

An Essential EIC Business Report

**Creating the Climate for
Change:**

**A Post-Bonn Action Plan
for Transforming Energy
Efficiency in UK Business**

A Report of EIC's Climate Change Working Group

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£10

By

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Executive Summary

a) The Challenge

As part of its overall Climate Change Programme, the Government has recognised the importance of reducing greenhouse gas emissions from the business sector from the current 68.6 MtCⁱ. But this reduction does not simply mean additional costs for business - measures to improve energy efficiency have the double benefit of reducing energy costs as well as tackling climate change. Government estimatesⁱⁱ suggest that the average business can save 15 - 20% of its energy costs through greater energy efficiency. Furthermore, a recent report for the German Environment Ministry predicted that measures to reduce carbon dioxide emissions by 40% by 2020 would create almost 200,000 new jobs.

EIC welcomes and supports the package of measures on driving energy efficiency the Government has put in place, principally as part of the Climate Change Levy package. These will make a major contribution to the UK's share of the targets agreed under the Kyoto protocol, as recently agreed at the Bonn conference. However, it is clear that further measures will be needed to meet the long-term challenge of climate change.

b) Recommendations

Enhanced Capital Allowance Scheme

- i. The ECA scheme should be developed to take into account the whole use of energy at a site. It should provide financial incentives to invest in the most effective energy efficient techniques – be they equipment and/or system solutions.
- ii. The Government should accept ACBE's recommendation that it allocates £300 million annually to the ECA Scheme and Carbon Trust.
- iii. To support the development of energy efficient systems, the following categories should be added to the list of eligible equipment categories: instrumentation and other energy management hardware and energy management software.
- iv. The following techniques should also be considered for adding to the ECA list: heat recovery systems, leakage/infiltration prevention devices, conveying, mixing, grinding, packaging, driers, furnaces, evaporators, ovens and process integration of heating and cooling.
- v. The certification of energy efficient systems should be by a simple site audit conducted by accredited assessors. Compliance should be measured against sector or process benchmarks.

Carbon Trust

- vi. Easy access to energy advice and audits must be made available to SMEs through the Carbon Trust, in collaboration with Regional Development Agencies and the Small Business Service.
- vii. A significant part of the resources under the Carbon Trust should be dedicated to supporting the SME sector's drive towards energy efficiency.
- viii. The Carbon Trust should consider the feasibility of setting up an insurance scheme for SMEs that invest in energy efficiency measures to reduce this risk and encourage greater investment of time and resources in these measures.

Climate Change Levy Negotiated Agreements

- ix. The opportunity to participate in the Climate Change Levy Negotiated Agreements should be extended as widely as possible to all energy intensive companies.

A Co-ordinated Framework

- x. A 'first stop' shop service, directing inquiries to the Carbon Trust, Energy Savings Trust, Energy Efficiency Best Practice Programme and regional initiatives, should be set up.
- xi. The Carbon Trust and Energy Savings Trust will need to work closely together to co-ordinate services to SMEs.

Delivering a Low Carbon Economy

- xii. The Government should strongly support the development of emissions trading and actively support London's potential role as the international centre for this trading
- xiii. The Government should provide clear milestones and a robust policy framework to demonstrate its commitment in the medium and long-term to climate change policies.

1. Introduction

The Environmental Industries Commission (EIC) was launched in 1995 to give the environmental technology and services (ETS) industry a strong and effective voice with Government.

EIC now has over 200 Member Companies and has grown to be the largest trade association in Europe for the environmental technology and services sector. It has the support of leading politicians from all three major political parties, industrialists, trade union leaders, environmentalists and academics.

EIC's goal is the creation of a healthy home market for companies providing environmental solutions, so the UK ETS industry can flourish both at home and abroad.

EIC's Climate Change Working Group represents organisations providing the products and services to reduce energy use. Members include environmental consultants, manufacturers of energy efficient technologies, energy management companies and academic institutions.

This paper and our recommendations focus on demand-side issues - how to build on existing policies to support UK demand-side companies to develop and market innovative and effective energy efficient techniques.

The Challenge of Reducing Business Energy Use

The Prime Minister has highlightedⁱⁱⁱ that, if we want to halt the process of global warming, we would need to cut global CO₂ emissions by 60% or more. This challenge is made even greater in the context of a growing global economy and the need for higher living standards in developing countries.

Any gains achieved through supply side policies could swiftly be swallowed up if the energy intensity of industry grows, or even stays the same whilst the economy as a whole develops. A high priority must be given, therefore, to supporting the take-up of energy efficient techniques and, more broadly, to de-coupling economic growth from energy demand.

Current Government Policy

The Government has recognised the great importance of business energy efficiency. Its support of the Kyoto Protocol on cutting greenhouse gases from its inception in 1997, and most recently at the resumed Sixth Session of the Conference of the Parties (COP6) on climate change in Bonn in July 2001, has been very positive.

