



Business Insights

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This publication provides a brief overview of the key themes which arose at “Climate Change: The Business Forecast”. While every effort has been made to reflect the presentations and discussions, the authors cannot guarantee all views have been taken into account.

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Foreword

Margaret Beckett, Alan Johnson, Steve Howard

Climate Change:
The Business Forecast
01

This has been a critical year for climate change. With our dual presidencies of the G8 and, in the latter half of the year, the EU, the UK has been able to put climate change firmly at the top of the international agenda. This has contributed to unprecedented debate in all sectors of society, from governments and parliamentarians to scientists, non-governmental organisations and, of course, business.

It has become increasingly clear through our discussions this year that, for business, climate change has risen from a specialist operational concern to the Boardroom. Many businesses will need to adapt to the consequences of climate change and many new markets will emerge, providing business opportunities, particularly for early movers. Investors are also increasingly demanding that businesses take account of climate change in their corporate planning. The expansion of the Carbon Disclosure Project, which is now signed by 143 institutional investors with assets of USD20 trillion, is indicative of the growing awareness among investors of the potential impacts of climate change on shareholder value and the need to take account of carbon in business planning.

The G8 Summit at Gleneagles in July was not the answer to climate change but it was a milestone. For the first time, Heads of Government from the Group of Eight leading industrial nations signed up to the fact that climate change is a serious long-term issue, and that human activity, through the release of greenhouse gases into the atmosphere, is contributing to that change. Leaders also agreed to a package of practical measures to be taken now and to a new Dialogue on climate change, clean energy and sustainable development, the first meeting of which took place on 1 November in London. The Gleneagles Summit was, therefore, a substantial step forward.

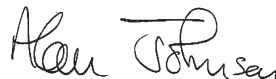
This document of business insights is being launched at the 11th Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC) and, significantly, the first Meeting of the Parties to the Kyoto Protocol. Here we will be looking at the implementation of the Protocol and, for the first time, beginning to discuss the process for agreeing a post-2012 framework, when the first commitment period under the Kyoto Protocol ends.

Looking ahead, the Prime Minister has recently stated that we need a sound, rational, science-based unity which ensures the right legally-binding framework to incentivise sustainable development. Climate change will only be addressed through both technological development and a robust, inclusive and binding international treaty.

These discussions are clearly of great importance to the business community and we are determined to ensure that they take full account of the views of international business. The insights gained from "Climate Change: The Business Forecast" will prove extremely valuable as we move forward and will help to inform the debate in the new G8+ Dialogue, here at the UNFCCC and beyond.



Margaret Beckett
UK Secretary of State
for Environment, Food
and Rural Affairs



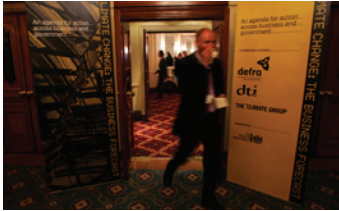
Alan Johnson
UK Secretary of State
for Trade and Industry



Steve Howard
CEO, The Climate Group



On 5 and 6 October, Defra, DTI and The Climate Group convened a high-level conference in London bringing together government with UK and international business representatives to discuss the risks and opportunities presented by climate change and the response to it. The aim was to build on the momentum of the G8 Gleneagles Summit, driving forward action on a low carbon future.



Among the speakers at the conference were UK Secretaries of State Margaret Beckett (Environment, Food and Rural Affairs) and Alan Johnson (Trade and Industry) and a range of corporate leaders including: James Rogers, CEO of Cinergy; Lord John Browne, Group Chief Executive of BP plc; Sir John Bond, Group Chairman of HSBC; Paul Golby, CEO of E.ON UK; Peter Hubbard, CEO of AXA; and John Sunderland, President of CBI. The event was introduced and facilitated by The Climate Group's CEO, Steve Howard.



Speakers addressed a wide range of issues surrounding business responses to climate change both in the plenary and in four parallel discussion streams – Consumers, Products and Buildings; Transport and Logistics; Climate, Investment and Finance; Power and Energy – providing a focused opportunity to discuss in detail the business risks and opportunities associated with climate change.



A panel of Chinese business leaders gave a presentation to plenary entitled “Climate Change and Energy: Opportunities in China”, which looked at energy demand and supply in China, problems and challenges, the policy framework and business opportunities. This was a unique opportunity to hear directly from representatives of the world's fastest-growing economy on how they are dealing with energy issues.



