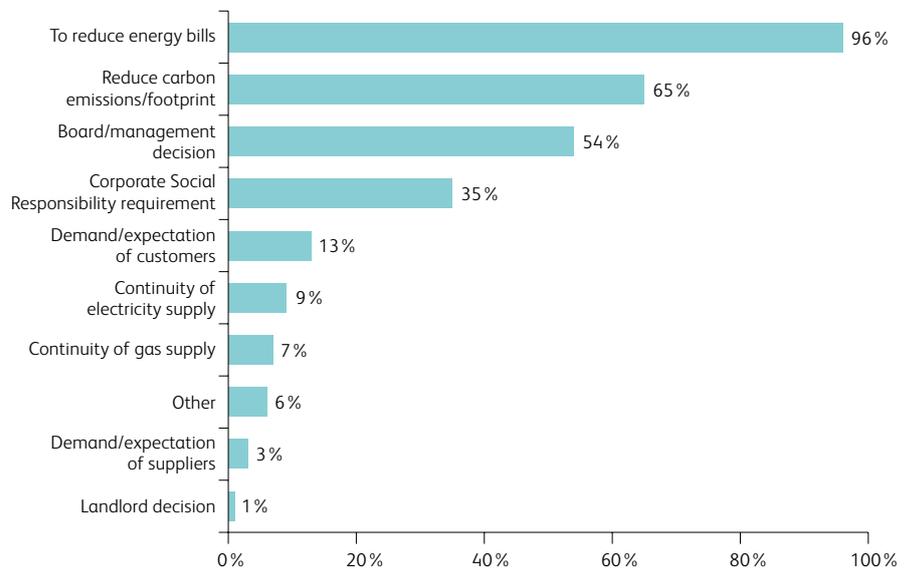
As energy costs represent a significant proportion of manufacturers' operational costs, companies are finding that increasing productivity and efficiency through reducing energy consumption is key (Chart 3). This process has been further incentivised by the introduction of legislation, such as Climate Change Agreements and the EU Emissions Trading System, as well as the increasing need for manufacturers to demonstrate to their stakeholders that they are taking climate change and energy management seriously.

In short, the incentives to improve energy efficiency in the manufacturing sector have existed for many years – both within and outside of legislation.

Over the last two decades, manufacturers have increased their energy efficiency and reduced greenhouse gas emissions by almost 40% whilst maintaining the same level of output.

**CHART 3** REASONS FOR IMPLEMENTING OR CONSIDERING ENERGY MANAGEMENT OR EFFICIENCY MEASURES

% of companies selecting options (multi select)



Source: EEF Energy Efficiency and Challenges Survey, 2013

<sup>10</sup> EEF analysis using data from ONS, 2011.

With increasing concern over electricity costs in the coming years, UK manufacturers continue to be focused on strategically managing these costs in order to find competitive advantage. Improving energy efficiency can not only help to reduce pressure that rising energy prices place on business competitiveness, but can unlock increased productivity and actively improve a business' position against its competitors.

Such is its importance that over a third of Chief Executives and Managing Directors

in manufacturing retain control over energy efficiency decisions, with similar numbers also taking the lead on energy procurement. In larger companies, the responsibility for procurement may lie in the hands of an in-house Energy Buyer or Manager, while decisions on efficiency are made by Facilities Managers or Operations Directors. Once turnover exceeds £20m, specialist energy buyers or energy managers start to be introduced (Table 2). For half of those surveyed, strategic energy management decisions were taken at the board level.

**TABLE 2** DECISION MAKERS

% responsible for procurement and efficiency decisions by company turnover (multi select)

Company turnover (£m)	Energy procurement		Energy efficiency	
	Chief Executive/ Managing Director (%)	In-house Energy Buyer/Manager (%)	Chief Executive/ Managing Director (%)	Facilities Manager (%)
Up to £2	75	4	64	4
£3-£10	48	2	46	23
£11-£20	25	3	22	22
£21-£50	33	13	31	21
£51-£100	15	20	20	35
£101+	5	38	10	48

Source: EEF Energy Efficiency and Challenges Survey, 2013

Three-quarters of those surveyed reported that a reduction in electricity bills is the key advantage of energy management or efficiency measures (Chart 4). In addition, over half reported a reduction in gas bills. Virtually all manufacturers (95%) reported a change or improvement as a consequence of implementing energy management. A reduction in carbon emissions was the next most frequently cited benefit of taking action to improve energy efficiency.