The package of measures to drive greater efficiency in the business use of energy is now substantial and it includes legislation, fiscal instruments, negotiated agreements and voluntary agreements. The measures include:

- The Climate Change Levy
- Negotiated Agreements under the Levy
- The Carbon Trust to recycle Levy proceeds into energy efficiency
- Advice from the Energy Efficiency Best Practice Programme
- Enhanced Capital Allowances Scheme
- Emissions Trading
- Integrated Pollution Prevention and Control

These measures are expected to contribute significantly to the UK greenhouse gas emissions reduction targets and emissions from the sector are predicted to drop to 64 MtC by 2010^{iv}.

The Opportunities for Energy Efficient Technologies

Measures to improve energy efficiency have the double benefit of reducing energy costs as well as tackling climate change. Government estimates^v suggest that the average business can save 15 - 20% of its energy costs through greater energy efficiency.

There is also another economic opportunity for the UK - the growing global market place for climate change solutions.

In his March 2001 speech on the environment, the Prime Minister highlighted that: "The global market for environmental goods and services is projected to rise to £440 billion by 2010". He went on to say: "I want Britain to be a leading player in this coming green industrial revolution. We have many strengths to draw on... I believe the role of Government is to accelerate the development and take-up of these new technologies until self-sustaining markets take over."

A report for the US Department of Energy estimated that the market for energy efficiency technology and services will rise to \$US125 billion by 2015, in the power sector alone.

And a recent report for the German Environment Ministry predicted that measures to reduce carbon dioxide emissions by 40% by 2020 would create almost 200,000 new jobs.

The mechanisms agreed under the Kyoto Protocol and Bonn summit will provide support for technology transfer, further increasing the opportunity for UK companies providing energy efficiency solutions to export their technologies and services. The emissions trading regime, under the Kyoto Protocol, will also boost investment in new jobs and investment in environmental technology and services as mainstream industry comes to realise the economic benefits from reducing greenhouse gas emissions from receiving tradable emissions credits. (See also 'Delivering a Low Carbon Economy' section, p.10)

2. Reducing Business Energy Intensity

Developing the Enhanced Capital Allowance Scheme

In the 2001 Budget, the Government confirmed its plans for the Enhanced Capital Allowances (ECA) scheme to improve the take-up of energy efficiency investment in industry.

The ECA scheme will provide for 100% write down of investments in qualifying energy efficient equipment. This will have the effect of bringing forward the tax benefits of the depreciation on capital equipment. It will be run by the Carbon Trust. The cost of the scheme is expected to be £70m in 2001-2, rising to £130m in 2002-3.

The initial list of technologies is: CHP, boiler systems, motors, variable speed drives, lighting systems, refrigeration equipment, pipe insulation materials and thermal screens.

EIC has run a high level campaign since 1995 for fiscal incentives for companies that invest in environmental technologies. We therefore welcome the introduction of the ECA scheme. There are, however, a number of short-comings in the current scope of the scheme which reduce its effectiveness. In particular, the role of energy savings systems, the scope of technologies and certification need to be addressed.

Energy Saving Systems

A key limitation of the current scheme is that it is focussed on providing ECAs for specific categories of equipment and does not address energy systems as a whole.

This narrow focus on specific equipment is sensible as a first step, however, in some cases, it could even be counter-productive as it may encourage investment in a sub-optimal technology simply because that technology attracts an ECA. An example would be support for insulation. There is little point spending money on insulation if the control systems are so poor that the effect of better insulation is buildings that are too warm.

Similarly, the emphasis on motors rather than the equipment attached to motors could also lead to inefficient decisions. It would not be logical to put a high efficiency motor on an air compressor that was supplying a leaky system.

Recommendation i: The ECA scheme should be developed to include a 'systems' approach that takes into account the whole use of energy at a site. It should provide financial incentives to invest in the most effective energy efficient techniques – be they equipment and/or system solutions.

Scope of the ECA Scheme

Developing the ECA scheme to support energy efficient systems and a greater range of technologies would need greater funding. In ACBE's 2000 report, 'Proposal for Establishment of a Carbon Trust', it recommended allocating a budget of £300 million to the Trust, 20% of the Climate Change Levy revenues, and called for the level of the funding for the Trust and ECA scheme to be reviewed. Re-investment of a greater percentage of the Levy revenues into energy efficiency (whilst not breaking the link with National Insurance Contributions) would provide a major boost to the Enhanced Capital Allowances scheme.

Recommendation ii: The Government should accept ACBE's recommendation that it allocates £300 million annually to the ECA Scheme and Carbon Trust.

Scope of Technologies Covered in the ECAs

To support this 'systems approach' we believe that components of energy savings systems should be added to the list of technologies eligible for ECAs. These would include instrumentation and energy management software. To gain certification, this sort of equipment would need to pass quality tests, and relevant criteria for these tests would need to be established.

