

Energy Efficiency Management

Delivering smart
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enable the public
sector to lead
the energy
revolution

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10/2010



FOREWORD

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Managing director
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Now is the time for us to take action

Both local government and the NHS are facing huge pressures to create cost efficiencies. This pressure has been even further intensified by the recently introduced austerity measures and the growing legislative demands for energy efficiency.

With these increasing demands to cut costs, the government's recent pledge to reduce UK carbon emissions by 34% by 2020 means that cutting energy consumption is a high priority. With the public sector spending more than £2.5bn on energy every year, there is a great opportunity for the public services to work with their energy suppliers to cut carbon and save money.

This report has been based on a survey of energy, facilities and estates managers in local government and the NHS. This survey gathered their views on energy efficiency within the public sector, and it provides great insight into the thinking around efficiency as well as into the objectives and challenges that are being faced.

Local government and the NHS both recognise the need for improved energy management, but they face significant challenges in achieving this – ranging from the variety and age of buildings in their control, to a lack of experienced personnel. In the face of the increased pressures, managers need help on what to do, how to do it and how to finance it.

The need to manage energy more effectively is a message we hear from our NHS and local government customers every day, and is one that we are well



This research provides a timely insight into an issue of growing importance, not only to the NHS and local government, but to society as a whole

equipped to help them solve. British Gas Business has years of expertise in helping public sector organisations reduce their consumption and therefore costs. Measures range from innovative joint financing options and large-scale audits to the simple, yet effective, installation of smart meters. Smart meters are crucial to help understand an organisation's energy usage and ultimately enable them to amend their consumption patterns.

This research provides a timely insight into an issue of growing importance, not only to the NHS and local government but to society as a whole. We at British Gas Business want to make energy use a strategic issue for the public sector and not just a pure procurement exercise. There are significant opportunities to be gained from taking a 360° view of energy and we are excited to play our part in finding and delivering appropriate solutions.

The need fo

The issues of climate change and energy conservation have never been higher up the political agenda. The impact of policies to cut carbon emissions will mean higher prices – so wise energy use is more important than ever

THE SURVEY

In September 2010 we engaged an independent research firm to send questionnaires to local government and NHS organisations, accepting responses from facilities and energy managers.

Responses were anonymous but came from the following types of organisation: unitary, county, district, metropolitan and city councils; acute, primary care, NHS foundation, mental health and community trusts, and the Scottish Health Board.

*Figures have been rounded to the nearest whole number so may not add up to 100%

In August 2010, in the first annual energy statement delivered to Parliament, the energy and climate change secretary Chris Huhne announced plans to cut UK carbon emissions by 34% by 2020 and at least 80% by 2050. However, he said that the impact of these policies could lead to an 18% rise in gas prices and a 33% rise in the cost of electricity.

This was worrying news for all those households, businesses and government departments that are already struggling to cope with energy bills that have soared over the past decade.

According to a 2009 report from the energy sector regulator Ofgem, wholesale energy costs have roughly quadrupled since 2003, and suppliers have been forced to pass these price rises on to their customers.



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Not only is there an environmental imperative, but there is an urgent financial one, too
Gary Porter, chair, environment board, LGA, p4

Energy management



THE CRC ENERGY EFFICIENCY SCHEME

The CRC Energy Efficiency Scheme, previously known as the Carbon Reduction Commitment, is aimed at improving energy efficiency and cutting emissions in large public and private sector organisations, such as local government and the NHS.

In total about 5,000 organisations are affected, and together they are responsible for roughly 10% of the UK's emissions.

The scheme operates a cap-and-trade system. Companies have to measure and record their energy use so they can calculate their carbon dioxide emissions, and then buy carbon allowances to cover those emissions. The revenue generated from these carbon auctions will be

redistributed between the scheme's participants. In essence, this provides a financial incentive for low-carbon emissions.

Our survey revealed that, several months into the scheme, a worrying 51% of respondents to our survey still have no plans in place to purchase carbon allowances.

However, they understand the principles behind the scheme – 63% expect to achieve the best possible positions in the league tables through reducing their emissions relative to their five-year average, and 66% plan to do this through steps such as investing in automatic monitoring and targeting equipment to identify where energy is being wasted.