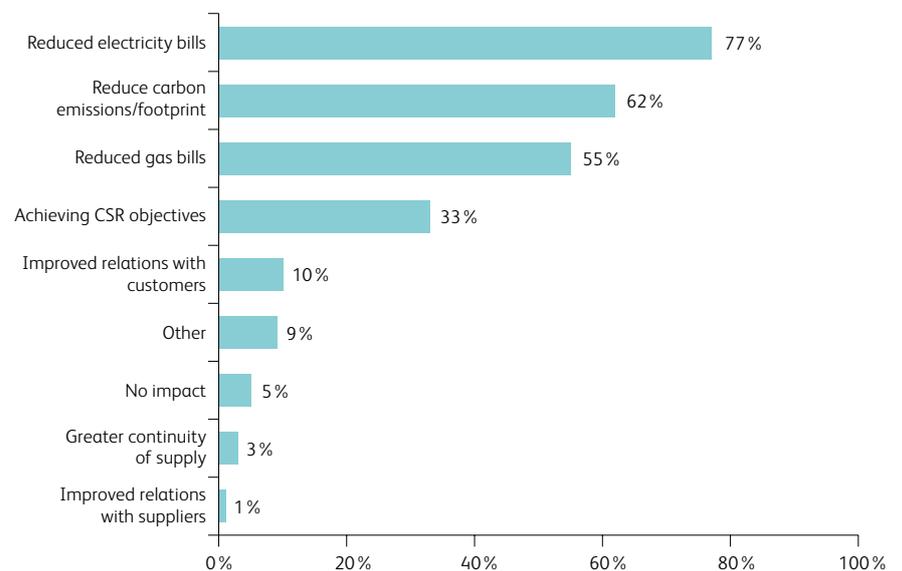
Our survey shows that a large proportion of manufacturers are already implementing the easier, more cost-effective actions to improve management of energy. Just under two-thirds have undertaken audits and over half have already adopted lighting efficiency strategies (Chart 5). More technically challenging process efficiency has been the focus of just under half of manufacturers and remains the focus for over a third of manufacturers.

**Virtually all manufacturers reported a change or improvement as a consequence of implementing energy management with a reduction in electricity bills being seen as the key advantage of energy management.**

Yet there remain a significant number of manufacturers who are still considering the full suite of options available to them, whether that be upgrading previous efforts or rolling out new initiatives. A significant number of respondents indicated that they had considered measures but rejected them. A range of business barriers continues to hamper further investment in energy efficiency.

**CHART 4 BENEFIT OF IMPLEMENTED ENERGY MANAGEMENT OR EFFICIENCY MEASURES**

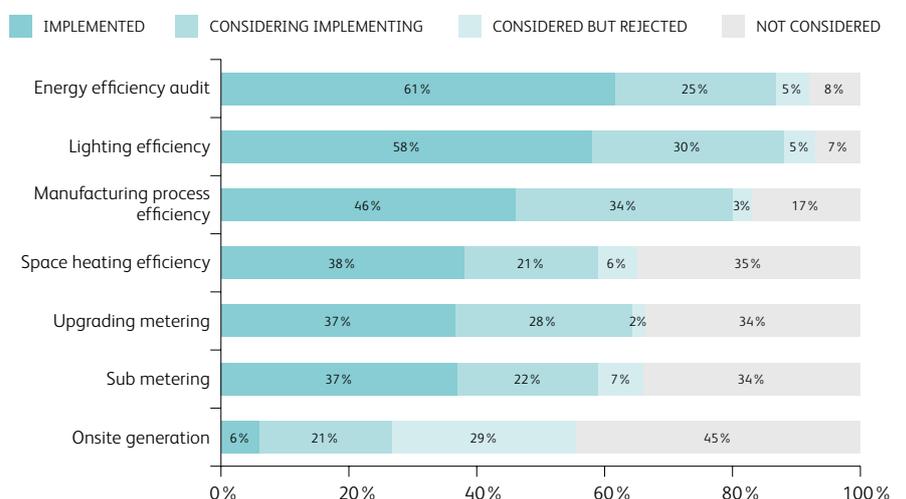
% of companies selecting options (multi select)



