

# **Pension Funds and Climate Change**

## Briefing on Current Developments and Policy

*Report to the Local Authority Pension Fund Forum*  
*October 2006*

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# Acronyms

<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>GWP</b>	Global Warming Potential
<b>CDM</b>	Clean Development Mechanism
<b>JI</b>	Joint Implementation
<b>EU ETS</b>	European Union Emissions Trading Scheme
<b>NAP</b>	National Allocation Plan
<b>CRDI</b>	Climate Risk Disclosure Initiative
<b>INCR</b>	Investor Network on Climate Risk
<b>PRI</b>	Principles for Responsible Investment

# 1. Introduction

The purpose of this briefing is to provide trustees with information on the latest developments in the area of climate change policy. There is a growing consensus among government, scientists and business on the need to take action to address climate change, and businesses are increasingly facing both physical and regulatory risks due to climate change in the coming years. Policy initiatives currently in place and under development will present both business and investors with long-term risks and costs, but also opportunities. Informed trustees will be in a better position to assess these risks and opportunities and make decisions likely to enhance long-term value.

This briefing will cover:

- The Kyoto Protocol and its mechanisms;
- The EU Emissions Trading Scheme, which is now underway, and developments in emissions trading;
- UK Government policy on climate change, including the implications of the recently released Energy Review; and
- on-going shareholder initiatives in the area of climate change.

The briefing seeks to identify relevant debates and challenges for investors in each of these areas, as well as opportunities for local authority pension funds to take action on climate change.

## 2. The Kyoto Protocol and its mechanisms

### 2.1. Background

The Kyoto Protocol was the result of commitments made in the 1992 UN Framework Convention on Climate Change (UNFCCC) to stabilise the level of greenhouse gases in the atmosphere. Kyoto was initially negotiated in 1997; however it did not come into force until February 2005 when Russia ratified the treaty. Under the Kyoto Protocol, quantified emissions limitations for six greenhouse gases have been established for the initial commitment period, which spans from 2008-2012. These limitations have been put in place for industrialised and semi-industrialised countries that agreed to the UNFCCC, the so-called 'Annex 1 countries.'<sup>1</sup> Developing countries do not have emissions reduction targets under the protocol at this time.

#### Box 1. Global Warming Potential

Six greenhouse gases are included within the Kyoto Protocol. As shown in the table below, the Intergovernmental Panel on Climate Change has established different Global Warming Potentials, or GWPs, for each of the gases, which represent their relative contribution to global warming. Although CO<sub>2</sub> has the lowest GWP, it is the largest contributor to greenhouse gas levels in the UK. At present CO<sub>2</sub> is the only greenhouse gas traded through the EU Emissions Trading Scheme, however all six greenhouse gases will be included in further phases of the scheme.

Greenhouse Gas	Global Warming Potential
Carbon Dioxide (CO <sub>2</sub> )	1
Methane (CH <sub>4</sub> )	23
Nitrous Oxide (N <sub>2</sub> O)	296
Hydrofluorocarbons (HFCs)	1,300
Perfluorocarbons (PFCs)	5,600
Sulphur Hexafluoride (SF <sub>6</sub> )	22,200

Source: IPCC, Third assessment report, 2001

The Montreal Conference in December 2005 was the first meeting of parties to the UNFCCC since the coming into force of the Kyoto Protocol. The conference laid the groundwork for discussion regarding further developments in the second commitment period, which will begin after 2012. Crucially, the conference also set out the rules and agreements related to the implementation of the three primary mechanisms established under Kyoto - Joint Implementation (JI), Clean Development Mechanisms (CDM), and International Emissions Trading. JI and CDM, [see boxes 2 and 3] seek to enable emissions reductions targets to be achieved through the most economically efficient means. Simply put, the mechanisms allow countries to meet their emissions reductions targets by investing in emissions reductions in other countries, where they may be achieved at less cost.

<sup>1</sup> Annex 1 countries include: Austria, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom. Australia and the USA are also Annex 1 countries but have not ratified the Kyoto Protocol.

## 2.2. Current debates and future outlook

In order to meet national level commitments under the Kyoto Protocol, the UK government will rely upon the private sector to provide a substantial contribution to the overall reductions in greenhouse gas emissions. The Kyoto mechanisms may provide business with opportunities to achieve these emissions reductions, either through undertaking emissions reduction projects in their overseas operations, or facilitating external JI or CDM projects, thereby generating emissions credits.

**Benefits to businesses.** Businesses that take part in the flexible mechanisms associated with Kyoto will benefit, because CDM and JI mechanisms:

- Enable emissions reductions to be met at least cost, and
- Have the potential to generate revenue or investment capital through tradable credits or rights to future greenhouse gas emissions credits.<sup>4</sup>

**Barriers to participation.** At present the take-up of CDM projects has been predominantly among multilateral actors, such as the World Bank, and national governments rather than the private sector.<sup>5</sup> There are several

### Box 2. Joint Implementation

Joint Implementation (JI) is a mechanism under the Kyoto Protocol that allows industrialised countries with greenhouse gas emissions reduction obligations, ('Annex 1' countries) to gain emissions credits through investing in emission reduction projects in another Annex 1 country. Governments, institutions such as the World Bank, and the private sector have undertaken JI projects. Most projects are expected to occur in Eastern Europe and the former Soviet Union, due to the lower costs of reducing emissions in those countries. Projects must be shown to be 'additional' to what would be achieved under business as usual in order to qualify for emissions credits.

