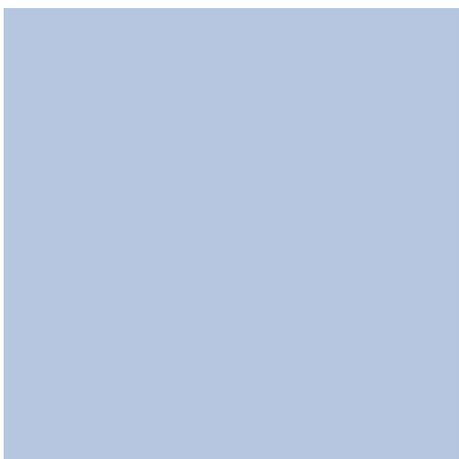


npower Business Energy Index Winter 2005





Dear Reader,

Continuing movements in wholesale energy markets and increasing legislation to tackle climate change, are creating a challenging time for UK commercial energy users.

In order to continue to understand how companies are coping with the impact of these economic and regulatory factors, the npower Business Energy Index is designed to monitor the impact of energy costs on UK business. The research also assesses what action is being taken by businesses in regards to reducing energy consumption and costs.

In this second report the research tracks the impact of volatility in the wholesale energy markets over the last six months and we look again at the views towards public policy and action taken to address energy efficiency.

The report includes a special policy topic, this time focusing on energy management. The Energy Management section will discover what measures companies are taking to better understand their energy consumption and how they are using these insights to reduce consumption and costs.

The research shows that the short- and medium-term effects of rising prices are still the key issues for customers. The movement in fossil fuel costs has forced up energy prices in the UK. However, most MEUs and SMEs would seem to suggest that they think the worst is almost over. Many companies have already taken measures to improve energy efficiency but there is still some work to be done. It is to the longer term that companies must shift their focus. Our special topic section on Energy Management shows that many companies already have a formal energy management system in place. But the key to competitiveness and profitability will be exactly how these systems fit with increasing regulatory and political challenges.



The survey was designed and conducted by Moffatt Associates, an independent research and marketing consultancy based in London.

This second nBEI report tackles the issues that lie at the heart of the current energy debate. What is clear is that contract price is no longer the only factor for businesses. The key will be the management of energy usage in a complex regulatory, economic and corporate environment. Whilst price issues may require short term measures in the longer term a commitment to managing energy needs more effectively will put UK businesses in the right position in the transition to a low carbon economy.

Yours sincerely

A handwritten signature in black ink that reads "Gordon Parsons".

Gordon Parsons
Managing Director, **npower business**

Research Objectives

The npower Business Energy Index sets out to identify and monitor trends in, and expectations about, key energy issues. The Index is intended to be a twice yearly barometer of issues affecting the business user marketplace.

Specifically it will:

- review energy costs, their components and their impact on customers;
- measure and monitor the incidence and efficacy of measures to increase energy efficiency; and
- explore business attitudes and opinions to current and future public energy policy.

Each survey will also canvass opinion on a special topic; in this report it is Energy Management.

Research Sample

Telephone interviews were conducted with a representative sample of 100 organisations, comprising 30 small- to medium-sized enterprises with significant energy usage and 70 major energy users. In the majority of cases the respondent was an energy buyer or a senior figure with responsibility for energy purchasing. The series of questions provided both comparable quantitative data and qualitative opinion and attitudes on energy user issues within the four main sections of the Report.

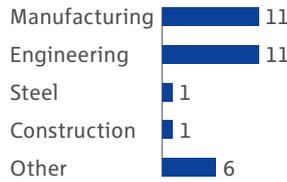
Policy-makers and influencers profile

In addition to business users the following organizations were interviewed to canvass views on specific aspects of energy management:

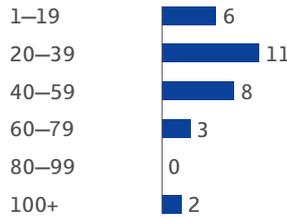
- Association for the Conservation of Energy
- British Ceramics Confederation
- Cornwall Consulting
- DTI (Strategic Issues Team)
- Energy Intensive Users Group (EIUG)
- Energy Savings Trust
- Energy Systems Trade Association
- Institute of Public Policy Research
- OFGEM
- Scottish Energy Savings Trust

Small- and medium-sized enterprise profile

Number of companies by sector

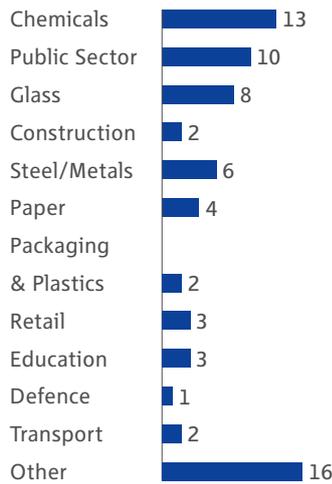


Employees

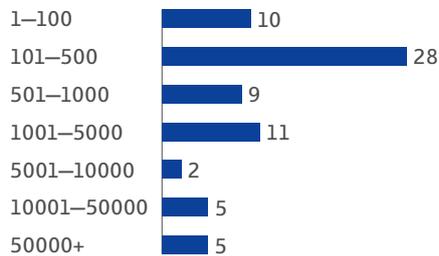


Major energy users profile

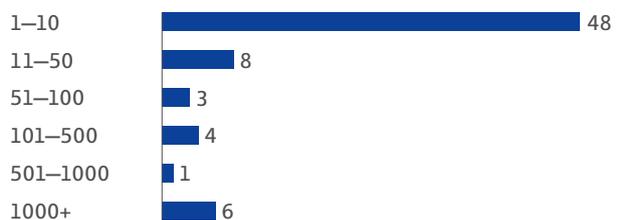
Number of companies by sector



Employees



Sites



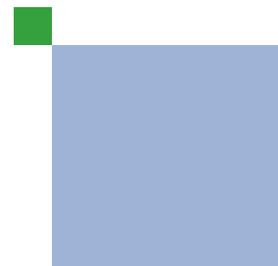
Research Highlights

Energy costs continue to rise...