A detailed discussion session on emissions trading was preceded by an introduction from Catherine Day, Director-General of Environment DG at the European Commission, who explained the workings of the EU Emissions Trading Scheme, describing it as a “nucleus from which an international carbon market can emerge”. Paula DiPerna also outlined the view from the Chicago Climate Exchange.



As well as making keynote speeches, Margaret Beckett and Alan Johnson gave their reactions in the final session to the insights produced during the conference. Summing up, Mrs Beckett noted that the conference reflected the increasing number of companies seeing business opportunities in tackling climate change, rather than viewing it simply as a cost.



The event was organised so as to minimise its own carbon emissions, through a number of initiatives:

- Food and wine throughout was British, thus reducing “food miles”;
- Transport to and from the dinner included zero-carbon emission hydrogen buses (supplied by Transport for London) and carbon-neutral Radio Taxis;
- All delegate materials were printed on recycled paper, and pens were made from recycled computer parts;
- The dinner venue subscribed to a “green” energy tariff;
- The whole event's emissions were offset as part of the UK Government's G8 Presidency offsetting plans.

A number of common findings emerged across sessions at the conference. These are summarised below, followed by more detailed findings from each discussion stream.

1. Climate change is happening and urgent

For the first time at a business conference on climate change, there was no need to open with presentations explaining the nature of global warming and its importance: it was clear from the outset that the participants had already internalised the significance of the issue, the urgency of addressing it and the need for robust policy. Over three quarters of participants – from a range of business sectors – stated that their organisations were already taking action to cut their greenhouse gas emissions. As James Rogers (CEO, Cinergy) stated, “the debate on the science is over”.

2. The shift to a low carbon economy offers major business opportunities

There was also clear focus – in both the presentations and discussions – on the opportunities that reducing greenhouse gas emissions and making the shift to a low carbon economy can present for businesses. While the risks associated with both climate change and climate policy were recognised, with the right policies these could readily be turned into new revenue possibilities. These opportunities include internal efficiency and productivity gains, improved reputation and the potential to sell low carbon products and services.

3. Climate change can be tackled without damaging economic prospects

Consistent with reports by the IPCC and the European Commission showing a minimal impact on GDP, there was a general feeling that major steps could be taken toward cutting greenhouse gas emissions that would not hamper economic output. In a poll taken at the conference, 60% of those participating believed that “we can tackle climate change without sacrificing economic growth” while less than a third believed that this was not the case.

4. There is a wide range of options for reducing emissions

Much of the discussion at the conference focused on the different options for reducing greenhouse gas emissions. The general conclusion was that there are plenty of technically viable and several commercially viable options but no single silver bullet. In an exercise in which participants collectively built a technology scenario that would enable global emissions to be stabilised by 2050 using currently applicable technologies, there was a clear recognition of the opportunities provided by increased energy efficiency, low carbon fuels and carbon capture and storage. The EU ETS was seen as bringing carbon into the boardroom, but was not sufficient for delivering long-term reductions.

5. Climate policies need to be “long, loud and legal”

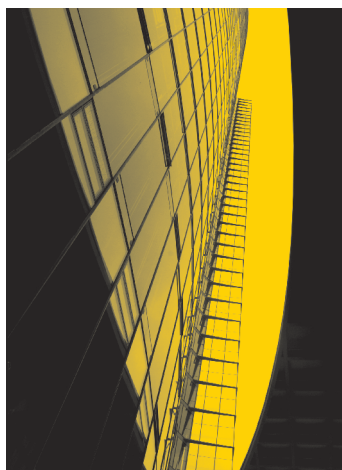
In considering policy, the plenary discussions and individual discussion streams came up with a remarkably consistent set of messages. In order to maximise the opportunities associated with the shift to a low carbon economy, government should:

- Establish a clearly mapped out long-term policy framework to create security and confidence for business, both domestically and internationally with other major emitters (e.g. Lord Browne stated BP’s need for “an appropriate regulatory and fiscal framework” if it is to deliver its first carbon capture and storage project);
- Ensure that climate and energy policy is consistent across government;
- Remove tax and incentive distortions that favour high carbon over low carbon options;
- Provide early stage support for new low carbon technologies to improve their chances of attracting private sector investment;
- Use its procurement power to explicitly support low carbon solutions.



