White Paper

UK Climate Policy for Business

LSE Enterprise
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Carbon regulation in the UK: an introduction

In 1901 the Swedish Scientist Svante Arrhenius was first to realise that burning fossil fuels might alter the earth's climate and cause temperatures to rise. Living in Sweden he did not find the prospect altogether daunting. "We can", he said in a lecture, "indulge in the pleasant belief that our descendants might live under a milder sky than is our lot at present".[1]

A hundred years later, Arrhenius' theory about global warming is widely accepted, but his benign view of the consequences is no longer shared. Scientists agree that global warming is unequivocal, that it has human causes and that its effects can already be felt. They warn that if emissions go unchecked the consequences – from rising sea levels to increased floods, droughts and storms – could be dramatic.

Many experts see a global average warming of 2°C as a critical threshold. Although some effects will be felt before, the more severe impacts will begin to kick in beyond 2°C. The science tells us that global emissions will have to peak within the next decade if we are to have a realistic chance of remaining close to the 2°C target.

People are taking note. In a Europe-wide survey in spring 2008, 62% of respondents thought climate change was one of the most serious problems facing the world today.[2] In the business world, 88% of respondents to the npower Business Energy Index (nBEI) of Winter 2007-2008 supported carbon emission reductions in the UK. However, the survey also suggested that the UK's carbon policies are still poorly understood.

The UK Government is committed to being a world leader on climate change. In November 2008 the Climate Change Act was passed, in which the UK assumes a legally binding commitment to reduce greenhouse gas emissions by 80% by the middle of the century. The Committee on Climate Change, a new independent body established under the Act, recommends that as a first step emissions should fall by 34% by 2020, rising to 42% if there is commensurate action by other countries.

The reference to international action is important. The UK, despite being one of the world's largest emitters, accounts for only about 2% of global greenhouse gas emissions. Tackling climate change requires a concerted and sustained effort from all countries over a long period of time.

The Kyoto Protocol and beyond

An important first step toward bringing global emissions down is the 1997 Kyoto Protocol. Kyoto commits developed countries to reduce their greenhouse gas emissions by about 5% until 2012. Developing countries, including large emitters like China, India and Brazil, do not have an emission target.

Although the target was fairly ambitious back in 1997, it does little to stabilise the climate. Its impact on delaying climate change is best measured in days. Kyoto is only a first step, and people are beginning to look beyond Kyoto.

An increasing number of politicians – including the leaders of the G8 – are calling for long-term reduction targets of about 50% by mid-century that would limit warming somewhere in the 2-3°C range. They generally accept that developed countries like the UK will have to cut their emissions by much more than the global average to reduce the current disparity in emissions per capita. The UK, for example, currently emits five times as much carbon per person than India.
These pronouncements are not legally binding – except in the UK – but they show the level of ambition politicians are now willing to contemplate.

1. The Father of Climate Change, The Guardian, 30 June 2005.
2. Eurobarometer. Europeans' attitude to climate change, Fieldwork March – May 2008, Publication September 2008.

A first test of the seriousness of these commitments is the negotiations on the international climate regime after 2012, when Kyoto expires. The talks are expected to conclude in December 2009 at a big climate summit in Copenhagen. The timetable is ambitious, but it is likely that agreement on a new global deal will be reached if not in 2009 then soon after. It is also likely that this new climate treaty will espouse the sort of targets the UK has already adopted under the Climate Change Act.

UK climate policy

Under the Kyoto Protocol the UK has agreed to reduce its greenhouse gas emissions by 12.5% relative to 1990. In 2006 (the latest year for which data is available) greenhouse gas emissions had fallen by 16% from 777 to 653 million tonnes of CO^2 equivalent, suggesting Britain will meet this target.

Most of the UK's emissions come from just two sources: power generation and road transport. In terms of final users, business accounts for about a third of UK emissions, ahead of transport and residential emissions (Table 1).