Recommendation iii: To support the development of energy efficient systems, the following categories should be added to the list of eligible equipment categories: instrumentation and other energy management hardware and energy management software.

There are a number of further techniques, which should be considered for qualification for ECAs in their own right, providing they meet pre-defined efficiency criteria. These would include common industrial equipment such as heat recovery systems and conveyors.

Recommendation iv: The following techniques should also be considered for adding to the ECA list: heat recovery systems, leakage/infiltration prevention devices, conveying, mixing, grinding, packaging, driers, furnaces, evaporators, ovens and process integration of heating and cooling.

Certification of Systems

For the scheme to be expanded to energy efficient systems the certification of equipment and systems needs to be effective and simple to administer. This could include compliance with simple standardised testing procedures. Examples of this approach in other areas include, testing fire prevention and other safety systems. Benchmarks could be established for different classes of system in terms of overall thermal efficiency.

Recommendation v: The certification of energy efficient systems should be by a simple site audit conducted by accredited assessors. Compliance should be measured against sector or process benchmarks.

The Carbon Trust

The Carbon Trust came into operation on 01 April 2001. Its initial focus is on short-term energy saving measures, including energy efficiency advice to business, over the longer term it will look at broader issues related to moving the UK to a low carbon economy.

It will be allocated around £50 million of Climate Change Levy revenues in 2001/2.

Under the Climate Change Levy large energy intensive companies (meeting certain qualifying criteria) are eligible for an 80% rebate, providing they sign up to a negotiated agreement to reduce energy use. It should be noted that large businesses are also better placed to be able to devote resources to take part in emissions trading than SMEs, that are largely ignored in the design of the Levy. The lack of awareness among SMEs, of the potential savings from investing in green technologies, is of considerable concern.

There are approximately 3.7 million business in the UK with 250 employees or less, accounting for some 40% of UK turnover. There are potential cost effective savings in this sector of 0.5 to 1 MtC available according to the Government's Climate Change Programme.

Given the lack of support measures for SMEs to improve their energy efficiency and the importance of them to the UK economy, a significant part of the resources under the Carbon Trust should be dedicated to supporting this sector.

One problem for SMEs, reported by EIC Members, is the lack of awareness of where to get good quality advice on energy efficiency measures and the cost savings available. For example, the Energy Savings Trust's (EST) role is seen as consumer-facing and the Carbon Trust's as business-facing. However, SMEs with an energy bill of under £20,000 - £30,000 will be dealt with by the EST. This is an obvious recipe for confusion for SMEs. Very careful co-ordination between these bodies, both in concept and execution is essential to avoid confusion. (*See also 'A Co-ordinated Framework' section, p.9*).

Another significant factor preventing SMEs from investing in energy efficiency measures is the risk that the expected levels of savings will not be achieved. Through the ECA scheme the Carbon Trust will be providing a level of quality assurance for specific technologies. This expertise could form the basis of an insurance system backing investments by SMEs in listed energy saving techniques. This would provide a low cost method of supporting such investment. We therefore urge the Carbon Trust to develop plans to work with financial institutions to reduce business risk as a factor in non-investment in energy efficiency.

Recommendation vi: Easy access to energy advice and audits must be made available to SMEs through the Carbon Trust, in collaboration with Regional Development Agencies and the Small Business Service.

Recommendation vii: A significant part of the resources under the Carbon Trust should be dedicated to supporting the SME sector's drive towards energy efficiency.

Recommendation viii: The Carbon Trust should consider the feasibility of setting up an insurance scheme for SMEs that invest in energy efficiency measures to reduce this risk and encourage greater investment of time and resources in these measures.

Climate Change Levy Negotiated Agreements

The Climate Change Levy Negotiated Agreements have proved an important driver of change in business energy efficiency. EIC Members report that those companies with Climate Change Levy Negotiated Agreements are those aware of the Climate Change Levy, and Climate Change in general, and, more importantly, are engaged in the energy efficiency process. Awareness is often at Finance Director level, so Climate Change becomes a board level issue. Conversely, those companies not eligible for a Climate Change Levy tend to have less interest in energy efficiency – even where they are energy intensive users.

A great many energy intensive companies are ineligible for the Climate Change Levy Negotiated Agreements, as they do not fall under the Integrated Pollution Prevention and Control regime. Although we recognise the difficulty of finding and agreeing a suitable definition of 'energy intensive', which brings more companies into the Negotiated Agreements than those covered by IPPC, EIC believes that it is important that the opportunity to exploit the Negotiated Agreements should be extended as widely as possible. The definitional problems need to be overcome to extend the success of the Climate Change Levy Negotiated Agreements.