CLIMATE CHAN

THE BUSINESS FORECAST



Key findings

- Policy consistency, simplification of labelling systems, data collection and benchmarking are needed.
- Action from both supply and demand sides is required to deliver lower carbon consumption and production patterns.
- Consumers can only buy what exists today, they can only know what they will want on the basis of today's goods.
- Long-term government policy frameworks encouraging leadership is needed to enable manufacturers, retailers and developers to innovate and modify practices.
- Don't over-rely on the 'green consumer' – the message and motivating factors can have mass appeal.
- Total integrated systems thinking is essential from retailers, developers, architects, designers and in transport.
- The middle man (retailer, property investor and procurement manager) influences "choice editing" e.g. only stocking 'A-rated' appliances.
- Improving building standards for refurbishment and new build must encompass energy, water, waste and transport impacts.
- Smart regulation that predicts the desired outcomes will pull industry innovation.
- Public procurement should set ambitious goals for products and services, this will have a strong market transformation effect.

Discussion

1. Consumers are not identifying with the 'green cause', as shown by Opinion Leader Research, and consequently there is a need to rethink the green brand. It is difficult to predict consumer interest, therefore suppliers must not wait for demand-side pull but innovate now and use existing, successful marketing techniques to promote sustainable products. At the same time, retailers will respond to public saliency, which requires communication of sustainable development issues from trusted business, government and NGOs. Retailers are looking to Government to create the environment that will attract consumers to these issues.

2. It is essential to engage consumers in sustainability issues. The call to action requires getting the consumers' attention, gaining their interest, creating 'desire' for the sustainable options and then taking action. Marketing can appeal to consumers' altruism as well as their business sense. A focus on intimacy and authenticity should help formulate the link between the global narrative and individual specific actions to motivate desire and action for change, as well as linking sustainable choices to a better quality of life. Sustainability could become the 'tie breaker' in consumer choices if all else is equal and information is provided.

3. A combination of incentives and information is required to encourage consumers to make the sustainable choice. It is essential that labels are simple, clear, standardised and compulsory for the manufacturer. The middle man (the retailer, procurement manager etc.) also has a role to play in 'choice editing' by only stocking or selecting products that are energy efficient.

4. With reference to buildings, government is currently establishing a range of standards that will reduce carbon emissions. These standards are being developed to satisfy the industry's need for a level playing field, but higher 'aspirational' standards will give recognition to market leaders. There is a clear effort by policy-makers, manufacturers and investors to improve the sustainability of buildings, but there is still much to be done, especially in the existing stock. Government needs the support of industry in creating these higher standards.
5. Property values will soon be impacted by the building's energy rating. This will improve the value of investing in carbon reduction improvements. Further changes could be effected in the property market by establishing strong public procurement standards. Data availability and benchmarking is crucial to maximise this beneficial effect.
6. Carbon is not yet a major factor in product development or consumer demand, though the subject of climate change is becoming well known and could easily translate into consumer behaviour change. Smart regulations are required to provoke market transformation and to incentivise consumers. The initial cost is the main purchase factor for white goods, as opposed to the running costs e.g. the cost of standby power. The cost of reducing standby power for the manufacturer is high and the demand is low. Therefore, greater harmonisation between regulations and eco-labels is needed to encourage global manufacturers to increase the energy efficiency of their products.
7. Innovation can be expensive and slow (there is inertia in technological change due to existing assets and investments) and so society must share the risk for innovation. Regulation must be bold, forward-thinking and progressive. Evidence has shown that emission savings over the last 25 years have grown exponentially with the introduction of regulations. Public procurement also has an important role to play in pulling the market either by specifying something that is not in existence yet or through forward procurement commitments creating economies of scale.



Key findings

- Business can deliver quick-wins that reduce transport costs and CO₂ emissions if Directors make this a higher priority.
- Technology is delivering, and will continue to deliver significant emission reductions. The challenge is for this to achieve significant market penetration.
- The Government's role is to provide a technology-neutral supportive environment. Industry's role is to develop and commercialise new technology for the market.
- Government needs to provide effective incentives, clear policy signals and targets that recognise the long industry development cycles.
- There is a need for Government – industry partnership to educate and inform consumers and to stimulate changes in working and lifestyle practices and attitudes. This will assist market penetration of fuel efficient alternatives.

Discussion

1. Transport and logistics are central to economic prosperity and personal freedom; but are also a significant contributor to UK CO₂ emissions. The challenge is to balance the needs of a successful economy whilst delivering carbon reducing solutions.