Table 1: UK Emissions by final user (2006)

Sector	Share
Business	32.0
Transport	25.1
Residential	23.8
Agriculture	7.9
Public	3.4
Waste Management	3.4
Industrial Process	2.8
Other	1.6

Source: National Atmospheric Emissions Inventory.

Although Britain is on track to exceed its Kyoto commitment, the Government is determined to reduce greenhouse gas emissions further. To this end it has revamped the institutions and the policy framework through which emission cuts are to be delivered.

In October 2008, much of the responsibility for delivering climate change was brought together in a new government department, the Department of Energy and Climate Change. Shortly after this, Parliament passed the Climate Change Act. This innovative piece of legislation:

- Sets a binding long-term emission reduction target for the UK
- Establishes a series of statutory five-year carbon budgets to guide the transition to a low carbon economy

- Empowers the Government to take further legislative action to remain within the carbon budgets, particularly in the field of carbon trading; and
- Creates an independent expert body, the Committee on Climate Change, to advise Government on climate policy and carbon budgets, and track progress on the targets.

The Committee on Climate Change has recommended that the UK should:

- reduce greenhouse gas emissions by at least 80% by 2050
- reduce greenhouse gas emissions by 34% by 2020, as interim target, under the third five-year budget (2018-2022). This should rise to an intended target of 42% if there is a new global agreement on climate change.

All targets are relative to 1990 and the fall in emissions since then counts against the targets. Relative to today, the additional emission cuts still required are 21% and 31%, respectively, for the interim and the intended target.

The Government reacted positively to the recommendations: the 80% target was incorporated in the Climate Change Act. The recommendations for the first three carbon budgets will be considered by the Government and approved by Parliament in the first half of 2009.

The developments in the UK coincided with the deliberations in Strasbourg and Brussels about the EU's energy and climate change package. The EU package, agreed in December 2008, commits EU member states to reduce greenhouse gas emissions by 20% (or 30% in the case of a post-2012 agreement), produce 20% of energy from renewable sources and increase energy efficiency by 20%. The targets are not applied uniformly across member states, and the contributions expected from the UK are broadly consistent with the recommendations of the Committee on Climate Change.

Britain's new carbon policy is ambitious. Achieving the targets will require the near-full decarbonisation of electricity production and road transport, as well as significant improvements in energy efficiency in businesses and homes.

Policies will have to be strengthened, including those put forward in a new Energy Act, approved in November 2008, and the 2007 Energy White Paper. They focus on energy efficiency, building regulation and incentives to consumers, for example through smart metering, but also promote renewable energy and new technologies like carbon capture and storage.
The energy measures are complemented by policies in the transport sector, such as the EU target to reduce the emissions from new cars.

However, one of the largest, if not the largest, contribution is expected from industry. There are three main instruments aimed at greenhouse gas emission reductions in industry:

- Climate Change Levy (CCL) and Climate Change Agreements (CCA)
- EU Emissions Trading Scheme (EU ETS)
- Carbon Reduction Commitment (CRC)

Climate Change Levy (CCL) and Climate Change Agreements (CCA)

The CCL and CCA are the earliest measures to address greenhouse gas emissions in industry. They were announced in the 1999 budget and came into force in April 2001. Aimed at industry, commerce, agriculture, public administration and other services, the two measures will continue until at least April 2013.

The CCL is administered by HM Revenue and Customs and is a tax on certain forms of energy consumption, such as electricity, natural gas, coal and liquefied petroleum gas (LPG). Transport fuels are not covered. The rates were last increased in April 2008 to account for inflation and now are:

- £4.56 per MWh of electricity
- £1.59 per MWh of natural gas
- £10.18 per tonne of LPG
- £12.42 per tonne of coal

Certain energy intensive sectors, specifically those covered by Pollution Prevention and Control legislation, can secure a rebate of up to 80% from the CCL by entering into a CCA. Over 50 CCAs are currently recognised by HMRC (Table 2).

CCAs are agreed between the Government and trade associations on behalf of both member and non-member firms. Typically, the agreement is between the Government and a trade association, with subsidiary agreements between the Government and individual firms, although other structures are also possible.