Source: EEF Energy Efficiency and Challenges Survey, 2013

**CHART 5 IMPLEMENTATION OF ENERGY MANAGEMENT OR EFFICIENCY MEASURES**

% of companies implementing, considering or rejecting energy management or efficiency measures



Source: EEF Energy Efficiency and Challenges Survey, 2013

# 3. BARRIERS TO IMPROVING EFFICIENCY

To improve energy efficiency, manufacturers must now overcome a number of considerable barriers in order to secure investment. Having already invested in the low-hanging fruit, companies are now facing investments with longer or uncertain paybacks, lumpier investments, and projects that are more complex to manage.

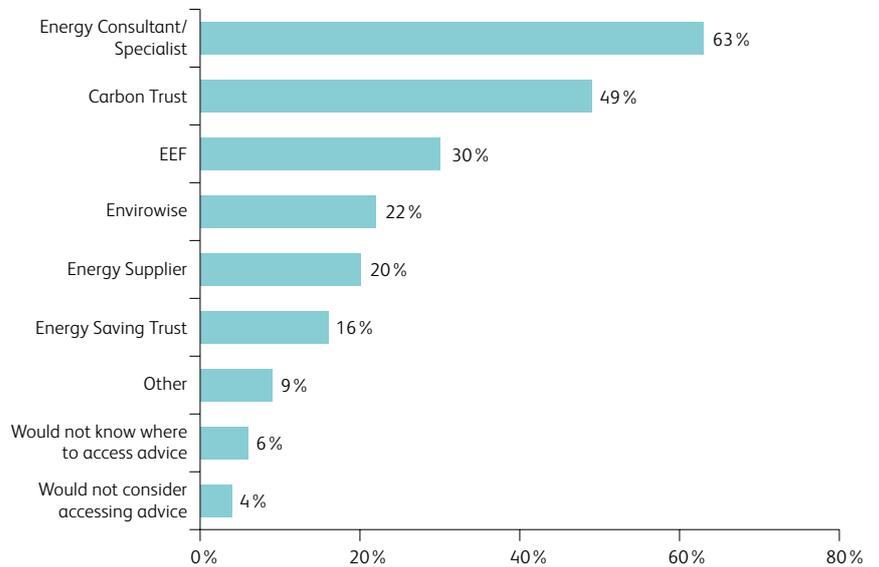
Scope for further energy efficiency gains in the short term is likely to be greater in the industrial building stock and non-energy-intensive manufacturing processes than in the most energy-intensive activities. The very diverse nature of these sectors means that market-wide solutions will be increasingly difficult to achieve, and as a result manufacturers are now looking for specialist, sector-specific advice, and for that support to feed into developing convincing business cases.

The survey has shown that manufacturers understand where to go for energy management or efficiency advice, with only 6% stating they would not know where to turn (Chart 6).

Companies are now facing investments with longer or uncertain paybacks, lumpier investments, and projects that are more complex to manage.

**CHART 6** SOURCE OF ENERGY ADVICE

% of companies selecting options (multi select)



Source: EEF Energy Efficiency and Challenges Survey, 2013

The majority of respondents enlist advice from energy consultants or specialists, whilst a significant number would turn to organisations such as the Carbon Trust. One in five would seek advice from their energy supplier; while cost is still king, nearly a third of manufacturers report the availability of advice as an important factor when selecting an energy supplier, and a fifth are looking for support in developing their energy strategy (Chart 7).