2. Participants identified three key approaches to reducing CO₂ emissions:
- Applying new technology – vehicles, fuels and information technology;
 - Encouraging more efficient driving;
 - Changing travel behaviour through IT solutions, responsible vehicle use, travel planning, and public transport.

Technology Solutions – Existing and Emerging

3. Participants emphasised that new technology was delivering more fuel efficient cars but acknowledged this was being offset by increasing personal mobility.

4. Technological solutions will be delivered through a variety of approaches. In the short-term more efficient conventional engines and biofuels will continue to be introduced. Hybrid vehicles are available and many vehicle manufacturers are introducing new models. Hybrid is identified as an important step in the evolution of technology to zero emission vehicles possibly using fuel cells powered by renewable hydrogen.

5. The Government needs to focus on setting challenging but realistic outcome based targets and avoid supporting specific fuel or technology solutions. Targets should recognise the 10 year plus development cycles operating in the oil and motor industries.

6. The key challenge is achieving significant market penetration for new technologies. The market for low carbon vehicle and fuels is presently limited due to their higher purchase costs. Existing incentives are insufficient to change most consumers' behaviour and Government must look to strengthen these to accelerate uptake of more efficient vehicles. It should also better utilise public procurement opportunities.

Changing Travel Behaviour

7. The impact of technology can also be influential in changing travel behaviour. Technology can influence the way the car is driven and the routes drivers take. Teleworking, teleconferencing and more flexible working arrangements can reduce the need to travel. Equally, road freight improvements can be achieved through driver training and developing route management software to reduce the distances travelled. Responsible vehicle use, walking, cycling and use of public transport will also be important contributors to reducing CO₂ levels.

Consistency, Coordination and Partnership

8. Participants felt that stronger and more consistent Government messages, policy and targets were needed to achieve overall emission reductions. This was in contrast to recent experience with LPG, grants for low carbon vehicles, and unwillingness to fund programmes to increase public awareness.

9. Participants believed that to achieve the necessary market penetration of more fuel efficient vehicles will require a policy framework which:

- Sets clear and long-term targets to guide the direction of policy without choosing winners and losers;
- Allows the industry to work out how it can best meet those targets
- Recognises and promotes the benefits of existing and emerging technology and travel alternatives;
- Considers incentives or variable vehicle taxation, and information schemes to stimulate consumer buying behaviour;
- Encourages Government and company purchasing of fuel efficient vehicles;
- Encourages transport operators to assist businesses to identify and implement efficient transport solutions.



Key findings

Scale up of existing technologies

- Energy efficiency and biomass, particularly for heat, were identified as priority areas with very significant untapped potential, including within the UK. It was strongly felt that new approaches are required.
- To scale up technologies such as renewable energy, policy frameworks need to be clear, stable and long term to sustain investor confidence. Grid and planning issues need to be addressed.
- ‘Modernisation’ of regulation is essential to deliver greater consistency. Without this, for example, productive synergies between traditionally separated ‘sectors’ such as waste and energy will not be captured.

Scale up of pre-commercial technologies

- Energy security and climate security need to be tackled together to create the potential for meeting public policy objectives in both areas, while providing consistent signals to the private sector.
- A clear, long term regulatory framework is required. This needs to reflect technology development timeframes – which can be significant from R&D to commercial viability.
- Accelerating the commercial development of emerging technologies which have the potential to reduce emissions, such as carbon capture & storage, will require a regulatory framework and clear incentives that reflect the carbon benefit, as well as public investment to bridge the gap to commercial viability.

Discussion: existing technologies

1. There is a need for a step change in the use of energy efficiency services and technologies. Described as the ‘cinderella’ of the energy world, there is very significant potential to reduce energy use, and reduce growth in new generation. New efforts targeting both domestic and commercial/industrial consumers as well as the Governments own buildings are needed, together with new approaches in the energy supply industry.
2. Efforts are also required, globally, to embed energy efficiency in existing institutions and decisions. Innovative options include Energy Efficiency Audits (EEAs) to capture energy efficiency at the point of investment in industrial and infrastructure activities. It is relevant to international institutions¹ as well as at national or sub-national level: for example, business loans could be screened by public investment funds or regional development agencies to ensure they reinforce delivery of energy efficiency.
3. There is currently strong investor interest in renewable energy – “the challenge is not the availability of capital but sizeable commercial opportunities”. International and national policy are key drivers at present, as well other market factors such as growth in energy demand, and high oil and gas prices. However, as policy-driven markets increase the perception of risk, it is essential that policies and support mechanisms are ‘loud, long and legal’ to increase confidence. Loud meaning strong enough to positively impact business plans, long meaning reflecting project timeframes, and legal meaning legally based policy – targets and delivery mechanisms. Clarity about infrastructure, grid and a positive approach to planning issues are also key.
4. The significant potential for biomass energy is currently being ‘completely missed’, both as a feedstock for electricity, and importantly, for high-grade heat; biofuels is another important area. Policy attention needs to be paid to the development of all parts of the supply chain. Solar thermal, solar hot water heating and biomass are highlighted as significant sources in non-industrialised countries.