In the CCA, a sector commits to certain emissions targets. Firms that beat their milestones can either bank the surplus "allowances" or sell them on the market. Accredited independent verifiers monitor compliance.

The Government estimates that until 2010 the agreements will abate about 7 $MtCO^2$ a year on average, relative to a business as usual scenario. A large part of the emission reductions so far has occurred in steel, which at the last review in 2007 accounted for over 40% of all emission cuts.

Impact on business

It has been estimated that the CCL adds about 15% to the energy bill of a typical firm. However, the levy is designed to be revenue-neutral. Firms paying the CCL get a discount of 0.3% on employers' national insurance contributions (NICs). Businesses also benefit from additional funding of £50 million a year to promote energy conservation and the use of renewable energy.

An evaluation by the London School of Economics found that the CCL could reduce energy and emissions by as much as 10%. The study did not find any noticeable impacts on either sales performance or employment. This suggests that participating firms have so far been able to offset higher energy costs through savings elsewhere, including a lower energy use and the savings in NICs.

Most firms also benefit from the rebate offered to participants in the CCA. Agreements are in place for practically all eligible sectors (Table 2), and the targets are generally adhered to. At the last review period, 99% of facilities had their right to a discount renewed.

The EU Emissions Trading Scheme (ETS)

The EU Emissions Trading Scheme (ETS), which came into force in 2005, is the world's first and foremost carbon market, and the main climate policy instrument of the European Union. The ETS is specifically aimed at high carbon emitters. EU-wide it covers over 11,000 combustion plants, oil refineries, coke ovens, iron and steel plants and factories making glass, cement, lime, brick, ceramics, pulp and paper. Starting from 2013 the scheme will be extended to include new sectors such as aluminium and petrochemicals. Aviation will also be included in the scheme.

Table 2: CCAs recognised by HM Revenue and Customs

Aerospace	Dairy	Lime	Poultry Meat Rearing (BPMF)
Agricultural Supply	Egg Processing	Maltsters	Printing
Aluminium	Egg Production	Metal Forming	Red Meat Processing
Apparel and Textiles	Food and Drink - Supermarkets	Metal Packaging	Renderers
Brewing	Food and Drink	Mineral Wool Producers	Reprotech - Waste Pellets
Calcium Carbonate	Foundries	Motor Manufacturers	Semi-conductor Manufacture
Cathode Ray Tube Manufacturing	Glass	New Rubber Tyre Manufacturing	Slag Grinding
Cement	Glass Manipulator	Non-Ferrous Metals	Spirits
Ceramics	Gypsum Products	Packaging and Industrial Films	Steel
Chemical	Horticulture	Paper	Surface Engineering
Cleveland Potash	Industrial Gases	Pig Farming	Textiles (Energy Intensive)
Cold Stores	Kaolin and Ball Clay	Poultry Meat Processing	Wallcovering
Craft Baking	Leather	Poultry Meat Production (NFU)	Wood Panel Manufacture

Source: DEFRA

In the UK, some 750 installations are participating, from the steel works in Port Talbot to the boiler houses of large hospitals and universities. In 2007 they emitted 256 $MtCO^2$, about 40% of total UK emissions. The largest 20 installations accounted for around half of these emissions (Table 3).

The ETS entered its second phase in January 2008. Phase II will last until the end of 2012. During that time some two billion allowances – worth one tonne of carbon each – will be issued annually. It has been estimated that this is nearly 10% less than would be required if emissions were not constrained.

In addition to trading allowances, the ETS also permits installations to buy emission "offsets" from outside the EU. That is, they can invest in concrete projects that reduce emissions elsewhere and use the resulting credits to meet their ETS obligations. For example, they may invest in a biomass project in Brazil or increase the energy efficiency of a Chinese steel plant. The main source of such projects is the Clean Development Mechanism (CDM), which was set up under the Kyoto Protocol. In the UK the use of CDM credits is currently capped to 8% of the total allowance pool.