There is usually a clear connection between operating an IPPC process and being an energy intensive company, but this is not always the case – there are some serious exceptions. The gas liquefaction industry, for example, despite being highly energy intensive, does not operate an IPPC process. Indeed, gas liquefaction companies may spend up to 15% of their turn-over on energy – putting it right at the top of business energy intensiveness. Other examples, in a similar situation, would include the cold storage industry, the water industry, the laundry sector and parts of the plastics industry.

Recommendation ix: The opportunity to participate in the Climate Change Levy Negotiated Agreements should be extended as widely as possible to all energy intensive companies.

A Co-ordinated Framework

The institutional framework for energy demand-side policies is increasingly fragmented, leading to a possible situation in which the resources expended will not be used efficiently, as different programmes overlap.

The many relevant organisations involved in this area include the Carbon Trust, the Energy Efficiency Best Practice Programme (run by the Carbon Trust), the Energy Savings Trust, and the Climate Change Projects Office.

EIC Member companies report a growing confusion as to what support is available, from what part of Government, on energy efficiency.

A number of reports have highlighted these problems. The ACBE report on setting up a Carbon Trust recommends that: "In the medium term there is a need for an overarching framework which could bring together the Carbon Trust and Energy Savings Trust and possibly other complimentary low carbon and energy saving programmes". Green Alliance (2001) published a report entitled 'Institutional Design for a Low Carbon Economy' which argues for the creation of a strong co-ordinating mechanism to ensure that the work of existing institutions is more effectively joined-up.

EIC believes that a wholly new overarching body at this stage could well increase, rather than alleviate, confusion and the practical institutional barriers to transferring responsibilities from so many different departments and organisations could well be so extensive as to hinder projects of more direct relevance to the aim of transforming business efficiency.

However, a single 'first stop shop', housed by an existing body, dedicated to reducing the energy intensity of the business sector, would clarify the outward face of the institutional framework, and would provide clear policy advice and a clear point of contact for all businesses tackling energy efficiency. The first stop shop would be able to direct its users to the right department or body to further its tackling of energy efficiency. The Carbon Trust would provide the obvious home for this first stop shop.

Recommendation x: A 'first stop' shop service, directing inquiries to the Carbon Trust, Energy Savings Trust, Energy Efficiency Best Practice Programme and regional initiatives, should be set up.

Recommendation xi: The Carbon Trust and Energy Savings Trust will need to work closely together to co-ordinate services to SMEs.

3. Delivering a Low Carbon Economy

The Government has set ambitious CO₂ reduction policies. The ACBE report on Carbon Trusts describes the commercial opportunities within a low carbon economy as ‘substantial’. To both meet these challenging targets and to exploit the opportunities within a low carbon economy requires organisational change in all aspects of business management from human behaviour to capital investment programmes and design specifications to production process.

EIC Members support the current emphasis on carbon reducing policies, but would like to see a long-term vision and the policy measures to achieve this clearly articulated by Government. This will encourage medium and long-term business planning to incorporate low carbon technologies and working practices. The Dutch Government’s vision for 2030 provides a good example of this sort of planning.

A key example of a policy in place to move on from the Kyoto and Bonn Summits to a long-term vision is the emissions trading scheme. This, although not the focus of this paper, is a valuable way forward and EIC encourages as wide a participation in this scheme as possible. EIC applauds the launch of the UK Emissions Trading Group’s Scheme and Framework in August 2001 and we would urge the Government to push forward with all the necessary domestic legislation to allow emissions trading as soon as possible. Furthermore, London has the opportunity to be the international centre for emissions trading, creating employment and wealth for the UK, and the Government should actively support the City with legislation and initial funding to ensure that the UK secures leadership in this lucrative international marketplace.

It is our hope that the current Cabinet Office Performance and Innovation Unit (PIU) study, reporting to the Prime Minister in Autumn, on resource productivity and renewable energy, for which EIC is providing input and expert opinion, will lead to the essential long-term vision and policy framework. We further hope that the Cabinet Office’s Energy Review will provide an example of the dynamic, joined-up thinking that is required to address the issue of business energy efficiency.

To conclude, we believe that milestones and a policy framework, that set out the UK’s progress to the Royal Commission on Environmental Pollution’s target of a 60% reduction in carbon dioxide emissions on 1990 levels by 2050, would clarify the UK’s route to a low carbon economy and demonstrate long-term commitment.

Recommendation xii: The Government should strongly support the development of emissions trading and actively support London’s potential role as the international centre for this trading.

Recommendation xiii: The Government should provide clear milestones and a robust policy framework to demonstrate its commitment in the medium and long-term to climate change policies.

ⁱ Source: UK Climate Change Programme

ⁱⁱ Source: 2001 Budget

ⁱⁱⁱ Speech to WWF on 06 March 2001

^{iv} Source: UK Climate Change Programme
^v Source: Budget 2001