- Over half (52%) of SMEs have experienced an increase in energy costs in the last 6 months. This compares with 50% in our first survey. But the impact on MEUs is more significant with 73% now reporting an increase in energy costs compared with 65% in our first survey.
- This discrepancy between the experience of MEUs and SMEs is also reflected in the size of the increase reported. The SME reported average increase is down to 9.6% from 13.5% in March 2005, but for MEUs the average increase is 31.4% compared with 22.9% in March 2005. As before, fossil fuel price movements are regarded by all companies as being the main driver behind the rise in energy costs.
- Generally, rising energy costs are continuing to have a negative impact on profitability and competitiveness. Nearly 80% (65% in March 2005) of MEUs and 77% (47% in March 2005) of SMEs say rising energy costs have reduced profits. However, it would appear that for SMEs, the impact on competitiveness is less than in March 2005. But in the case of MEUs the opposite is the case, with 65.4% saying that rising energy costs are reducing competitiveness, compared with 51% in March 2005.
- Looking to the next 6 months, more MEUs (53% compared with 40% in March 2005) are predicting further cost increases, averaging in the region of 34%. Amongst SMEs, 40% are predicting increases (compared with 27% in March 2005) but for them the average expected increase is significantly less at 8%.
- Both MEUs and, especially, SMEs would appear to take the view that the worst may soon be over and are more optimistic about the medium-term trend in energy costs. Twenty-four per cent of all respondents are predicting an increase in the next 3 years down from 36% in March 2005.

...forcing energy efficiency higher up the corporate agenda...

- Further rises in energy costs are continuing to highlight the importance of energy efficiency and not surprisingly the issue is of greater significance for MEUs. In total about 70% of all firms have taken one or more steps to improve efficiency and reduce energy consumption.
- Overall, those companies who were intending to change supplier would appear to have now done so (12% changing supplier compared with 27% in March 2005) although slightly more SMEs have switched supplier.
- Just over half (same as in March 2005) of all companies have reduced heating/lighting consumption but in terms of changing production related equipment – a more expensive option – only 27% have done so compared with 51% in March, with both economic and technical factors acting as major barriers for both MEUs and SMEs.



- It would also appear that MEUs have had as much information/advice on energy efficiency as they need, with the proportion requesting external information down from 68% to 34% in October. More SMEs are seeking external advice and still see the lack of information and advice as a barrier to them reducing energy consumption.
- Companies are on the whole sceptical about whether Government can do anything to help them mitigate the impact of rising energy costs. As with our earlier survey, there are calls for the Government to do more to encourage innovation in energy efficiency technologies and there is evidence that significantly more MEUs are taking advantage of the Enhanced Capital Allowance Scheme. Generally, companies are saying that they are concerned about the lack of coherence in Government energy policy and are opposed to further regulation.

...with varying experiences on energy management

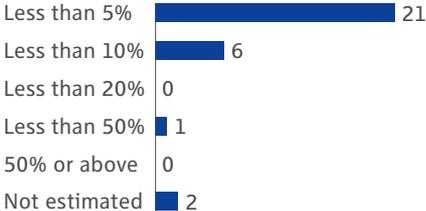
- Not surprisingly, virtually all companies check their energy bills and compare bills year-on-year. But time and resource commitments are key factors differentiating MEUs and SMEs. So, while 84% of MEUs read meters, only 60% of SMEs do so, and less than 7% of SMEs use web-based monitoring, compared with 44% of MEUs.
- In terms of remedial action taken over the last 12 months 46% of MEUs appointed an energy manager, 57% reviewed metering procedures, 47% upgraded their technology and 37% installed energy use monitoring. In contrast 73% of SMEs have taken no action because time, resources and lack of information are key inhibitors.
- Sixty-four per cent of MEUs and 33% of SMEs have sought external information and advice and it would appear that the Carbon Trust is the major point of contact. Seventy per cent of MEUs and 33% of SMEs have conducted an energy audit, in many cases with the help of the Carbon Trust. Generally speaking companies are looking initially for easy cost-effective ways of reducing consumption because to change fundamental processes would involve significant capital expenditure.
- In terms of purchasing energy, the vast majority of MEUs are aware of varying contract length, flexible and block purchasing. In the case of SMEs, the purchasing options are fewer but most (87%) are aware of varying contracts.
- In summary, about 76% of all companies surveyed reported having had a formal energy management system of which a significant number (about 45%) were expecting immediate benefits and benefits over the medium term. Qualitative responses suggest a mixed response to the role of suppliers. Views were expressed that suppliers could improve metering and provide more market information to allow users to purchase energy more efficiently.

Section 1: Energy Costs

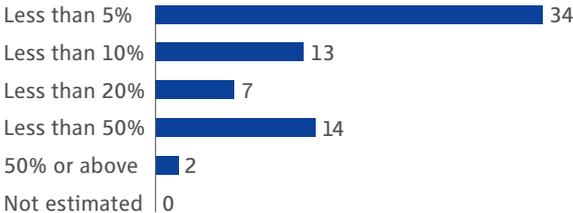
In the second npower Business Energy Index respondents were asked a range of questions relating to energy costs which have been benchmarked against results from the first nBEI.

1.1 Energy costs as a share of total operating costs

SMEs



MEUs



How has your business been affected by recent changes in energy costs

Selected comments

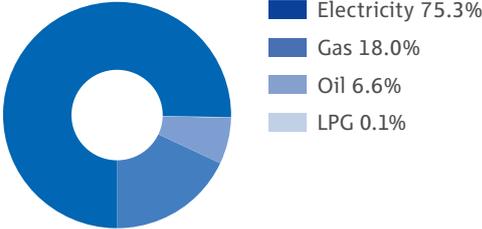
SMEs
 'We have looked at automating some of our machines, and running at different times of day, for example at night.'
 'We are on a fixed contract, so we have not been affected.'

MEUs
 'We operate in global markets and I'm sure that other countries don't have the burdens that we have. It does affect our competitiveness.'
 'The government wants us to open buildings for longer, such as schools and libraries but this will force our operating costs up not down.'

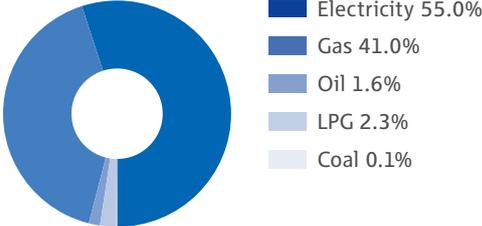
Components of energy expenditure

1.2 Components of company energy costs

SMEs



MEUs



Trends and forecasts

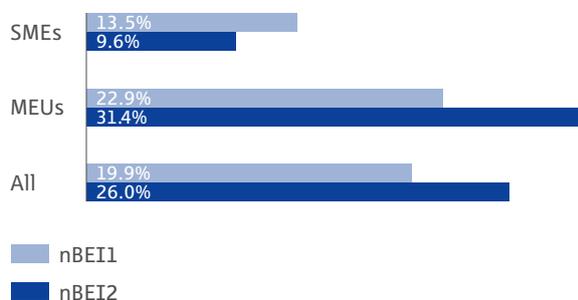
1 = nBEI Summer 2005

2 = nBEI Winter 2005

1.3 Estimated increase or decrease in company energy costs over the last 6 months (%)

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 | All 2 |
|------------|--------|--------|--------|--------|-------|-------|
| Increased | 50.0 | 51.7 | 65.0 | 72.9 | 60.0 | 66.7 |
| Same | 33.3 | 27.6 | 21.7 | 24.3 | 25.6 | 25.3 |
| Decreased | 0.0 | 0.0 | 1.7 | 1.4 | 1.1 | 1.0 |
| Don't know | 16.7 | 20.7 | 11.7 | 1.4 | 13.3 | 7.1 |

1.4 Average increase in energy costs – last 6 months



What are the key issues that will impact on your energy costs over the next three years?