The result has been that in homes, offices, factories and shops up and down the country we have all become acutely aware of the need to find cheaper energy and to reduce our energy use – not only to cut those bills but also to minimise our harmful impact on the environment.

Local government and the NHS are no exceptions. Our survey of officials in local government and the NHS revealed that when it comes to meeting cost-cutting targets, energy management is in fact the most important issue for them, even more so than reducing headcount or

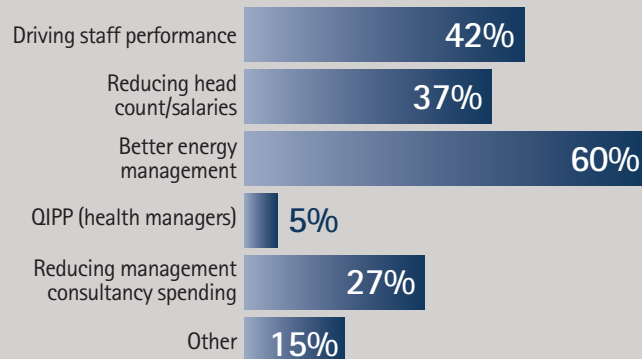


We have all become acutely aware of the need to find cheaper energy and to reduce our energy use

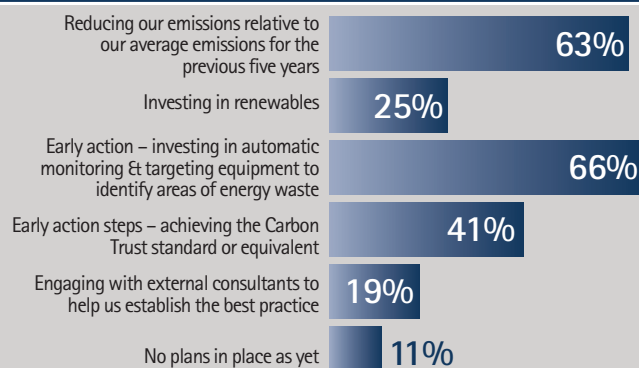
cutting consultants' fees.

In an age of austerity when everyone in the public sector is under severe pressure to cut costs, energy bills are regarded as a relatively pain-free way to make savings, and as an area where specific initiatives will yield rapid, tangible results.

1: Which of the following is most important to your organisation in meeting cost-cutting targets? (Select those that apply.)



2: How do you plan to achieve the best possible position in the CRC Energy Efficiency Scheme league tables?



Respondents ready to act

Those with responsibility for taxpayers' money know that revenue saved from energy costs can be diverted to frontline services

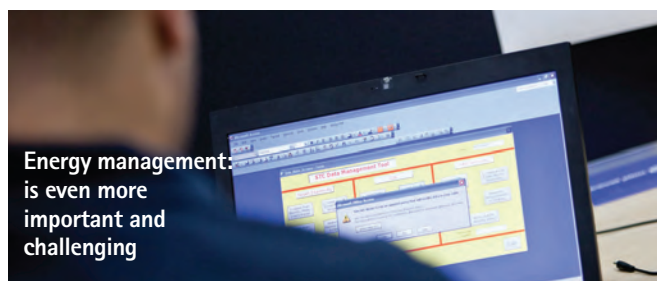
Our survey made it clear that local government and NHS buyers fully understand the importance of action on the issue of energy management, and are already closely monitoring their energy expenditure.

An overwhelming 88% of respondents know how much their energy bills are, and 97% know exactly which sites under their control use the most energy.

Gary Porter, chair of the Local Government Association environment board, says: "At a time when many households are feeling the financial pinch, councils know it's more important than ever to make sure that hardworking people are not hit in the pocket by rising energy prices."

Cllr Porter says it is only right that councils look at the amount of money they are spending on energy and, where possible, reduce their carbon footprint by improving their energy efficiency.

He adds that it is important that council taxpayers can rest assured they are



getting the best value for money for the taxes they pay.

"Not only is there an environmental imperative to cut back on the amount of carbon we release into the atmosphere, there is an urgent financial one too.