Discussion: pre-commercial technologies

5. There needs to be a convergence of approach to critical international issues – energy security (& affordability), and climate change. The future is currently being shaped by high and volatile oil and gas prices and a high level of future coal use with significant rising demand in key centres such as China, at the same time as climate science justifies deep global cuts in emissions.

6. Government leadership is necessary to provide a long term market framework, which can deliver scale, timing and the direction of the response required in the marketplace. This needs to translate through into national circumstances effectively. Even with mechanisms like the European Emissions Trading Scheme (ETS) the market currently is not providing a clear enough signal on responding to climate, in the medium term, to influence the investment going in to substantial new energy infrastructure, globally.

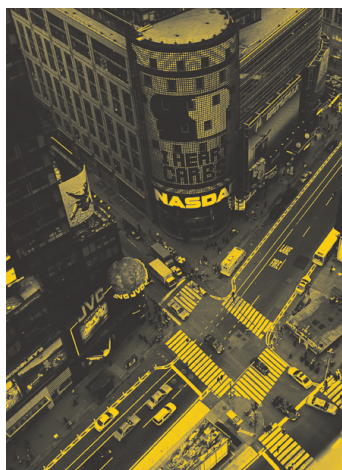
7. Technological innovation and R&D create shareholder value by developing business strengths for future markets – from high efficiency gas and wind turbine development, to carbon capture technology and fuel cells. However new technology R&D may take 10-15 years; plant investment and return may take 20-30 years, but the current Kyoto phase ends in 2012, only 7 years. Stronger alignment between policy timeframes and technological development and innovation is required.

8. Governments may not be qualified to pick winners, but the notion of ‘picking losers’ could be explored: for example negotiated retirement of the most inefficient or polluting stock.

9. Carbon capture and storage is seen as a viable option, but requires further technology development at the capture end to cut abatement cost; at the storage end, regulatory issues plus long term liability need clarified. Government policy is needed to create value and a level playing field with conventional technology. Public investment will be required: ‘technology means nothing unless you invest in it’.

10. The opportunity for scale up is there. The challenge is for Governments to create the long, loud and legal market frameworks that will drive businesses to invest.

¹Currently pioneered by the European Bank of Reconstruction and Development, which has a dedicated energy efficiency team.



Key findings

- There are many significant investment opportunities in the shift to the low carbon economy: the clean energy market is expected to grow by 20-25% per year to a potential \$1.9 trillion in 2020.
- Investors are concerned about climate change and climate/energy policy because of need to protect value from compliance, reputational and physical risks and the opportunities to create shareholder value.
- However, the overall impact is still small due to uncertainty around policy and lack of confidence that government will allow carbon prices to be high and long-term enough to change investment decisions.
- This is compounded by short-termism and conservatism by investors and their managers and narrow interpretations of fiduciary duty.
- Governments have a critical role in delivering a clear regulatory framework in order to provide security within markets for longer term investment and security. Clear signals are needed past 2012 with consistency across objectives, policies, time and geographies.
- Investors need to educate themselves and develop more joined-up long-term strategies to confront climate change and the required shifts in energy investment: this needs to come from the highest level.