Selected comments

SMEs

'Fossil fuel costs – these are a significant burden.'

'The actual cost of electricity and availability, e.g. will there be a black-out? This is very important and these are our main concerns.'

MEUs

'There are so many things which are outside of our control and create market volatility. The weather, geo-politics, the whole carbon thing and of course the speculators.'

'Hopefully a decision on nuclear power.'

1.5 Perceived significance of selected cost drivers – last 6 months

(scale 1–10 where 10 = highly significant)

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 | All 2 |
|-----------------------------|--------|--------|--------|--------|-------|-------|
| Fossil fuel price movements | 5.1 | 5.4 | 8.2 | 8.2 | 7.2 | 7.2 |
| Power/gas supplier charges | 4.7 | 5.1 | 4.8 | 3.4 | 4.7 | 4.0 |
| Environmental obligations | 3.9 | 4.6 | 5.7 | 5.9 | 5.1 | 5.4 |
| Other government policies | 3.4 | 4.0 | 5.2 | 5.0 | 4.6 | 4.6 |
| Seasonal fluctuations | 3.5 | 3.2 | 4.6 | 3.5 | 4.1 | 3.5 |

1.6 Perceived impact of rising energy costs (%)

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 | All 2 |
|-----------------------|--------|--------|--------|--------|-------|-------|
| Lower profits | 46.7 | 76.7 | 64.8 | 79.6 | 58.3 | 78.6 |
| Lower competitiveness | 26.7 | 13.8 | 51.0 | 65.4 | 42.0 | 46.9 |
| Changed pricing | 34.5 | 16.7 | 31.4 | 32.4 | 32.5 | 27.6 |
| Changed equipment | 13.8 | 6.7 | 32.2 | 36.8 | 26.1 | 27.6 |
| Fewer operations | 10.0 | 3.3 | 22.4 | 26.5 | 18.2 | 19.4 |
| Changed process | 6.7 | 3.3 | 16.1 | 27.1 | 12.8 | 19.1 |

1.7 Estimated increase or decrease in company energy costs over the next 6 months

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 | All 2 |
|--------------------------------|--------|--------|--------|--------|-------|-------|
| Overall Average Prediction (%) | 1.4 | 4.4 | 15.4 | 19.3 | 10.1 | 15.7 |
| Predicting Increase | 8 | 12 | 24 | 37 | 32 | 49 |
| Average Increase (%) | 6.5 | 7.7 | 28.9 | 34 | 23.3 | 27.6 |
| Predicting No Change | 16 | 9 | 19 | 26 | 35 | 35 |
| Predicting Decrease | 3 | 0 | 1 | 2 | 4 | 2 |
| Average Decrease (%) | 4.3 | 0 | 15 | 1 | 7 | 1 |
| Don't Know | 3 | 9 | 16 | 5 | 19 | 14 |

1.8 Energy cost trends – next 3 years

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 | All 2 |
|--------------------------------|--------|--------|--------|--------|-------|-------|
| Overall Average Prediction (%) | 12.3 | 9.4 | 14.2 | 4.2 | 13.2 | 5.2 |
| Predicting Increase | 18 | 11 | 14 | 13 | 32 | 24 |
| Average Increase (%) | 16.2 | 12.8 | 24.5 | 18.9 | 19.8 | 16.1 |
| Predicting No Change | 4 | 4 | 4 | 45 | 8 | 49 |
| Predicting Decrease | 1 | 0 | 3 | 1 | 4 | 1 |
| Average Decrease (%) | 10 | 0 | 15 | 0 | 13.8 | 0 |
| Don't Know | 7 | 15 | 39 | 11 | 46 | 26 |

Viewpoint

Research for the second npower Business Energy Index highlights the continuing increase in energy costs for UK businesses, with 67% of respondents reporting rises over the past six months, compared with 60% previously. The average increase in costs, meanwhile, has risen to 26%, from 20%.

The markets for coal, oil, gas and UK electricity have shown a marked convergence during 2005. The factors driving this convergence help to explain the magnitude of recent energy cost increases. That fossil fuel and electricity prices are correlated is well established, but to these must now be added the role of climate change mitigation measures. No longer an environmental issue alone, the curbing of greenhouse gases (GHGs) is now an integral component of the energy price. In the second npower Business Energy Index, fossil fuel price movements continue to be identified by the majority of respondents as the foremost driver of energy costs, followed by environmental obligations.

In the UK market for electricity, approximately 40% of retail price movements can be attributed to fluctuations in wholesale power market prices. Close to one-third of UK power generation is, in turn, from gas-fired generation, with coal-fired generation accounting for a similar share. To achieve the reduction in emissions of CO₂ consistent with the UK's international commitments under the European Emissions Trading Scheme (ETS) and the Kyoto Protocol, the national energy mix must shift from higher-carbon emitting fuel sources to lower-carbon or even zero-emission sources.

As a result, gas-fired generation will tend to increase relative to coal. This switch alone would inevitably tend to support gas prices, but a number of other upward pressures have intervened.

The depletion of UK Continental Shelf reserves means that we will have to import a gradually increasing share of our gas requirements. This increased dependence on imports is a potential source of upward pressure on UK gas prices, but recent high prices for crude oil have also played a key role. Traditionally, long-term gas supply contracts have been indexed to oil prices. The development of independent and actively traded gas markets, which the UK led in the 1990s, is loosening this link but the process of decoupling gas from oil prices will be a gradual one.

Moreover, the fact that additional gas supplies are limited in the near term obviously constrains the scope for power generators to substitute gas for coal. As a result, they are having to buy more emissions allowances in the traded market, and these costs will have to be recovered. Though this is only one factor in the Europe-wide electricity market. Other factors – notably low rainfall levels hampering hydroelectric power production in parts of Europe – have added to the short-term upward pressures.