"As councils face swinging cuts, the more money they can save through energy efficiency, the more can be spent on the vital frontline services on which people depend," Cllr Porter adds.

It is not only local government officials for whom this is the case: NHS officials are just as capable and committed. Furthermore, respondents feel confident in the ability of their departments to perform competently in this area.

 Councils know it's more important than ever to make sure that hardworking people are not hit in the pocket by rising energy prices
Gary Porter, chair, environment board, Local Government Association

When asked how confident they feel about managing and analysing the energy usage data that is available to them, only 7% admitted they were not confident. Thirty-four percent said they felt very confident, with a further 49% confident.

When asked which factors pose the greatest risk to their

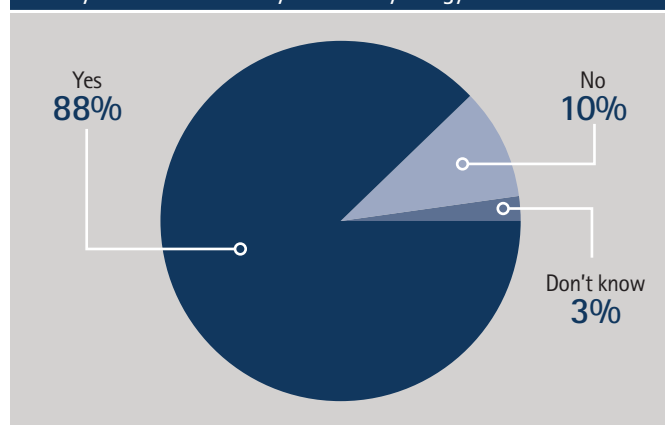
ability to manage energy use and cost, only 16% highlighted a poor understanding of the data available to their team. Twenty-five percent reported a lack of suitably qualified staff and personnel – and without doubt, there is a need for local government and the NHS to increase their human resources in this area – but there are no significant question marks surrounding the competence of officers.

This does not mean, however, that local government and the NHS are managing energy usage and cost as well as they would like, or that respondents are not concerned about developments in this area.

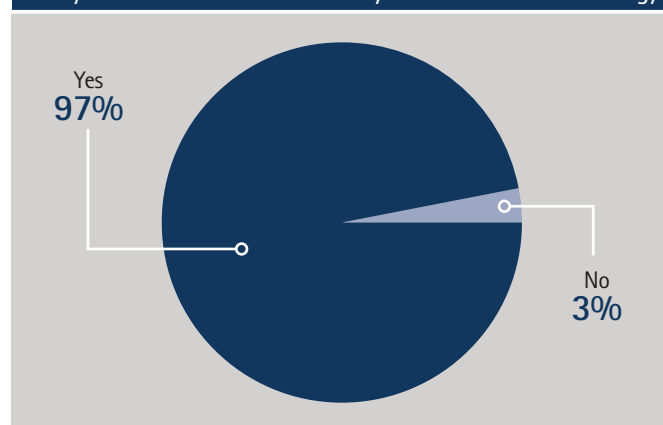
The CRC Energy Efficiency Scheme was only launched in April, the government's age of austerity is only beginning, and wholesale energy prices are rising again.

As we shall now go on to see, our survey revealed that, on top of this mounting economic pressure, local government and the NHS face a number of specific issues that will make energy management even more important – and even more challenging – than it has been in the past.

3: Do you know how much your monthly energy bill is?*



4: Do you know which of the sites under your control use the most energy?





The scale of the investment is ... of a size not seen since the post-Second World War reconstruction
Green Investment Bank Commission report, p7

The obstacles to managing energy

Ageing buildings, red tape and a sheer lack of staff resources are among the problems managers face when tackling energy issues

Our respondents could easily identify the specific challenges they face in managing energy usage and cost.

Sixty-six percent highlighted the varied mix and age of buildings in their estates and 55% pointed to a lack of investment in estate improvement. As we might expect, the age of estates is of more concern for the NHS than for local government: 82% of NHS respondents cited it as an issue, compared with 58% of local government respondents.