Discussion

Financing the shift to a Low Carbon Economy: Risks and Opportunities for Investors

1. In both the presentations and group discussion, it was clear that investors are well aware of the risks posed by climate change and energy policy. Many investors and fund managers are signatories to the Carbon Disclosure Project, employ staff responsible for assessing climate change and policy risks and are beginning to check that companies have carbon management systems. This is seen both as a proxy for general good management and as a sign that companies are prepared to respond to potential changes in the values of their assets. In large part this is being driven by the emergence of a price for carbon in the EU Emissions Trading Scheme.
2. Some investors are beginning to seek out opportunities by switching assets within and between sectors and geographically, and/or to engage with corporates on their need to develop strategic responses to climate change and energy policy. While most insurers are well aware of the risks posed by the impact of climate change, especially in the wake of Hurricane Katrina, a smaller number are beginning to factor climate and policy preparedness into the risk assessments they carry out. For example, a number are considering refusing or increasing the cost of D&O liability cover to companies that do not demonstrate sufficient progress in this area.
3. Similarly, there is widespread awareness of the investment opportunities presented by the shift to a low carbon economy across a wide range of asset classes and risk profiles. Around \$35 billion of investments are likely to be needed in the renewable energy sector in the next five years with overall market for clean energy likely to be over 1.4 trillion by 2020. There are already medium-return, medium risk investment opportunities in, for example, diversified wind and other renewable energy portfolios. However, the scale of energy investments required over the next 30 years and the impact that current decisions will have on future carbon emissions mean that careful choices need to be made and that investor strategies and government policies need to be pulling in the same direction towards low carbon options.

At present the pace of the responses to these risks and opportunities is still incommensurate with the urgency of the problem and the scale of the opportunities. There are several reasons for this:

- Uncertainty over climate policy – domestically, internationally and within the EU ETS – beyond 2012 means that investors are unable to factor carbon prices into investment decisions;
- The weakness of the carbon price signal when compared shifts in energy prices;
- Inconsistent signals from government e.g. support for clean energy versus support for fossil fuels and difficulties in obtaining planning consent and initial financing;
- Lack of awareness amongst CIOs and senior investment managers over the implications of climate change and climate policy;
- The short-term investment horizon and basis for reward employed by many investors in conjunction with a narrow view of fiduciary responsibility that militates against many longer-term investments.

In order to overcome these obstacles, there are a number of important roles for governments and investors. Governments should:

- Seek to address climate change policy and issues with all political parties to ensure continuity in policy in the event of a change in administration;
- Ensure policy certainty over a 15-20 year time horizon to create investment certainty – policy must be backed by implementation. While it is important to seek international agreement to avoid arbitrage and business migration, government should not make domestic policy contingent on a full global regime being established;
- Ensure that policy is consistent by making policies mutually supportive rather than contradictory and eliminating distortions so that investment is driven by real returns;
- Make a strong commitment to emissions trading necessary as a spur to investment;
- Be ambitious in setting performance standards for e.g. buildings, vehicles and appliances;
- Develop and support public-private partnerships that help reduce risk and bring investments forward and provide market education on true cost of power;
- Maximise the return on government investment, e.g. by supporting R&D in emerging technologies through pre-commercial finance, infrastructure and risk management;
- Design the scale of support to scale of technologies and make this support more flexible to reflect technology innovations.

For their part, investors and financiers should:

- Develop institution-wide, joined-up strategies to respond to climate change and climate policy, for example ensuring that insurance and asset management decisions pull in the same direction, and ensure that climate change is addressed at board level;
- Employ a broader view of fiduciary responsibility that allows for longer investment horizons and recognises the materiality of climate change and carbon assets and liabilities. This should be reflected in the mandates given to investment managers;
- Spread risk over a broader base in order to minimise risk of investments and allow investment in new areas e.g. clean energy VCTs;
- Seek to address problems of lack of investment for small scale projects
- Increase education within the investment industry on climate change and climate policy;
- Be more active in advocating policy that supports short and long-term investments in low carbon solutions;
- Demand disclosure by companies on carbon risks and opportunities, both directly and by supporting the relevant legal frameworks, act on the information provided.

Key points

- Cap and trade is workable, flexible and is technology-neutral.
- The ETS is not a sufficient investment stimulus to encourage the long-term capital investment needed. But it does influence decisions at the margins
- Importance of regulatory certainty but also a recognition of the political difficulty of getting it.
- Competitiveness: divided opinion but a general feeling that the number of sectors affected by the ETS is relatively small. Global sectoral agreements should be pursued where competition is an important issue.
- Harmonisation and linking: need to ensure consistency with other trading schemes and maximise opportunities to link systems together.
- Make CDM work.
- Need more consistency of National Allocation Plans (NAPs).
- Opportunities exist for businesses to profit from carbon abatement.