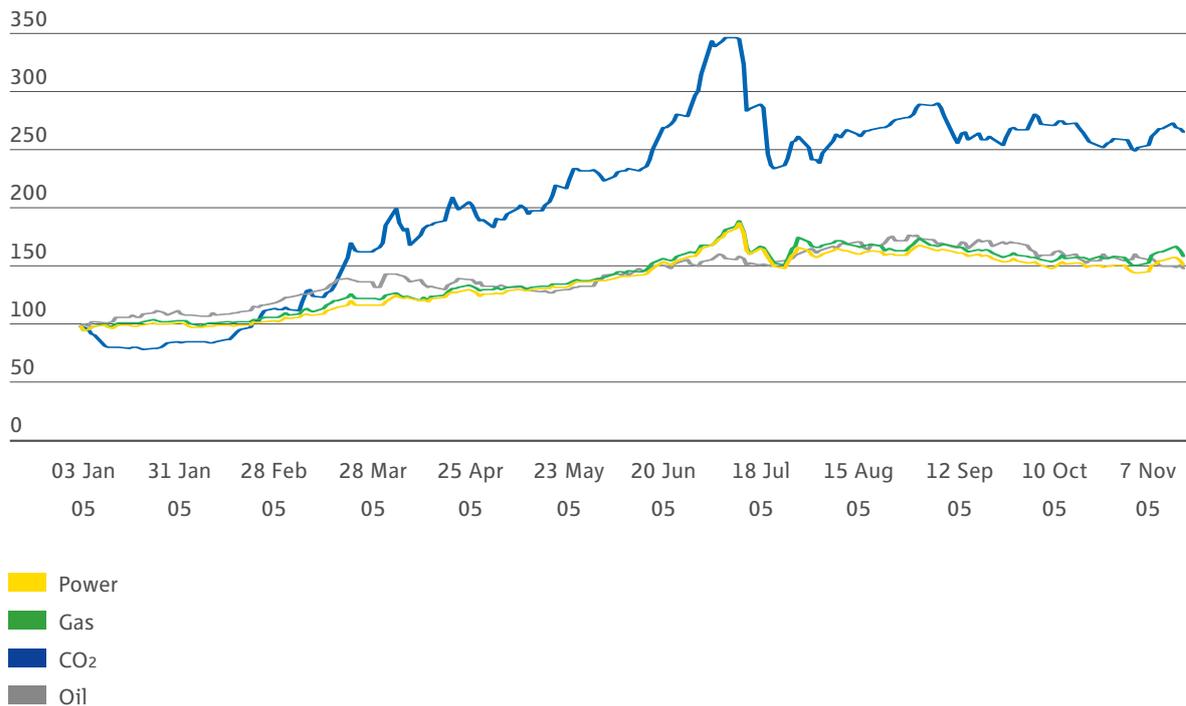
It is apparent from the above that several factors have conspired to escalate energy cost increases. At least some of these upward pressures, such as rainfall patterns, are clearly short-term and others are likely to reduce beyond the short-term. While the possibility of further sustained rises in the price of oil cannot be dismissed, gas supplies to the UK market will increase with the further expansion of the Interconnector pipeline in 2006 and a new pipeline from the continent due online in 2007, coinciding over the next two years with the building of new terminals for the importation of liquefied natural gas (LNG).

Both MEUs and SMEs are taking a somewhat more optimistic view over medium-term energy price prospects than they did six months ago. Only 24% of all respondents now expect further increases over the next three years, compared with 36% previously.

A competitive market framework in the UK and across Europe is the best guarantee that the necessary investments will be made to address supply bottlenecks and market imbalances. What industry operators – both energy suppliers and their customers – need, however, is clarity in the economic and regulatory environment.

Indexed energy trends: 2005 to date

Index: 3 Jan 2005 = 100



Source: RWE Trading



Section 2: Energy Efficiency

Respondents were asked to rate energy efficiency in terms of its importance to their business, and their own performance in implementing energy efficiency measures. The research also sought to identify barriers to optimal implementation of energy efficiency measures, and possible facilitators. The results are displayed against those from the first nBEI.

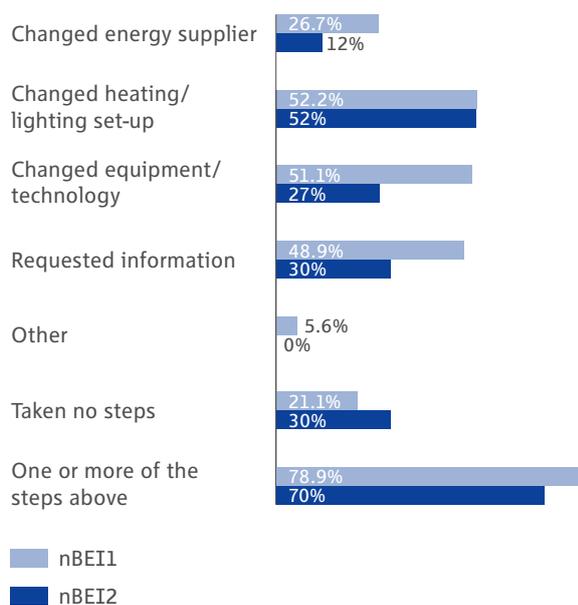
2.1 Significance attached to energy efficiency

(scale 1–10 where 10 = highly significant)

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 (%) | All 2 (%) |
|---------|--------|--------|--------|--------|-----------|-----------|
| Average | 5.8 | 5.7 | 8 | 7.8 | 7.3 | 7.2 |
| Minimum | 1 | 1 | 2 | 2 | 1 | 1 |
| Maximum | 10 | 8 | 10 | 10 | 10 | 10 |

2.2 Steps taken to increase efficiency – last 6 months

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 (%) | All 2 (%) |
|---------------------------------|--------|--------|--------|--------|-----------|-----------|
| Changed energy supplier | 6 | 7 | 18 | 5 | 26.7 | 12 |
| Changed heating/lighting set-up | 11 | 6 | 36 | 46 | 52.2 | 52 |
| Changed equipment/technology | 7 | 3 | 39 | 24 | 51.1 | 27 |
| Requested information | 3 | 6 | 41 | 24 | 48.9 | 30 |
| Other | 2 | 0 | 3 | 0 | 5.6 | 0 |
| Taken no steps | 15 | 15 | 4 | 15 | 21.1 | 30 |
| One or more of the steps above | 15 | 15 | 56 | 55 | 78.9 | 70 |



2.3 Significance of barriers to achieving greater energy efficiency

(scale 1–10 where 10 = highly significant)

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 (%) | All 2 (%) |
|---------------------------|--------|--------|--------|--------|-----------|-----------|
| Behavioural/cultural | 2.8 | 3.9 | 5 | 4.6 | 4.3 | 4.4 |
| Organisational/structural | 3 | 3.6 | 4.6 | 4.6 | 4.1 | 4.3 |
| Technical | 4.7 | 3.7 | 4.4 | 5.4 | 4.5 | 4.9 |
| Economic | 5.3 | 4.2 | 6 | 6.4 | 5.7 | 5.7 |
| Lack of information | 4.1 | 3.8 | 2.8 | 1.0 | 3.4 | 1.8 |

What steps has your company taken in the last six months to improve energy efficiency?

Selected comments

SMEs

'We have received information from the Carbon Trust, and installed energy efficient lighting.'

'We switched to gas for heating.'