The increase in NHS spending between 1997 and 2008, from £35bn to £119bn, had a huge impact on the NHS estate, reducing the percentage that was built before 1948 from 50% to 21%, but the job is unfinished. Around 23% of the estate is still defined as “not fit for purpose”.

Most importantly, in the context of this survey, those buildings are of an age and type that make it either impossible or prohibitively

expensive to make them more energy efficient.

It is also worth noting that one in four respondents says that overly bureaucratic and formulaic procurement in the public sector prevents their organisations from managing their energy needs as efficiently and effectively as they need to.

Although there may well be good reasons for it, it also seems as if the bureaucratic and formulaic approach to procurement – which the public sector is famous for – might also be impeding its ability to improve its energy efficiency.

As one respondent said: “The greatest risk to my ability to manage energy usage and cost is that I can’t enforce energy consumption of new projects to less than statutory or mandatory consumption.”

Another added: “We come up against cultural barriers such as individual staff energy use from PCs, lighting, and so on.”



82%

the percentage of NHS respondents who cited the age of estates as an issue when it came to managing energy

While private sector bodies might find it relatively straightforward to rewrite procurement policies and adapt their internal cultures, in the public sector this takes much longer.

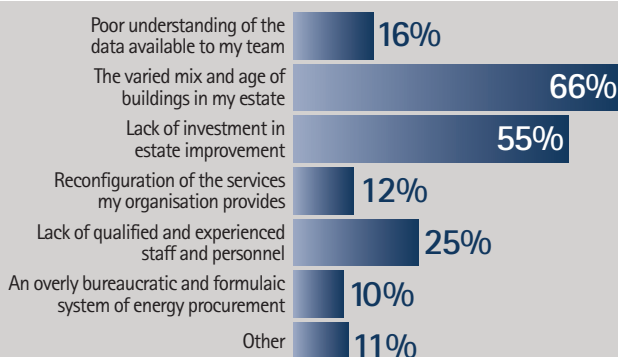
Jeff Whittingham, energy services director at British Gas Business, highlights another issue. He says: “The NHS and local government operate large, dispersed estates and they simply lack the people resource to manage energy consumption effectively. You might have a team of three or four people

looking after an estate of 800 buildings and, no matter how good at their jobs they are or how hard they work, they just can’t have the necessary impact. This becomes even more of a problem as those organisations become capital constrained.”

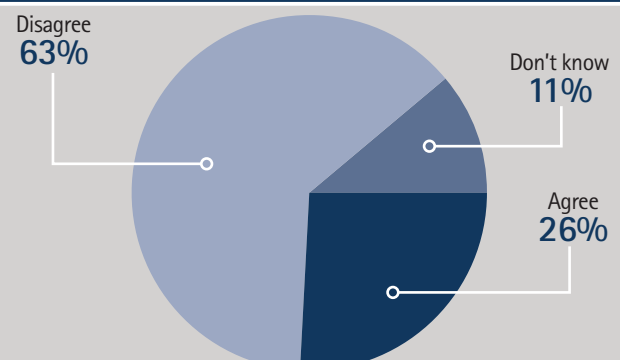
Procurement processes also hold these organisations back, Mr Whittingham says. “There are many private sector organisations such as ours that can help with this shortfall in people, but in many parts of local government and the NHS the process for bringing us on board is too slow, too cumbersome.”

“They should raise the threshold at which contracts need to be put out to tender, and streamline their processes to make themselves more fleet of foot,” he says.

5: Which of the following poses the greatest risk to your ability to manage energy usage and cost?



6: Overly bureaucratic and formulaic procurement in the public sector prevents my organisation from managing our energy needs as efficiently and effectively as we need to



Taking the necessary action

Survey respondents revealed a number of strategies, such as buying consortia, or finding a supplier with energy management expertise

Energy management is becoming an increasingly complex challenge. Those in local government and the NHS are facing a mounting tide of pressures and obstacles. So what are they planning to do about it?

Our survey revealed that a range of short- and long-term tactics is used.

First, the use of buying consortia is popular – 49% find it an effective way of reducing costs quickly. Only 8% said that they prefer to manage their own buying.