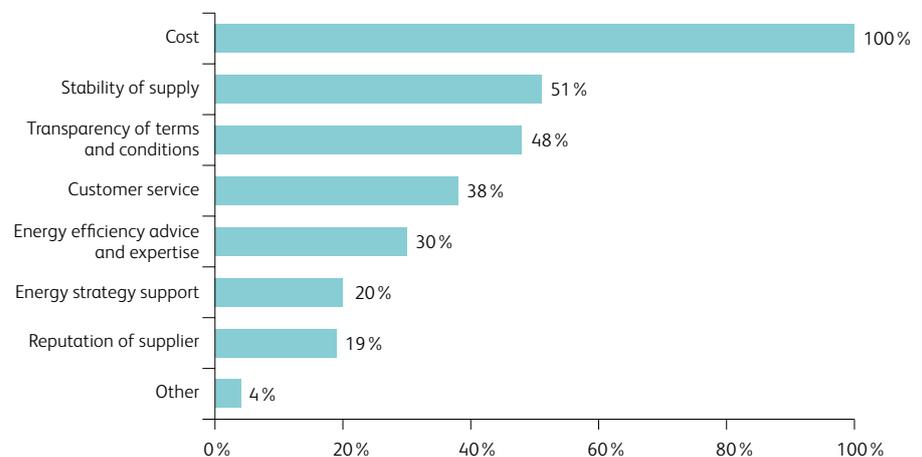
Yet the survey also suggests that some companies are struggling to secure the advice needed to identify realistic and cost-effective opportunities in the first instance; over a third of manufacturers believe there is limited scope to increase efficiency (Chart 8).

A general skills gap and a lack of expertise were also highlighted as significant barriers to investing in energy-saving measures. With the forthcoming requirement for all large organisations to undertake an Energy Savings Opportunity Scheme assessment by December 2015, energy suppliers have a clear opportunity to sell or provide more value-added services tailored to the needs of manufacturers. Other providers of advice must offer support and guidance with a clear understanding of the actual industry and its particular challenges. Generic advice is now of limited value to secure further savings.

EEF also supports the reintroduction of the full Industrial Energy Efficiency Accelerator (IEEA) programme, which focuses on the next generation of energy efficiency improvements at sector level and looks at the unique challenges faced by that sector and the opportunities for step changes in how sectors use energy.

**CHART 7 FACTORS THAT ARE IMPORTANT WHEN SELECTING AN ENERGY SUPPLIER**

% of companies selecting options (multi select)

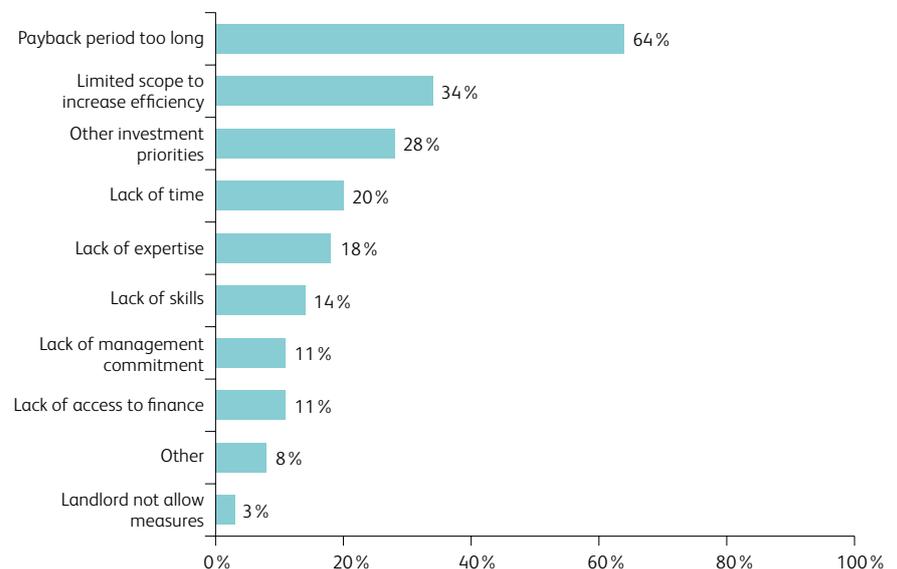


Note: figures have been rounded to the nearest whole number

Source: EEF Energy Efficiency and Challenges Survey, 2013

**CHART 8 REASON FOR ENERGY MANAGEMENT OR EFFICIENCY MEASURES BEING CONSIDERED BUT REJECTED**

% of companies selecting options (multi select)



Source: EEF Energy Efficiency and Challenges Survey, 2013

Yet even measures such as improving space heating efficiency and sub-metering systems are not being brought forward by large numbers of businesses. Sub-metering systems, whilst not actually delivering savings in their own right, enable manufacturers to better pinpoint savings opportunities. Almost as many manufacturers as have implemented projects in these areas have decided not to invest after examining the business case. In particular, manufacturers struggle to build a convincing business case to invest in costly on-site generation. This is not surprising, as manufacturers lack expertise in electricity generation and may be loath to enter into a new and politically unstable market. However, increasingly, manufacturers are leasing land to energy suppliers to run energy-generating technologies on-site, working in partnership with trusted energy suppliers to jointly manage such initiatives.