Discussion

1. Is the ETS working? What are the current strengths and weaknesses?

- Yes. It is having a positive effect on marginal decisions. But the short term nature of the phases is not enough to drive long-term investment decisions consistent with moving towards a low-carbon economy.
- Strengths: cap and trade is workable, flexible and is technology-neutral; positive influence on CER pricing and therefore encouraging projects to be developed.
- Weaknesses: inconsistencies across Europe; price volatility; Russian hot air; risk of transferring emissions outside EU; needs expanding geographically.

2. How can the ETS provide a clear signal to business? What are the policy blocks and how can they be overcome?

- Signals are clear but there is a time visibility issue – lack of confidence in future phases.
- There is a question as to whether the ETS will deliver a carbon price that is high enough, over a timescale that is long enough, to incentivise the scale of capital investment required.
- Consistency of national allocations: need a level playing field
- Education is key.
- Longevity: will the ETS exist beyond 2012 if no further international agreements are reached?
- Uncertainty of the project based mechanisms.
- Volatile energy markets have driven carbon prices high in the short-term, raising concerns about international competitiveness. Consideration needs to be given to limiting these price shocks to ensure an orderly transition to a low carbon economy.

3. Can the ETS be (re)designed to encourage large-scale investment in low carbon technologies? What additional climate and energy policies are required?

- Certainty: need to extend timeframe and geography.
- Make CDM work.
- Accelerate implementation of Phases 2 and 3.
- Develop, improve and/or accelerate common systems for verifying carbon savings from CDM, efficiency and carbon capture and storage projects.
- The ETS currently favours electricity production from gas over coal (as gas emits less CO₂). The future of coal-fired generation is dependent on the longevity of the ETS and a carbon price that makes new technology viable e.g. carbon capture and storage.
- To encourage large-scale investment the scheme needs a longer time horizon (ie beyond 2012), wider global participation and complementary measures to encourage new technologies.
- Must avoid simply exporting emissions outside the EU.

4. How can the need for substantial long-term greenhouse gas emission reductions be achieved without damaging competitiveness? Where should policy be going?

- No evidence to show that the ETS impacts negatively on competitiveness.
- Need mechanisms that incentivise companies to look at carbon savings in all sectors.
- Emissions trading schemes should be linked so that the cost of abatement is understood and reduced.
- Huge opportunities for business in a carbon constrained world. These opportunities should be promoted through education, political will and strengthening the mechanisms for technology transfer e.g. CDM and JI.
- Auctioning – different views: some feel that sector benchmarks, which reward early action, are better.

Background: The European Union Emissions Trading Scheme (EU ETS)

On 1 January 2005 the European Union Greenhouse Gas Emission Trading Scheme (EU ETS) commenced operation as the largest multi-country, multi-sector Greenhouse Gas emission trading scheme world-wide. The EU ETS is one of the policies being introduced across Europe to tackle emissions of carbon dioxide and other greenhouse gases in order to address the serious issue of climate change. The first phase runs from 2005-2007 and the second phase will run from 2008-2012 to coincide with the first Kyoto Commitment Period. Further five-year periods are expected subsequently.

The scheme works on a “Cap and Trade” basis. EU Member State governments are required to set an emission cap for all installations covered by the Scheme (in total representing around 46 per cent of the EU’s total emissions of greenhouse gases). Each installation will then be allocated allowances for the particular commitment period in question. The number of allowances allocated to each installation for any given period, (the number of tradable allowances each installation will receive), is set down in a document called the National Allocation Plan.

Agenda

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The Business Forecast
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Day 1 Wednesday 5 October 2005

- 09:00**
Registration and refreshments
at Café Royal, Regent Street,
London W1B 5EL
- 09:30**
Introduction
– Steve Howard, CEO,
The Climate Group
- 09:40**
Keynote speeches
– Margaret Beckett,
Secretary of State, Defra
– Alan Johnson, Secretary
of State, DTI
– James Rogers, Cinergy
– John Sunderland, CBI
- 10:40**
Introduction to the
discussion groups
- 11:00**
Discussion groups 1
- 12:30**
**Report back from
the G8 Summit**
– Sir Michael Jay,
Prime Minister's G8 Sherpa
- 13:00**
Lunch
- 14:15**
Discussion groups 2
- 15:45**
Princeton Wedges
– Presentation by Sarah Wade
– Interactive voting
- 16:45**
Results of vote and discussion
- 17:15**
Close of session
- 17:30**
Hydrogen buses to
Westminster Pier
- 18:00**
Drinks reception and
transfer to Canary Wharf
aboard "Silver Sturgeon"
- 19:45**
**Dinner at East Wintergarden,
Canary Wharf**
– After dinner speaker:
Clive Anderson
- 22:30**
Carriages