Indeed, the consortium approach was recommended by the Office of Government Commerce in a 2009 report, *Energy buying: Working together for better results*. It recommended the energy supply frameworks of Buying Solutions and the Pro5 group of public sector buying consortia.

However, our survey revealed that respondents are also adopting longer-term tactics to reduce energy consumption and so cut costs. The top three tactics mentioned by our

respondents were investment and energy efficiency spending (81%), employee education programmes (60%) and, unsurprisingly, modernising estates (41%).

Our survey also indicated that local government and the NHS are looking for suppliers who will help with this. When asked what they look for in an energy supplier, while the most popular answer (73%) was understandably “a low tariff”, it was by no means the only significant response.

Forty-five percent look for a supplier with the scope to meet their supply needs as well as offer broader energy services, such as energy monitoring and management. Forty-two percent want a supplier that will help them reduce consumption; 41% one that will support them in meeting their legislative obligations; and 34% look for a supplier with expertise in monitoring and managing infrastructure and energy consumption.

While this indicates broad acceptance of the fact that



Smart meters provide half-hourly readings

“Traditionally, there has been too much emphasis on energy price and too little on energy consumption”
Nick Grant, director of corporate markets, British Gas Business

an energy supplier can be a valuable partner in managing energy usage and cost, there seems less willingness to engage specialist consultants in this area.

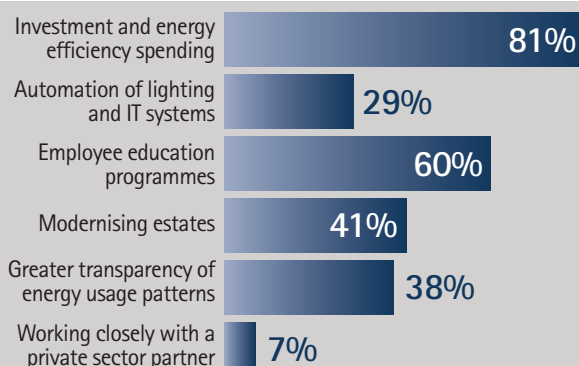
This reluctance was particularly marked among local government respondents. Only 14% of them will engage with external consultants to help them establish best practice, while 35% of NHS respondents will do so.

Similarly, while only 12% of local government respondents would consider adding a specialist energy services provider to their outsourced facilities management package, 35% of NHS respondents would do so.

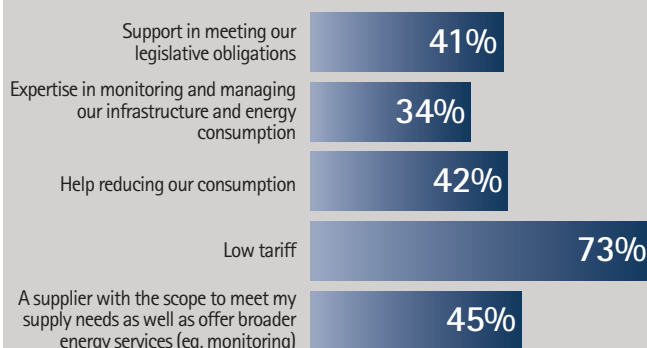
Nick Grant, director of corporate markets at British Gas Business, says: “Traditionally, there has been too much emphasis on energy price and too little on energy consumption. The fact is that price differences between suppliers are usually between 1-5% and in any case prices can fluctuate, like in 2008 and 2009, by about 5% a week.

“By addressing services and usage these organisations could save between 5-10% on their energy bills.”

7: Which of the following do you think will be most important for achieving energy efficiency targets?



8: Which of the following do you look for in your energy supplier?



Finding the finance

Many local government and NHS organisations are planning to invest in energy efficiency measures. But where will the money come from?

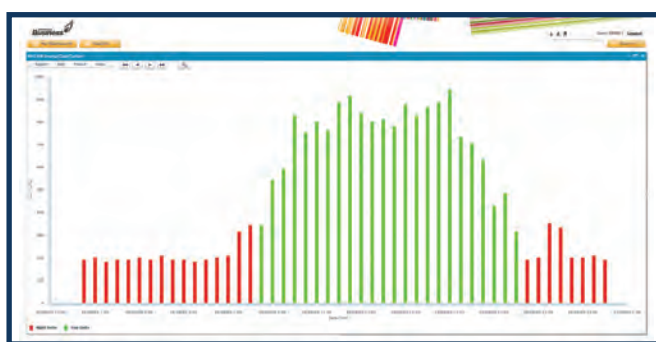
Our survey revealed a clear understanding of the environmental and financial imperatives to cut the use of energy.