Table 3: UK installations participating in the EU ETS

Sector	**Emissions** (2007, $MtCO_2$)	**Number of installations**
Power Stations	177.9	125
Refineries	17.8	12
Offshore	14.8	111
Iron and Steel	20.8	12
Cement	8	15
Chemicals	6.2	67
Non-ferrous Metals	2.7	2
Services	1.9	230
Food, Drink and Tobacco	1.9	59
Other Oil and Gas	1.2	35
Lime	0.8	4
Engineering and Vehicles	0.7	35
Pulp and Paper	0.7	6
Glass and Mineral Wool	0.4	10
Ceramics	0.1	18
Other	0.2	9
Total	**256.14**	**750**

Source: DEFRA.

Impact on business

The EU ETS offers firms three ways to meet their emissions targets: they can reduce their own emissions; they can purchase additional EU allowances (forcing another EU firm to cut more); or they can buy credits from the CDM (leading to emission cuts outside the EU). Policy makers think that this flexibility will keep down the cost of compliance.

The ETS affects both the firms directly covered by the scheme and the clients of those firms. This is because the cost of compliance will in part be passed on to the market. By how much depends on how price sensitive a sector is and how much overseas competition it faces. Firms in highly competitive and price sensitive sectors will be less able to pass on costs. If they did they would lose market share.

The main channel through which the ETS affects the rest of the economy is the price of electricity. It has been estimated that, EU-wide, an EU allowance price of €20 could increase the price of electricity by €10-19 (£9 – 17) per MWh. Allowances currently trade at around €20, but the price is expected to rise to maybe €50 by 2020.

At least until the end of phase II, firms within the ETS are largely protected from higher compliance costs through the free allocation of allowances. However, this will change from 2013 onward when the majority of allowances will be sold through auctions. The switch to auctions will have a substantial impact on the profitability of ETS firms. At a market price of €20 the value of the UK allowance pool is almost €5 (£4.5) billion a year.

The impact of the ETS on competitiveness is one of the main worries for business. It is a justifiable concern, although research has shown that there are only a handful of sectors where the ETS may have a noticeable impact on competitiveness. They account for little over 1% of UK GDP and include sectors like lime, cement, metals and refined products where carbon costs (either directly or indirectly through electricity) amount to a large part of sales revenues. However, only some of them, most notably the metals sector, are also exposed to international competition and thus unable to pass on costs to the market.

The Carbon Reduction Commitment (CRC)

Large firms in the service sector – supermarkets, retailers, banks, cinemas and hotels – are some of the fastest growing users of energy. They currently account for about 8% of Britain's greenhouse gas emissions, or 51 million tonnes CO^2 equivalent.

To curb this demand, and the associated carbon emissions, the Government is planning a new trading scheme, the Carbon Reduction Commitment (CRC), which will come into force in 2010.

The CRC is specifically targeted at firms that are not covered by existing policies but that are large enough to consume more than 6,000 MWh of half-hourly metered electricity per year. (6,000 MWh translates into an annual electricity bill of about £500,000).

Participation is evaluated at the level of the parent company, so subsidiaries or branches belonging to the same company are assessed jointly. Overall some 50,000 sites belonging to 5,000 organisations are expected to participate in the CRC. Most of them are in the service sector but the scheme will also cover local authorities.

Although only electricity consumption is used to determine participation in the scheme, the CRC will cover both direct emissions (for instance, from gas consumption) and indirect emissions from electricity. The scheme will not include transport emissions and emissions from installations already covered by CCAs or the EU ETS.

Electricity use will be converted into carbon emissions based on the average emissions of the UK electricity system. Currently this means an emission factor of about 0.5 tonnes per MWh. The rule also applies to subscribers to green electricity schemes. However, renewable energy generated on site – for example from a wind turbine – is exempt.