Payback periods represent one of the key barriers to investment. Half of those surveyed selected this as their primary reason behind considering but ultimately rejecting measures (Chart 9). Two-thirds of manufacturers

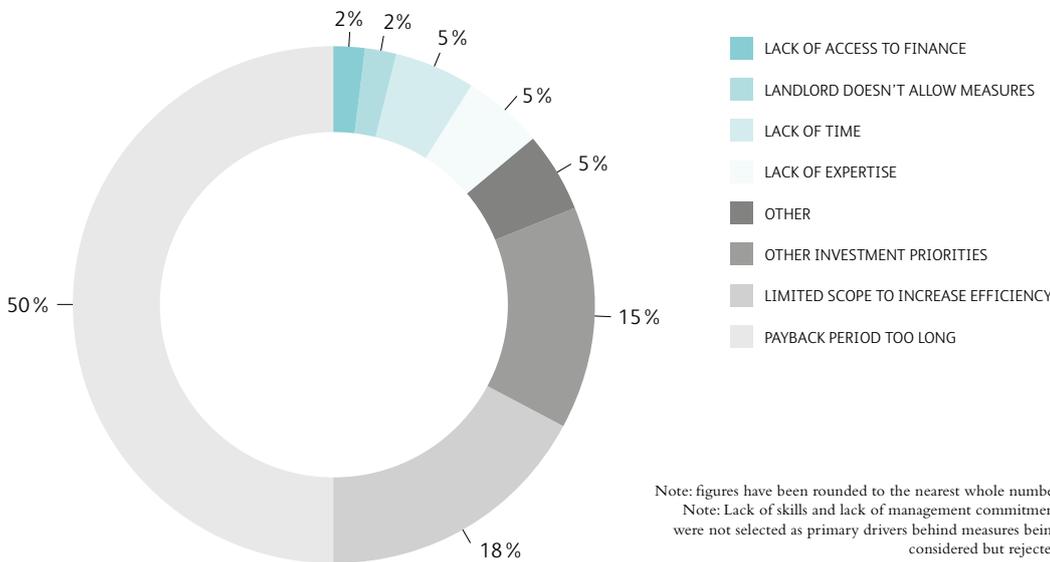
Half of those surveyed selected payback periods as the primary reason for considering but ultimately rejecting efficiency measures.

require a payback period of three years or less. This has not been helped with the recent trend for shortened credit terms being offered by banks and other financial institutions to fund investments.

In theory, the government’s Enhanced Capital Allowance (ECA) scheme could help to bring

**CHART 9** PRIMARY REASON FOR ENERGY MANAGEMENT OR EFFICIENCY MEASURES BEING CONSIDERED BUT REJECTED

% of companies selecting options (single select)



Source: EEF Energy Efficiency and Challenges Survey, 2013

down payback periods for energy-efficiency capital investments. Qualifying equipment must be selected from an 'Energy Technology Product List'. However, our members tell us that the scheme, as it stands, is of limited value. For example, there is no incentive for overseas manufacturers to go through the bureaucracy of attempting to place a technology on the list if there is not a big market for it in the UK. This is a problem for manufacturers looking to invest in niche technologies. Government must undertake a review of capital allowances, including Enhanced Capital Allowances (ECAs), to ensure that it is fit to meet the needs of modern manufacturing.

But simply focusing on the financial barriers to energy efficiency may not yield the volume of change needed. A closer examination of barriers is required. For example, action on energy competes with other business-critical investment priorities, and access to management time is often limited. Investments in new plant and machinery, products and processes, innovation, people, marketing, skills and branding compete against each other when boards assess how and where to invest. Investments are likely to be linked to manufacturers' strategic priorities, with larger companies likely to identify developing capacity for new products as the biggest driver for investment, whereas a larger proportion of small and medium-sized companies are more likely to invest to increase productivity. This could explain why one in ten reported a lack of management commitment to push through new measures.