It also showed that local government and the NHS are keen to invest in energy efficiency measures to enable this. In fact, nearly one in three respondents said their organisations are looking to invest in some type of energy-efficient project over the next six months.

However, finance is a problem: the ability to fund energy-saving projects is the top concern in relation to energy management, affecting 63% of our respondents.

Our respondents know that in this age of austerity there is likely to be less finance available to make these important investments. Yet, despite this, they remain curiously unwilling to explore funding options from the private sector.

While 97% of respondents know which of their buildings are high-energy use, and 55% cite lack of investment as a major problem in



The smart meter dashboard monitors energy consumption

addressing this, 78% of those planning to invest over the next six months say they will not require finance.

They expect either to fund it themselves or to receive some sort of resources from the government.

It is possible that the mooted 'Green Investment Bank' will plug this gap. The independent commission that recommended its establishment said that a public financial institution was needed to unlock green investment. It said: "The scale of the investment required to meet UK climate change and renewable energy targets is unpre-

£550bn
the estimated cost of
building a new, low-carbon
infrastructure

cedented, and of a size not seen since the post-Second World War reconstruction."

The government has estimated that building the new low-carbon infrastructure that the UK needs will cost £550bn between now and 2020. The Green Investment Bank might indeed provide this level of funding, but it seems unlikely.

Solutions will be required

from the private sector, and energy services director Jeff Whittingham outlines what British Gas Business plans to offer: "We're in discussions with a partner to launch a new product that will be the first combined supply, services and finance product in the energy market."

"It will revolutionise the market, enabling organisations, such as those that completed this survey, to manage volume risk at the same time as price risk, and crucially to acquire the finance they need to minimise those risks."

This is, then, an exciting time for those involved in local government and NHS energy management.

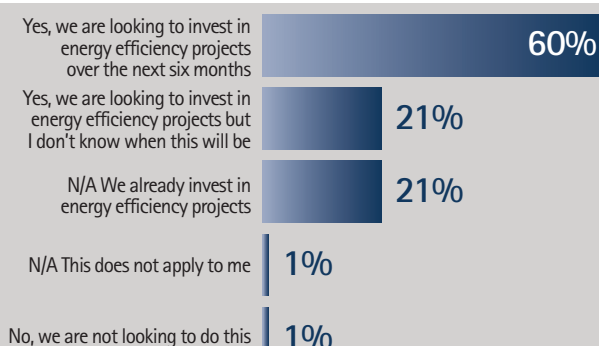
The demands are great and intensifying, and there are many obstacles to effective action, but there is a growing number of innovative and effective ways of taking action to reduce not only expenditure but also overall consumption.

The opportunity is there: the time has come to seize it.

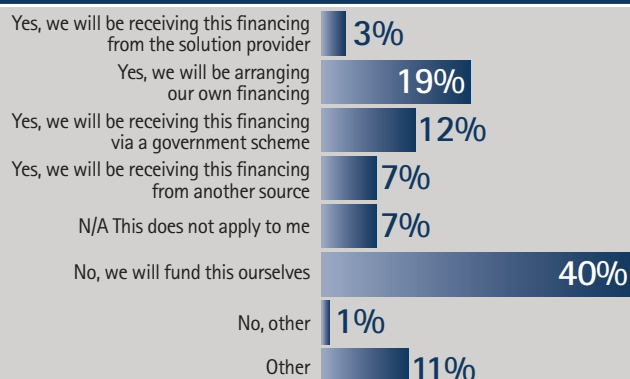
More information

LGCplus.com/Environment
& HSJ.co.uk/Facilities

9: Over the course of the next six months, are you looking to invest in energy efficiency projects? *



10: If yes, will you need someone to provide project financing to avoid upfront costs?





Question.

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Answer.

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