Like the EU ETS, the CRC will work as a cap-and-trade scheme, although it will start with a pilot phase during which emissions will not be capped. From 2010 to 2012 organisations will be able to buy an unlimited amount of allowances at a fixed price, currently suggested to be £12 per tonne.

Sales will occur twice a year, in January and July, but allowances may be traded on the secondary market throughout the year. At the end of the year firms will have three months to reconcile their books and surrender the requisite amount of allowances to the Environment Agency, which will run the scheme on behalf of the Government.

In the second phase, from 2013 to 2017, the Government will introduce an aggregate emissions limit – a cap – for all CRC organisations. The corresponding number of allowances will then be sold through annual auctions and traded on the secondary market, converting the CRC into a traditional cap-and-trade scheme.

Impact on business

Although all CRC allowances will be sold (unlike in the ETS), the scheme is designed to be revenue neutral. All sales proceeds, net of administrative costs, will be returned to participating organisations. In fact, the Government expects the CRC to be beneficial on aggregate and unlock energy savings worth £755 million over the life of the scheme.

Nevertheless, there will be winners and losers, since revenues will be returned depending on performance. Each year a league table will be published identifying the organisations that have done most to reduce their carbon footprint.

The best performing firms will receive a 10% bonus on their refund (which is in proportion to allowances purchased) and the worst performing firms will face a 10% penalty. Bonus and penalty payments will grow over time until they reach +/- 50% in year five.

Besides the financial reward, the league table will introduce transparency. For many firms the public relations impact of a low league table position will be as important as the financial implications.

Firms also need to be aware of the impact of the scheme on their liquidity. Allowances will generally be purchased throughout the year, or at the latest in spring of the following year, when submissions are due. But the refund will only occur in autumn, when the league tables are published. In the pilot phase, the initial outlay will be £6 per MWh of electricity (£12 per allowance times an emission factor of 0.5).

Conclusion: an issue of management

The ultimate objective of the EU ETS, the CRC and the CCA is to curtail the emission of greenhouse gases from business. But there is a second objective that is often left unspoken: to bring the issue of carbon emissions to the attention of senior management. By putting a price on carbon, climate change becomes a question of costs and not just environmental compliance. It receives the attention of CEOs and CFOs, as well as environment, health and safety officers.

Reducing the carbon footprint of business is all about sound management. All three policy instruments aimed at business were specifically designed to reward firms that spot opportunities to reduce emissions, cut costs and adopt low-carbon processes. Research has shown that good management makes a difference here: well-managed firms tend to use less energy per unit of output than less well-run firms. But in the nBEI survey of Winter 2007/2008 only a third of firms expected emission reduction to result in new business opportunities. Three out of four respondents felt the new carbon policies constitute an undue burden.

A key challenge to change this is better information. The new instruments are not without complexities and they make demands on administrative capacity. Firms have to learn new skills to ensure compliance with the rules. The earlier they do this, the earlier they can take advantage of potential opportunities that might arise (see Box 1).

In the case of the EU ETS, firms have generally adjusted well to the reporting and monitoring requirements of the system. But not all ETS firms participate actively in the market. Investing in trading capacity and know-how is costly. Only large firms have chosen to do that, first and foremost the power utilities, which are already used to trading fuels and electricity. Smaller firms tend not to trade actively and treat the EU ETS as a matter of environmental compliance.

Box 1: Ten easy steps that businesses can take

1. Look at your company's overall energy usage, including parent companies and subsidiaries, to identify whether your business will be affected by the CRC.
2. Speak to your energy supplier to identify what help is available to reduce your energy consumption.
3. Make someone responsible for monitoring your company's energy consumption; analysing that consumption and providing regular reports to your company's board of directors.
4. Ensure that energy management is on your board's agenda.
5. Develop an energy management plan to reduce your energy consumption by 10-20% - companies affected by the CRC will be rewarded for this.
6. Develop short, medium and long term goals for your company's energy consumption.
7. Decide how much energy you think you can save by each action in your plan.
8. Ask your energy supplier or the Carbon Trust to conduct an energy audit for you.
9. Set a budget for opex and capex to support your energy reduction plan.
10. Start ASAP!