'In the last 6 months we have been looking at quotes for the [next] 12 months.'

'I was thinking of requesting information from the Carbon Trust as I thought this was something we should look at.'

MEUs

'To give an example, just turning the screens off on the computers has an estimated saving of £1m. Our biggest problem is time. We are also recruiting a new energy manager.'

'Our big problem is that there are other ways to make the end product and we have to go down that track which means replacing major capital assets. But do we do it in the UK?'

'It is not very easy for us to change something in the factory, the machines are never switched off.'

'We've put some IR sensors and are looking at the kit. 10% of our capex budget this year will be going on energy projects.'

Viewpoint

In 2006 a raft of regulations and legislation will hit UK business, resulting from the Government's moves to cut carbon emissions emitted from the construction, use and maintenance of buildings. Changes to Part L of the Building Regulations, the implementation of the Energy Performance of Building Directive and the EU Directive on Energy-Use Efficiency and Energy Services will all come into force.

With some industry commentators stating that UK business loses more than £1 billion each year through energy inefficient buildings, there is increasing evidence that companies are already looking at methods of achieving savings. In light of these reasons it is perhaps unsurprising that the latest npower Business Energy Index has found that 70% of businesses surveyed have looked at actions to improve their energy efficiency.

The winter 2005 survey identifies that over half of businesses (52%) have made effective changes to their lighting and heating over the past six months, whereas the number of businesses changing energy supplier has dropped by half (from 27% in the summer survey to 12% in the latest survey).

Despite the financial challenges involved in changing production equipment, just over a quarter of businesses (27%) made this investment compared with 51% of companies which reported in the summer. However, because of the Enhanced Capital Allowance Scheme, Major Energy Users (MEUs) continue to see this as a viable option (34%). For other MEUs, the expense resulting from downtime impeded changing to more efficient machinery. MEUs commented that the time needed to invest in improving efficiency was also significant and expensive.

SMEs are increasingly seeking information offering advice on how they can improve their energy efficiency but the proportion of MEUs requesting external information halved from 68% to 34%. SMEs also explained that they were continuing to achieve savings through energy efficient lighting, switching to gas heating and by approaching the Carbon Trust for additional ideas.

Despite continued uncertainty across the energy markets, many businesses are still not taking steps to improve their energy efficiency (up from 21% to 30%).

However, companies are beginning to realise that small changes can make significant differences. Suppliers, as well as independent organisations such as the Carbon Trust, can arm companies with the expertise and the tools to address energy consumption. By setting energy reduction targets through best practice or by instigating a more responsible use of energy across the workplace, SMEs and MEUs can achieve significant energy savings.

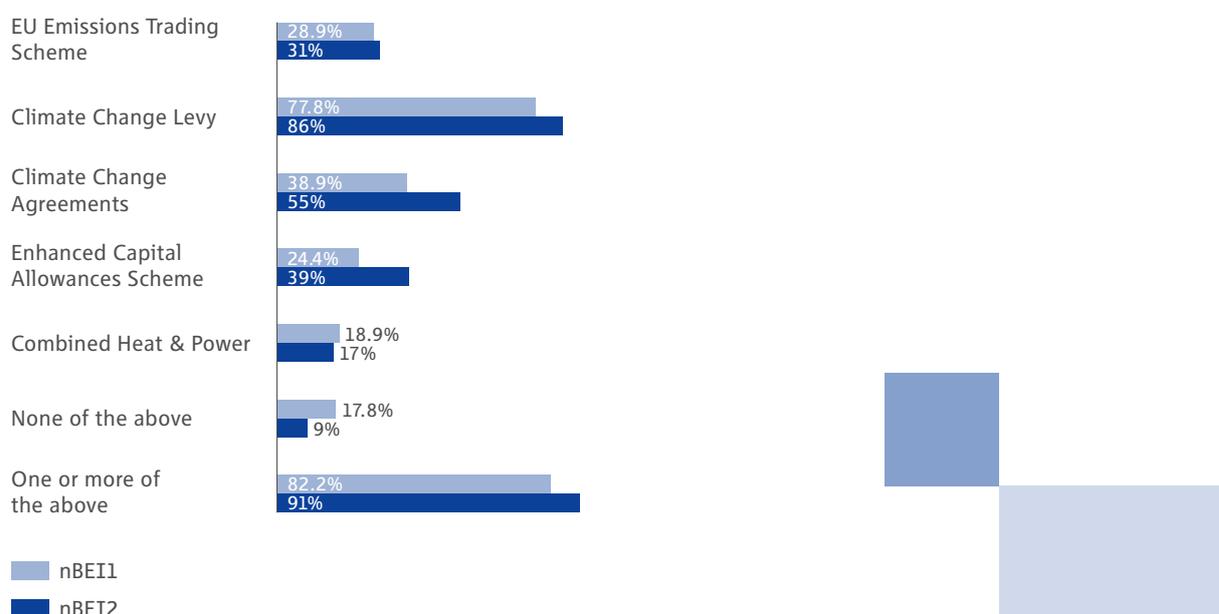
In addition, investigating solutions such as Combined Heat and Power (CHP), or accessing the Enhanced Capital Allowance scheme, offers further energy efficiency possibilities to heavier energy users, as well as providing additional sources of revenue, or ways to allay fears over investment costs.

Section 3: Public Policy

Respondents to the survey were asked a series of questions on their current involvement in official energy schemes as well as what else could be done at a central level to promote energy efficiency. These results have been compared to figures from the previous nBEI. A selection of comments from SMEs and MEUs continue to highlight a number of concerns with current energy policy.

3.1 Involvement in official energy schemes

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 (%) | All 2 (%) |
|------------------------------------|--------|--------|--------|--------|-----------|-----------|
| EU Emissions Trading Scheme | 1 | 1 | 25 | 30 | 28.9 | 31 |
| Climate Change Levy | 14 | 21 | 56 | 65 | 77.8 | 86 |
| Climate Change Agreements | 3 | 3 | 32 | 52 | 38.9 | 55 |
| Enhanced Capital Allowances Scheme | 1 | 0 | 21 | 39 | 24.4 | 39 |
| Combined Heat & Power | 1 | 1 | 16 | 16 | 18.9 | 17 |
| None of the above | 15 | 9 | 1 | 0 | 17.8 | 9 |
| One or more of the above | 15 | 21 | 59 | 70 | 82.2 | 91 |



3.2 What Government could do to help energy efficiency (%)

| | SMEs 1 | SMEs 2 | MEUs 1 | MEUs 2 | All 1 | All 2 |
|---|--------|--------|--------|--------|-------|-------|
| Encourage technical innovation | 93.3 | 80 | 70 | 90 | 77.8 | 87 |
| Introduce specific financial incentives | 63.3 | 53.3 | 31.7 | 5.7 | 42.2 | 20 |
| Introduce further regulation | 20 | 23.3 | 10 | 2.9 | 13.3 | 9 |
| Provide more relevant information | 83.3 | 70 | 21.7 | 48.6 | 42.2 | 55 |
| Other | 3.3 | 0 | 0 | 2.9 | 1.1 | 2 |

3.3 Highest priority

(scale 1–10, where 10 = high priority)

| | SMEs | MEUs | All |
|-------------------------------------|------|------|-----|
| Encourage efficient innovation | 4.6 | 4.8 | 4.8 |
| Providing more relevant information | 4 | 3.5 | 3.7 |
| Introducing tax or incentives | 3.4 | 1.4 | 2 |
| Introducing further regulation | 2 | 1.1 | 1.4 |

What could the Government do to help you improve your energy efficiency?