Another significant underlying issue is the relatively stagnant investment in the UK since the end of the recession. Business investment currently stands 24% below the pre-recession peak and we have seen limited

growth since the end of the recession.

However, recent evidence of manufacturers' investment intentions has been very positive and have shown strong signs of investment picking up. Looking ahead to 2014, manufacturers are planning moderate or largely maintenance investment in the UK but some manufacturers, mostly larger companies, are planning overseas investment in the year ahead. In an increasingly global environment and as growing numbers of our members have a global reach, manufacturers are looking to new markets and locations to help them achieve their growth objectives. As such, investment decisions need to take into account the effectiveness of options across the business portfolio. Companies look to invest in locations that have the best rate of return. A lack of finance, policy instability, a reluctance to spend cash reserves and the UK investment culture are all constraining factors that play a part in investment behaviour.

Simply focusing on the financial barriers to energy efficiency may not yield the volume of change needed. A closer examination of barriers is required.

To deliver a step change in energy efficiency in manufacturing, industry and government must work together to develop appropriate policy solutions, drilled down to individual manufacturing sectors. The key to unlocking investment in energy efficiency is in understanding the specific barriers that each sector faces. This is especially true for the manufacturing process. However, this must sit within a wider modern industrial strategy that drives balanced growth within the UK economy and enhances the overall business environment in which manufacturers operate.

# CONCLUSION

This report has outlined the significant challenges that manufacturers encounter to remain competitive in the face of high energy costs as the UK meets the complex dual challenge of updating an aging energy infrastructure and managing the causes of climate change.

Concern over the cost of energy and its subsequent impact on competitiveness is extremely high. Yet manufacturers are far from impotent to these challenges. Our survey highlights that manufacturers are taking action to become more energy efficient and that energy efficiency is rapidly escalating as a core business concern within companies. A third of CEOs have taken control of energy-efficiency decisions and two-thirds have undertaken audits to explore further measures to reduce costs.

The most advanced companies are systematically addressing inefficiencies in their buildings and processes to try and mitigate rising costs that come straight off the bottom line. This must remain a focus for all manufacturers. Energy management must be driven by executive-level commitment and driven through the business at company and site level. Energy usage must be mapped and managed. Companies should budget for and explore technology solutions. Staff need to be engaged. New ways of doing business, such as adopting fully circular or closed-loop supply chains, may also help. Furthermore, this must be done with one eye on the rapidly evolving framework of policy and incentives emerging from government.

By adopting a systematic, strategic approach, companies can improve their energy efficiency, offset some of the rising costs that they face and move to a position of advantage over their competitors.

Yet there remain significant barriers and obstacles to realising this goal. Government can and must do more to support manufacturers in this endeavour by helping to dismantle the barriers to action and stripping out costs, where it is in its power to do so. The boards of manufacturing companies need to be convinced that the UK is the right place to make investments. Addressing unilateral energy taxes, reintroducing the Industrial Energy Efficiency Accelerator and reform of the Enhanced Capital Allowance scheme would help and would send a signal that within the UK there is a commitment to fostering a vibrant manufacturing sector that can compete in a global market. There is a role also for energy experts and advisors at the Carbon Trust, in business organisations and from energy suppliers to provide clear and relevant support to manufacturers.

To remain internationally competitive and to remain a place where companies choose to invest - to remain a country where companies can grow - Government, industry and energy suppliers must work together to ensure that energy policy and the energy sector support the vision of maintaining and expanding the UK's modern, export-focused manufacturing base.

# TOP TIPS

## – MANAGE YOUR ENERGY WISELY...

**Embed commitment:** Without gaining executive level commitment, most energy programmes will fail to achieve their full potential. Ensure that someone on the board has responsibility for energy. Set appropriate KPIs linked to business performance.

**Plan to invest in energy efficiency:** Make budgets available for energy-saving projects, as long as they meet standard payback criteria. Ensure capital processes include specific criteria for energy and carbon savings. Make the business case relevant to the top-level audience by linking savings to an equivalent increase in top-line growth, or to another metric that will gain attention. Build in anticipated increases in energy costs and tax relief options. Explore other sources of financial support such as the Green Investment Bank and Green Deal for Business.