An even smaller number of firms participate directly in the CDM. The risks on CDM projects can be substantial – these are, after all, direct investments in emerging markets – and the regulatory requirements are highly complex. The CDM is therefore the domain of specialised project developers, aggregators and market intermediaries. ETS firms can nevertheless take advantage of their CDM quotas by buying already issued or guaranteed credits on the secondary market.

The CRC will only start in 2010, but managers need to start paying attention to the scheme now. Inclusion in the CRC will depend on a firm's electricity consumption in 2008. The status of each firm under the CRC should therefore soon be clear. The subsequent monitoring

regime will be fairly light, relying on self-certification combined with risk-based audits targeting likely delinquents. Nevertheless, it will pay to establish clear monitoring and reporting procedures early on.

Given the way CRC revenues are recycled, there are also large rewards for reducing emissions fast and move up the league table. Firms should act early to identify cost-effective measures to reduce their carbon footprint.

Reducing a firm's carbon footprint can be a challenge, but the measures needed are often cash-flow positive, with investments recouped in a short period of time. Firms that want to approach the task proactively and take advantage of the flexibility the CCL/CCA, EU ETS and CRC affords can do a number of things:

- They should familiarise themselves with the monitoring, reporting and verification requirements of new schemes such as the CRC, and devise a monitoring / compliance strategy. Even firms outside a scheme may initially be asked for information to ascertain their exclusion.
- They should start to monitor and manage energy use more actively and explore energy savings opportunities more systematically. Organisations like the Carbon Trust, but also energy suppliers like npower, may assist in identifying cost-effective opportunities.
- Firms without in-house trading capabilities may want to discuss their trading needs with a carbon market professional that can help to plan ahead. For example, the EU ETS includes many options to manage price risk and optimise purchases over time.
- ETS firms should also look into their position vis-à-vis the CDM. Few firms will want to enter the CDM market themselves, but their entitlement to import CDM credits is an asset that should be managed.

Further Reading

On business attitudes to energy and climate change

npower (2008). npower Business Energy Index Winter 2007 –2008.

On the UK's climate change policy

Committee on Climate Change (2008). Building a low-carbon economy. The UK's contribution to tackling climate change, London: HMSO. See also www.theccc.org.uk.

Case Study: Lafarge Cement UK

Cement manufacturing is an energy intensive process and central to all core operations at building materials provider, Lafarge. So understandably, reducing emissions and operating more sustainably has been at the forefront of the company's strategy. Lafarge was one of the founding members of the World Business Council for Sustainable Development and has actively led sustainability within the global building materials sector.

As part of the Group's global operations, Lafarge Cement UK has targeted lower emissions from all its processes through improvements in energy efficiency and by cutting the use of traditional fossil fuels and raw materials through substitution with waste materials. This has resulted in a reduction of absolute CO^2 emissions of more than 30 per cent (based on 1990 levels).

Lafarge was also one of the first global companies to enter into a partnership with an NGO, WWF in 2000. As part of this partnership, a target of 20 per cent net reduction in CO^2 per tonne of cement by 2010 was set (based on 1990 levels). To put this into context, this agreement existed prior to the introduction of emission trading mechanisms in the UK or Europe by 2007, Lafarge had already achieved a 16 per cent reduction.

It was also in 2007 that Lafarge published its Sustainability Ambitions for 2012, which are designed to introduce clear, measurable and deliverable objectives for its operations across the world, including the UK, addressing sustainability challenges facing the business in the short, medium and longer term.

Again, Lafarge Cement UK is making good progress on meeting these ambitions. In 2007 it had achieved the target for reducing sulphur dioxide (SO^2) emissions (20 per cent compared to 2005 emissions). Lafarge has dedicated significant capital investments to enable its operations to become more sustainable. Examples of this include equipment and abatement technology to increase the use of waste-derived fuels in its production process and the development of plastic packaging for cement products, which has been demonstrated as more environmentally sustainable than traditional paper packaging.