Selected comments

SMEs

'The government could increase capital allowances on energy savings'

'Isn't there enough regulation already?'

MEUs

'The best way that government can help is to return some of the money taken in taxes for all energy improvement related activities. They could also provide future assistance with the CCL [Climate Change Levy] and the administrative problems that it creates.'

'We could do with a reduction in the tax or a better redistribution back for the effort and cost that is being put in rather than just topping up the National Insurance fund.'

Viewpoint

The increasing upward pressures on energy costs, reviewed in Section 1 of this report, pose a challenge to UK businesses, but may serve as a timely reminder of longer-term issues confronting both Government and industry in the coming years.

Government energy policy must always balance affordability with security of supply and emissions reductions goals. As the chart below shows, on current trends the UK is heading for a capacity constraint in power generation within the next ten years. Whilst demand will grow, a major segment of our existing power generating base, nuclear capacity, stands to be depleted as obsolete plant is retired. In addition, some coal-fired power generation is likely to come under pressure to close as a result of tightening environmental regulations, in particular the Large Combustion Plant Directive (LCPD), which targets reductions of atmospheric pollutants, such as sulphur dioxide.

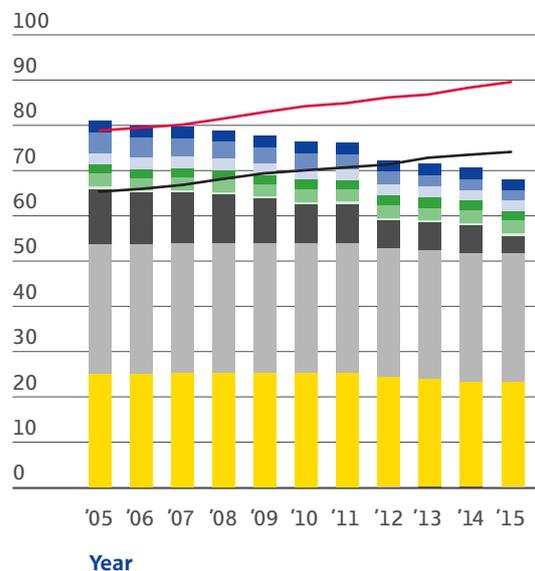
At the end-user level, to help meet environmental goals, most industry respondents polled in the latest survey would like Government to assist energy-efficient innovation, but not necessarily by means of financial incentives or, indeed, additional regulation. The increasing Government policies and regulations governing energy usage over recent years, such as the Climate Change Levy and Climate Change Agreements, the Renewables Obligation (RO) and the ETS inevitably introduce additional costs for industry, but given the increasing urgency of controlling climate change and promoting energy conservation, it is unlikely that recent regulatory trends will be rolled back in the foreseeable future.

Businesses should proactively seek advice on the most appropriate energy-efficient solutions (see section 4), while government can help to lighten the regulatory burden by focusing on a limited number of clearly defined policies.

In npower’s view, the ETS and the RO are among the policies to be pursued in that they provide market-based incentives for electricity producers to select the most cost-effective energy sources, consistent with overall environmental targets.

It is important to ensure that competitive international energy markets work free of distortions in order for gas and power to be priced at competitive market levels which allow UK businesses and their counterparts in other countries to compete on equal terms.

Power generation capacity (GW)



Source: RWE npower

Section 4: Energy Management

The final section of the latest nBEI report centres on business attitudes to energy management. Respondents were asked a series of questions on what steps they have taken to monitor energy usage and what help they have received externally. Companies were asked how aware they were of different energy management services and whether they expected them to deliver any real benefits.

4.1 Ways of monitoring energy usage (numbers saying yes)

| | SMEs | MEUs | All (%) |
|----------------------------|------|------|---------|
| Checking energy bills | 29 | 69 | 98 |
| Compare bills year on year | 23 | 67 | 90 |
| Receive third party report | 13 | 37 | 50 |
| Read meters | 18 | 59 | 77 |
| Web based monitoring | 2 | 31 | 33 |
| Other | 0 | 0 | 0 |

4.2 Measures taken to reduce energy consumption – past 12 months (numbers saying yes)

| | SMEs | MEUs | All (%) |
|--------------------------------------|------|------|---------|
| Appointed energy manager | 4 | 32 | 36 |
| Reviewed metering | 2 | 40 | 42 |
| Upgraded technology | 4 | 33 | 37 |
| Installed building management system | 0 | 7 | 7 |
| Installed energy use monitoring | 1 | 26 | 27 |
| No steps taken | 22 | 10 | 32 |
| Other (not stated) | 1 | 0 | 1 |

Have you actively sought information from an external source on improving energy management?

Selected comments

SMEs

'No, because no-one has the time to do this.'

'Yes, when we introduced ISO 14001 three years ago. There are certain procedures that we have to fulfil.'

MEUs

'We have used Etsa, the Carbon Trust and independents. This is not exactly what we need, our problem with efficiency is more cultural, and there are always other priorities.'

'No. Don't see anyone who can help with our situation more than we can ourselves.'

Have you conducted an energy audit to identify ways of saving energy?

Selected comments

SMEs

'Yes, the Carbon Trust.'

'Yes, but there was too much red tape.'

MEUs

'We have done both internal and external, but the implementation then comes down to management time and investment pay back criteria.'

'Yes, through consultants we were able to put prices to the ideas that we have had, so that we can make the appropriate business cases in house.'

4.3 Awareness of ways of purchasing energy

(numbers confirming their awareness)

| | SMEs | MEUs | All (%) |
|-------------------------|------|------|---------|
| Varying contract length | 26 | 69 | 95 |
| Flexible purchasing | 12 | 66 | 78 |
| Block purchasing | 13 | 66 | 79 |

4.4 Recognised benefits of energy management

| | SMEs | MEUs | All |
|-------------------------------------|------|------|-----|
| No immediate benefits, but expected | 4 | 42 | 46 |
| High immediate benefits | 2 | 32 | 34 |
| Medium immediate benefits | 1 | 20 | 21 |
| No benefits | 4 | 2 | 6 |

In general terms, what more (if anything) could energy suppliers do to help your company manage your energy requirements more effectively?