**Manage energy use at company level:** Put in place an energy policy, an energy reduction plan and a quantified list of improvement projects to underpin it. Larger companies should consider following the energy management systems standard ISO 5001. Explore software options that enable sophisticated energy monitoring across the business. Automated monitoring and targeting software (aM&T), which is required under building regulations, is a powerful and cost-effective tool if used correctly: use it to develop customised reports and analysis and to validate savings from Capex investments. Review how you buy energy to ensure you are receiving the best value for money: consider seeking specialist energy procurement advice.

**Map your energy usage:** Carry out an in-house energy audit to understand how and where energy is used across your business. Install sub-metering and put in place energy performance indicators (KPIs) for all energy-intensive plant. If heat is produced on site, carry out a heat mapping exercise to assess whether any wasted heat can be utilised in other processes or areas within the site or by neighbours. Consider establishing an energy action team which meets monthly to review consumption patterns, to identify and build project proposals and to report to the board.

**Manage energy use at site level:** Ensure that there is a person responsible for carbon and energy management at each site. Carry out annual leak surveys for your compressed air systems. Carry out regular site energy walks to spot opportunities for improvements. Fresh eyes can spot opportunities that others have inadvertently overlooked, so rotate staff for energy walks. Use aM&T software to help prioritise areas for improvement.

**Look again at technology:** Routinely consider the whole range of options available to you from compressed air systems, climate controlled factory areas and boiler houses to heat distribution systems, lighting, pumps and motors. Ensure you have access to the right level of expertise. Seek out best practice in your sector, potentially through trade associations, and benchmark your performance against best in class. Plan for improvements during scheduled downtime. Do not ignore larger investments such as more efficient machinery – these might offer substantial payback. Review the business case for previously considered technologies in light of anticipated price rises.

**Engage staff:** Put in place processes for staff to report energy wastage and improvement ideas and ensure that these are actioned and communicated back. Consider incentives to encourage involvement and energy champions. Carry out an energy awareness campaign or staff training programmes at least every 12 months. Effective programmes use a range of communication tools and media to engage staff. If you have an aM&T system, use it to make your communications timely and relevant. Embed energy efficiency into other relevant staff training programmes.

**Reduce grid consumption:** Consider generating your own energy. Energy generated by on-site renewable and low-carbon generation technologies are exempt from some of the charges and levies that form part of the costs charged by suppliers. In addition, you can sell surplus electricity back to the grid, creating a revenue stream as well as contributing to longer-term carbon reduction initiatives. As well as renewables, explore other technologies such as ground water source heat pumps, biomass boilers and fuel cells. Explore other options such as leasing land to energy generators to operate technologies on site or leasing generating technologies for projects that don't meet standard payback criteria.

**Monitor government policy:** Stay on top of your legal obligations. Regular energy audits will be a legal requirement for non-SME companies by 2015. Be aware of the range of incentives that government has, or is planning to, put in place to encourage businesses to reduce energy consumption or change the way you use it.

**Consider alternative business models:** Fully circular or closed loop supply chains help retain value in materials, components and products and could potentially improve energy efficiency. Explore options with your suppliers and customers and consider new strategic alliances and partnerships with other supply chain stakeholders. Challenge designers to think about opportunities for circularity. Selective finance models can remove the need for capital investments whilst providing a positive cash-flow contribution. In some cases, full energy performance contract models may be appropriate.

## FOR MORE ADVICE

**npower:**

[www.npower.com/large-business/managing-energy](http://www.npower.com/large-business/managing-energy)

**The Energy Institute:**

[www.energyinst.org/home](http://www.energyinst.org/home)

**Energy Managers Association:**

[www.theema.org.uk](http://www.theema.org.uk)

**Chartered Institution of Building Services Engineers:**

[www.cibse.org](http://www.cibse.org)

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# ANNEX 1

**TABLE 3** UTILITY CONSUMPTION

Electricity and gas consumption in the last 12 months

	Total consumption (MWh)	Upper quartile (MWh)	Median (MWh)	Lower quartile (MWh)
Electricity	1,623,674	5,975	1,469	459
Gas	2,428,138	8,016	1,932	396

Source: EEF Energy Efficiency and Challenges Survey, 2013

**TABLE 4** ENERGY CONSUMPTION BANDS

Energy consumption bands applied to data

Energy size bands	
Type of consumer	Annual consumption (MWh)
Small	≤500
Medium	501-10,000
Large	≥10,001