One of the key priorities for Lafarge in reducing its emissions has been making its processes more energy efficient. As part of this drive to become greener, the company has recognised the need to fully understand its energy usage, especially as a large consumer of electricity, to allow it to make a long-term difference.

In a close working relationship, Lafarge and npower came together and devised an energy management programme. The first steps on this energy management journey were to:

- Identify when and where it was using its energy and the relative emissions of this
- Translate this data into actions to reduce energy usage - leading to cost and carbon savings

Lafarge was one of the first businesses to use npower's energy management tool, encompass, which has been used across its sites – from large cement manufacturing sites to small aggregate works. This web-based software allows the business to analyse, monitor and evaluate its energy use, cost and carbon emissions. One of the main advantages of encompass has been to allow Lafarge to identify irregular patterns of consumption and initiate corrective action, almost instantly, leading to savings and lower CO^2 emissions.

The tool has been particularly useful in its flexibility to provide support to sites of varying size. For example, data can now be collected from smaller operations that previously had limited energy monitoring capability, while larger plants can more effectively manage their energy needs.

This has also provided Lafarge with detailed information to recognise areas of good performance in relation to energy consumption, which can then be shared across all parts of its business to promote best practice.

In 2008 the company implemented a variety of measures on its drive to become more energy efficient. These measures have included:

- increased operating reliability of manufacturing equipment
- closing a less efficient cement works
- increasing the use of cement extenders
- increased use of waste fuels and waste raw materials

The outcome of these actions has translated into Lafarge Cement UK reducing its fuel consumption by 4% (on an energy basis) and energy consumption per tonne of cement by 6%. These results have helped Lafarge in its aim of becoming more sustainable and energy efficient as a business and in its obligations under the EU ETS.

As carbon reduction continues to grow in importance for global businesses, those who follow the approaches taken by companies like Lafarge to bring clarity to its energy consumption will be best placed to flourish in a future low carbon economy.

npower is one of the top energy suppliers to the UK business market, serving over 230,000 small to medium sized enterprise sites and around 15,000 industrial and commercial customers, with over 100,000 sites.

npower is dedicated to helping businesses use energy more efficiently to save money on their bills and to reduce CO^2 emissions. We work with companies such as BT, Wembley Stadium plc, AstraZeneca and Sainsbury's.

For its business customers, npower specialises in risk management solutions, including market-leading flexible energy purchasing, and broader energy management functions, tailored to every size and type of business.

To help businesses improve energy efficiency npower have developed m3 – measure, monitor, minimise – a portfolio of advice and tools to guide customers on an energy management journey. The process sets out the steps businesses can take to deliver long term cost and CO^2 reductions. This includes monitoring and targeting tool, encompass, which gives businesses accurate and timely information on their energy consumption, providing the data they need to implement energy saving actions.

npower's energy services team builds on this, working with businesses to look at how they can change onsite processes to deliver energy savings. This includes capital investment programmes in areas such as GQCHP, renewables and onsite generation as part of long term emission reduction programmes.

npower aims to have a positive impact on the communities it serves and reduce its customers' carbon footprints whilst always improving its service to customers.

www.npower.com/enlightenedenergy

Grantham Research Institute on
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About The Grantham Research Institute on Climate Change and the Environment at the London School of Economics:

The Grantham Research Institute on Climate Change and the Environment is the home to all climate-change and environment research at the London School of Economics.

The Institute is chaired by Lord Stern of Brentford, author of the 2006 Stern Review, and brings together international expertise on economics, finance, geography, the environment, international development and political economy to establish a world-leading centre for policy-relevant research and training in climate change and the environment.

The Institute has been funded by philanthropists Jeremy and Hannelore Grantham, through their Grantham Foundation for the Protection of the Environment. It will work closely with the Grantham Institute for Climate Change at Imperial College London, established last year also with funding from the Grantham Foundation. A common advisory board will oversee the work of both Institutes.

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