Selected comments

SMEs

‘By suppliers offering more information, for example perhaps energy audits. This may be worth considering.’

‘A report on our bills, year-by-year, would be good.’

MEUs

‘We need more information to determine what the demand is at any point in time with an explanation of trades, volumes, spikes and dips. It’s not that we want to undermine the suppliers - just that we might be able to act a bit sooner.’

‘We’ve developed a great partnership which has led to a reduction in consumption.’

What measures has your company taken to reduce energy consumption over the past 12 months?

Selected comments

SMEs

‘Although we haven’t appointed any one individual, we are encouraging every member of the company to do this’

‘We’ve switched off the heating!’

MEUs

‘We are introducing some hard data logging systems to help us monitor usage. That may help us move on to another level but it’s still a case of getting the resources.’

‘We’re currently looking at some new controls for heating systems and some electronic balancing and fittings on lighting. We have had a reduction of 50% in some areas.’

How aware is your company of different means of purchasing energy?

Selected comments

SMEs

‘We have taken out two new agreements. We are too small for block purchasing’

‘We are aware of these, but can’t do anything because the landlord is responsible for the energy’

MEUs

‘My understanding of flexible purchasing is that you can continually look. A bit like spot buying?’

‘My understanding of flexible is being able to move in the market as the market changes. Unfortunately here the Board have had such a shock with the price increase that they have insisted on a fixed long-term deal just so that they know the cost even though ultimately it might not be the best approach.’

Selected comments from policy-makers and influencers on energy management issues.

In your experience how do MEUs and SMEs monitor energy usage and is this changing?

'In terms of monitoring, the larger firms are into half hour data capture, but then again there are differences, some use it to plot trends and work with it, others just collect it, others use it to refine processes for Climate Change Agreement, or Climate Change Levy reporting.'

'The EU ETS has enabled the major users to monitor their usage quite well. Our feeling is that the smaller the company the less well informed they are about their energy apart from when the bill arrives.'

'There is evidence to suggest that metering is increasing in larger sites and that this is being driven by the companies themselves. This could indicate more monitoring but there is no evidence that monitoring is improving across the board.'

In general, to whom do companies ask for advice on energy management and what is the role of the Carbon Trust?

'The Carbon Trust has had a very successful time in helping companies and there is more they can do. I think that there is also a role for the Regional Development Agencies to become more involved at the local level for the smaller companies.'

'The Carbon Trust itself does a job of promoting energy efficiency but it has targeted the larger spenders who have the most to lose from inefficiency. They have undoubtedly provided valuable assistance to many, but now need to move on from their first phase approach to develop tools or products for wider application.'

How, if at all, are companies conducting energy audits and what are the main drivers or barriers?

'I suspect that the ones that are doing it are taking action, but its not spreading to others.'

'There are increasing numbers of companies who are using the Carbon Trust programme. The entry level is very good with its free survey and immediate tasks recognition. Beyond that it is a resource issue, for both large and small firms.'

'Most are doing something and using the Carbon Trust programme. This is typically leading to more metering, with automatic monitoring and targeting. We have seen a 30% increase in attendance at industry events as people seek to learn more.'

In your view, what are the usual recommendations from energy audits and what measures will companies typically use to address energy consumption issues?

'Most companies are fairly pragmatic and will pursue no cost recommendations first. Machines will not be replaced until the end of their useful life.'

'Typically it's the quick wins in office areas such as heating and lighting.'

'For some a complete change of premises or major plant would be the best bet, but if their individual competitive market conditions are less than very favourable this won't happen.'

'Lighting controls and efficiency are generally initial hits, heating often has more problems. The management of sites varies enormously and for some the control of bits of their utility costs lies with third parties such as landlords. Cleaning regimes, both industrial and commercial also often hold out opportunities for savings.'

What more could suppliers do to encourage better energy management and greater energy efficiency?

'Some of the worst examples we have are to do with tenancy situations. There is a need to get sub-tenants on their own smart meters so that they have the information to work with to help reduce consumption.'

'Government has a desire for energy suppliers to become more like energy services companies.'

'There needs to be some sort of market mechanism in place. There are no good innovative incentives for industry, if you're not an MEU.'

What more could Government do to encourage better energy management?

'Government has an ill thought out energy policy especially with regard to its pet wind project.'

'Despite the rhetoric the programmes in place are very weak and disjointed. For example the New Buildings directive has been severely watered down and the differences between energy issues in new buildings versus alterations to existing buildings are distorting.'

'It's about trying to get the correct fit of policies. I think that we need to review whether the policies are doing what we intended them to do.'

Viewpoint

With economic, regulatory and environmental pressures coming to bear on the UK's commercial energy users, there is increasingly a paradigm shift from the traditional pursuit of 'best price' to ensuring the 'best use' of energy.

MEUs in particular are feeling the brunt of the energy market's fluctuating prices and have responded by establishing energy management best practice and initiatives to address challenges in organisational culture towards energy use. In comparison, the SMEs surveyed appear to have been slow to recognise the financial benefits to be gained through improved energy management.

Over the last six months 73% of MEUs and 52% of SMEs reported that they have experienced increases to their energy costs, and both groups identified the volatile fossil fuel market as a significant contributing factor. With energy costs influencing UK business' profits, companies – in particular MEUs – are responding through energy management.

The winter 2005 nBEI report reveals that MEUs are better able to identify and make energy savings, probably because of their access to resources and energy representing a higher percentage of company costs. The majority of MEUs (70%) reported they had conducted an energy audit to identify methods of saving energy compared with only 33% of SMEs.

Comments from MEUs stated that energy audits increasingly were becoming a feature of company policy and done in-house; whereas some SMEs said that they had also conducted audits but found that they brought too much time-consuming red tape.

The majority of companies demonstrated that they were monitoring their energy use through checking energy bills (98%) and comparing bills year on year (90%). However, while 84% of MEUs reported that they read their own meters, only 60% of SMEs use this method of energy management.

Likewise, only 7% of SMEs use web-based monitoring, compared with 44% of MEUs. However, this could be explained by the groups' differing need for up-to-the-minute data.

In the past six months, more MEUs (64%) than SMEs (33%) sought advice from the likes of the Carbon Trust on methods to improve their energy management.

With regards to more sophisticated forms of energy procurement, the survey found that it was mainly MEUs that are aware of alternative methods of purchasing energy. Significant numbers of MEUs cited knowledge of variable contract lengths and flexible purchasing options, including block purchasing, as methods to mitigate uncertainty in wholesale energy costs.

Additionally, 76% of companies have some type of formal management system and most companies are expected to benefit either immediately (55%) or in the future (46%). Only 6% of companies saw no benefit from introducing energy management systems.

Continued...