Day 2 Thursday 6 October 2005

- 08:35**
Arrival and refreshments
- 08:50**
Chair intro
- 09:00**
**Business Leadership
on Climate Change**
– Lord Sainsbury, Chair
– Lord Browne, BP
– Sir John Bond, HSBC
– Prince of Wales
(video message)
- 09:45**
Chinese business perspective
– Panel of Chinese business
leaders, introduced by
John Ashton, E3G
- 10:35**
Financial perspective
– Peter Hubbard, AXA
– James Cameron,
Carbon Disclosure Project
- 10:55**
Coffee
- 11:15**
Emissions Trading: The Future
– Catherine Day, Director-
General for Environment,
European Commission
– Paula DiPerna, Chicago
Climate Exchange
- 11:45**
Discussion groups 3
- 13:10**
Lunch
- 14:15**
**Read-out from GLA
Cities Event**
– Nicky Gavron, Deputy Mayor
- 14:30**
**Report back from discussion
tracks and plenary discussion**
– Margaret Beckett and
Alan Johnson
- 16:15**
Close

Discussion Groups

Sessions and Speakers

	Session 1 – Day One 11:00-12:30	Session 2 – Day One 14:15-15:45	Session 3 – Day Two 11:45-13:10
Transport and Logistics	Changing business transport behaviour Chair – Michael Roberts, CBI Speakers – Dr Stephen Ladyman MP, Minister of State for Transport – Richard Turner, Freight Transport Association – Stephen Joseph, Transport 2000 – Malcolm Noyle, Lloyds TSB Autolease	Technology solutions Chair – Graham Smith, Low Carbon Vehicle Partnership Speakers – Roger Putnam, Ford UK – John Mumford, BP – Phil Pettitt, Innovits	Focus on emissions trading Chair – Tom Burke, Imperial College Speakers – Steve Drummond, CEO, CO ₂ e.com – Paul Golby, CEO, E.ON – Tony White, Director, CCC – Michael Grubb, Carbon Trust
Power and Energy	Scale up of clean energy 1: existing technology Chair – Elliot Morley MP, Minister for Climate Change and the Environment Speakers – Ian Marchant, Scottish and Southern – Keith Anderson, Scottish Power – John Roberts, United Utilities – Peter Hobson, EBRD – Andrew Marsden, GE	Scale up of clean energy 2: pre-commercial technologies Chair – John Roberts, CEO, United Utilities Speakers – James Smith, Shell – Gardiner Hill, BP – Tom Burke, Imperial College – Mike Rolls, Siemens	
Climate, Investment and Finance	Mechanisms for funding the shift Chair – Stephen Haddrill (ABI) Speakers – Richard Burrett (ABN Amro) – David Jones (Allianz Global Investors) – Tom Murley (Hg Capital)	Risks and opportunities Chair – Tom Delay (Carbon Trust) Speakers – Andrew Sentance (BA) – Peter Scales (Chair IIGCC) – Chris Rowland (DRKW)	
Consumers, Products and Buildings	Can sustainability ever motivate consumers? Chair – Mike Longhurst (McCann Erickson Ltd) Speakers – Deborah Mattinson (Opinion Leader Research) – Sir Stuart Hampson (John Lewis) – Chris Pomfret (Roundtable member and Board of FSA) Panellist – Alan Knight (SDC)	Meeting the climate change challenge in the built environment Chair – Bernie Bulkin (SDC) Speakers – Richard McCarthy (ODPM) – Mike Beaven: (Environmental Sustainability Group) – Paul McNamara (PruPIM) – Adrian Penfold (British Land) Panellist – Åke Pettersson (Fortum Varne)	Innovation for a low-carbon lifestyle: G8 and the 1 watt standby Chair – Phillip Sellwood, Energy Saving Trust Speakers – Bjorn Stigson, WBCSD – Jack Frost, Johnson Matthey – Bruno Zago, Hewlett Packard



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- Imperial College
- Institutional Investors Group on Climate Change
- London Development Agency
- Princeton University
- Sustainable Development Commission
- Transport for London
- UK Business Council for Sustainable Energy
- UK Trade and Investment