Source: EEF Energy Efficiency and Challenges Survey, 2013

**TABLE 5** UTILITY CONSUMPTION BY CONSUMER BAND

Utility consumption in the last 12 months by consumer band

Size of consumer	Upper quartile (MWh)	Median (MWh)	Lower quartile (MWh)
<b>Electricity (total)</b>	<b>5,975</b>	<b>1,469</b>	<b>459</b>
Small	332	193	152
Medium	4,475	2,053	890
Large	33,000	19,894	14,000
<b>Gas (total)</b>	<b>8,016</b>	<b>1,932</b>	<b>396</b>
Small	354	165	80
Medium	5,244	2,268	1,161
Large	41,929	23,848	16,238

Source: EEF Energy Efficiency and Challenges Survey, 2013

**TABLE 6** AVERAGE UTILITY SPEND

Utility spend in the last 12 months

	Mean	Median	Range	Minimum	Maximum
Electricity	£708,751	£140,000	£41,996,916	£3,084	£42,000,000
Gas	£405,740	£53,653	£12,998,877	£1,123	£13,000,000

Source: EEF Energy Efficiency and Challenges Survey, 2013

## ABOUT NPOWER

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npower is a leading business energy supplier, serving more than 238,000 small to medium-sized enterprise (SME) sites and around 17,000 industrial and commercial customers, with over 100,000 sites. Our customers include many recognisable names such as BT, Tata Steel and Sainsbury's.

Energy is a vital commodity and we are dedicated to helping UK businesses use it more efficiently. For major energy users, we offer bespoke energy solutions and multi-utility management consultancy to improve efficiencies right across the procurement/consumption chain.

And for smaller business consumers, we provide sector-specific advice and guidance on reducing energy use.

We provide direct access to energy trading services with dedicated support for large consumers. Our award-winning team offers risk management services with comprehensive market intelligence and a range of products

designed to support each buyer's requirements and level of expertise.

A key part of our service is also about informing and engaging with our customers and other stakeholders such as industry bodies and government. We hold regular events, roundtable discussions and webinars to promote understanding of key issues, such as Electricity Market Reform and planning for future energy costs.

Our aim is to ensure that the views of business customers are properly represented. We are proud to have won a number of awards in recognition of the service we offer to businesses, including Energy Supplier of the Year and Excellence in Carbon Reduction at the 2013 Energy Awards.

npower is the first of the Big 6 energy suppliers to be awarded ISO 50001 accreditation for energy management best practice in 2013 and gained the prestigious Carbon Trust Standard in the same year.

### To find out more about npower, please contact:

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# ABOUT US

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EEF is dedicated to the future of manufacturing. Everything we do is designed to help manufacturing businesses evolve, innovate and compete in a fast-changing world. With our unique combination of business services, government representation and industry intelligence, no other organisation is better placed to provide the skills, knowledge and networks they need to thrive.

We work with the UK's manufacturers, from the largest to the smallest, to help them work better, compete harder and innovate faster. Because we understand manufacturers so well, policymakers trust our advice and welcome our involvement in their deliberations. We work with them to create policies that are in the best interests of manufacturing, that encourage a high-growth industry and that boost its ability to make a positive contribution to the UK's real economy.

Our policy work delivers real business value for our members, giving us a unique insight into the way changing legislation will affect their business. This insight, complemented by intelligence gathered through our ongoing member research and networking programmes, informs our broad portfolio of services. These services unlock business potential by creating highly productive workplaces in which innovation, creativity and competitiveness can thrive.

The EEF Information & Research Team is in a unique position to provide insight into the trends and behaviours that shape the UK manufacturing sector.

The team is able to provide invaluable research data, assisting with daily business needs whilst also providing the intelligence to help businesses compete, innovate and grow.

## To find out more about this report, please contact:

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The data used in this survey has been provided by EEF members. Contributing to our surveys helps us to accurately reflect trends and behaviours that shape the UK manufacturing sector.

If you would like to participate in future surveys, please contact Amanda Norris in our Information and Research team [anorris@eef.org.uk](mailto:anorris@eef.org.uk)

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We foster enterprise and evolution to keep your  
business competitive, dynamic and future focused

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