Realising where, when and how energy is consumed provides the base for any initiatives regarding energy efficiency. Energy audits are an essential pre-requisite to this process and a variety of audits are available that can easily be tailored to specific business requirements.

For organisations that have a number of business processes, or buildings that are multi-tenanted, having additional meters allows a more precise means of measuring processes such as air conditioning or lighting, or the energy use of individual tenants. A variety of services such as web-based energy monitoring, are useful solutions for energy users who require a more regular snap-shot of energy consumption.

Broader energy management initiatives, such as overhauling building management systems and updating heating and ventilation plants require a greater level of investment. But these measures can help larger organisations comply with latest regulation including the EU Performance of Buildings Directive, as well as savings to energy and maintenance costs.

While investment in energy management is seen by some companies as an expensive solution, there are potentially significant commercial benefits to UK business. The political focus with regards to climate change is only likely to intensify and those companies that address energy management issues now will be best placed in the future low carbon economy.

npower Concluding Viewpoint

Comparing the results of this survey to the findings of the previous npower Business Energy Index, it is apparent that energy costs continue to concern UK business. In this winter 2005 nBEI report we have explained the key drivers of energy costs in the UK as well as detailing some of the measures companies can take to manage their energy consumption.

Understandably in the current business climate, energy efficiency through energy management is becoming critical throughout industry as the means to mitigate energy costs. The additional pressures of European and national legislation across the generation and supply chain, plus the drive for major businesses to meet corporate social responsibility targets, have added fuel to the fire.

Increasingly, many businesses are concerned with demonstrating sound environmental performance by controlling the impact of their activities, services and products on the environment. Stricter regulations and legislation, plus a need to report environmental performance to appropriate stakeholders, has resulted in many organisations integrating environmental management systems into their corporate structure.

Corporate Social Responsibility (CSR) targets are becoming a key focus for shareholders, and the use of measurement tools, such as ISO 14001, provide a framework for managing individual environmental responsibilities. Companies that have already emphasised these issues are seeing the benefits of added value.

Current EU and UK Government energy policy would indicate that energy efficiency and energy saving targets will remain prime political objectives. However, it is not only the large corporate energy consumers that will be affected by the wide range of legislative instruments – other areas of the economy are being targeted with tough controls, for example public sector bodies.

The number of new assessments and rating schemes can be difficult to understand; Climate Change Levy, Renewables Obligations, Renewable Guarantees of Origin, UK and EU Emissions Trading Schemes (ETS). But these all have a common purpose and a common goal; tackling carbon emissions and reducing environmental impacts.

In the summer nBEI survey UK business stated it was not opposed to the move towards a reduced carbon economy but that it should not be made at the expense of its competitive position in Europe. This concern continues alongside the desire for clarity from Government regarding environmental regulation of energy use.

Continued...

In any scenario facing business, energy efficiency and energy management should be at the core of the pursuit of compliance with regulatory, economic and CSR considerations. Auditing consumption and consumption patterns will provide the foundation for energy management. Understanding where, when and how energy is consumed will lead to informed metering and monitoring assessments.

What the findings of this winter 2005 nBEI report have also shown is that changes of any size can make a real difference to energy consumption, and cost. From installing more energy efficient lighting to encouraging staff to think about energy use in the workplace to using the Enhanced Capital Allowance Scheme to help replace multi-million pound machinery. All of these measures can deliver real environmental and economic benefits relative to every company.

Energy suppliers are well placed to assist businesses in terms of energy management. Trends in wholesale costs over the past few years have led to an increased focus on helping customers mitigate risk. Energy suppliers have actively designed energy management measures and now offer a wide range of energy services tailored to individual business requirements.

More sophisticated forms of procurement have been developed to offer companies greater flexibility in contracts and to allow them to turn the volatility in the wholesale market to their advantage. In addition, energy services products help forge the link between energy metering, monitoring and management to ensure a more economically and environmentally astute organisation.

npower believes it is the role of energy suppliers to help customers of all sizes to navigate the political and economic landscape when affected by energy issues. With the right expertise and guidance, this apparent adversity can be turned into real commercial advantage.

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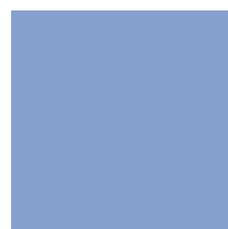
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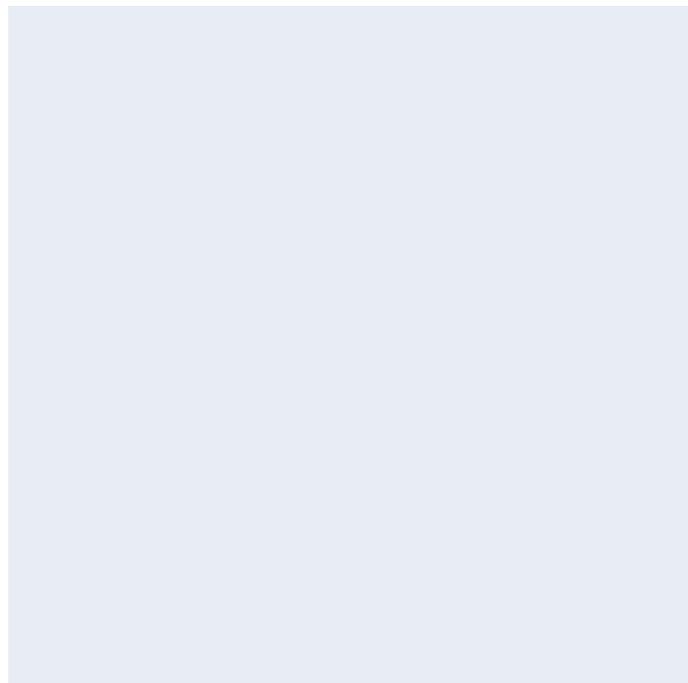
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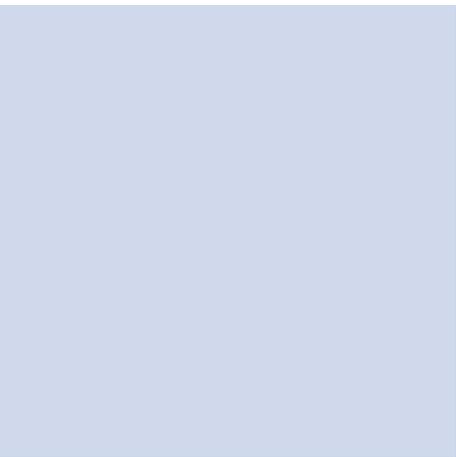
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RWE npower

Windmill Hill Business Park
Whitehill Way
Swindon
Wiltshire
SN5 6PB

T +44 (0)1793/87 77 77
F +44 (0)1793/89 38 61
I www.rwenpower.com