### Box 3. Clean Development Mechanisms

A further mechanism under Kyoto is the Clean Development Mechanism, or CDM. CDM operates in a similar manner to JI, however projects are undertaken in developing countries ('Non-Annex 1' countries) rather than industrialised countries. An additional objective of CDM projects is to foster technology transfer to developing countries, thereby contributing to sustainable development. India, Brazil and Chile have been the largest suppliers of CDM-based emissions reductions so far.<sup>2</sup> In August 2006 the World Bank developed the largest CDM project to-date – which will result in a payment of US\$1.02 billion by European and Asian companies to Chinese chemical companies for the reduction of emissions of HFC23, the most potent greenhouse gas. Emissions credits achieved through the project will be equivalent to 19m tonnes of CO<sub>2</sub> annually.<sup>3</sup>

<sup>2</sup> International Emissions Trading Association, State and Trends of the Carbon Market 2005, May 2005.

<sup>3</sup> Timothy Gardner, 'World Bank logs largest ever greenhouse gas deal,' Reuters, 29 August 2006.

<sup>4</sup> Climate Change Projects Office, Department of Trade and Industry, 'A Business Guide to Climate Change Projects,' May 2004

<sup>5</sup> UNEP Finance Initiative Climate Change Working Group, 'The Clean Development Mechanism: The Finance Sector Perspective' January, 2005  
[http://www.sefi.unep.org/fileadmin/media/sefi/docs/briefings/ceobriefing\\_0501.pdf](http://www.sefi.unep.org/fileadmin/media/sefi/docs/briefings/ceobriefing_0501.pdf)

barriers to participation in CDM projects by businesses, which highlight the potential risks to those that choose to get involved:

- Institutional barriers – such as lengthy and inefficient processes to determine project eligibility and gain approval from various regulatory bodies – which lead to increased transaction costs
- Lack of certainty – there is not a structure in place for CDM projects following the 2008-2012 commitment period, preventing businesses from looking at longer-term investments
- The requirement for companies to demonstrate that emissions reductions are ‘additional’ to those that would have otherwise occurred can be burdensome
- There is a lack of institutional capacity to handle project-based mechanisms within both national and host governments.<sup>6</sup>

**Financial risks and uncertainties.** The price for project-based emissions credits is currently significantly lower than that for credits granted by EU governments and traded through the EU Emissions Trading Scheme. Companies that take up CDM or JI projects therefore face a disadvantage when trading those credits: buyers are unwilling to pay a higher price because the projects behind the credits are seen to be more risky and uncertain.<sup>7</sup> However, going forward the linkage between the project-based and allowance-based emissions markets is expected to play a key role in the determination of prices for project-based emissions reductions.<sup>8</sup>

**Uncertain future of climate change policy.** It is thought that more substantial reductions than those currently set out in Kyoto will be needed to minimise the impact of future climate change. Therefore, if momentum continues to grow, more substantial cuts will be likely to be put in place in the next phase of Kyoto after 2012.<sup>9</sup> At the same time, substantial importance has been placed on the need to engage with non-participant countries, including the US and Australia, which account for a significant portion of current greenhouse gas emissions, and rapidly growing developing countries, such as China and India. These issues leave uncertainty surrounding the future of Kyoto after 2012.

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<sup>6</sup> UNEP Finance Initiative Climate Change Working Group, ‘The Clean Development Mechanism: The Finance Sector Perspective’ January, 2005  
[http://www.sefi.unep.org/fileadmin/media/sefi/docs/briefings/ceobriefing\\_0501.pdf](http://www.sefi.unep.org/fileadmin/media/sefi/docs/briefings/ceobriefing_0501.pdf)

<sup>7</sup> International Emissions Trading Association, State and Trends of the Carbon Market 2005, May 2005.

<sup>8</sup> UNEP Finance Initiative Climate Change Working Group, ‘The Clean Development Mechanism: The Finance Sector Perspective’ January, 2005

<sup>9</sup> The Carbon Trust, ‘Climate Change and Shareholder Value,’ March 2006.

## 3. The EU Emissions Trading Scheme

### 3.1. Background

The EU Emissions Trading Scheme currently forms the basis of the EU's strategy to meet its Kyoto emissions reduction obligations. The ETS is a 'cap and trade' system for greenhouse gas emissions, in which a cap is placed on total emissions and allowances are then traded on a market. In a similar manner to the CDM and JI, the underlying premise is that the system allows emissions reductions to be achieved in the most cost-effective manner. So long as the cap on emissions is sufficiently low, reductions in emissions will be achieved as the market price for emissions credits is expected to exceed the cost of emissions abatement technology. Additionally, where emissions are traded on a market a quantifiable value is placed on efficiency improvements, encouraging their adoption.

Phase 1 of the ETS began in January 2005 and will run through 2007. Under the scheme each member government allocates emission caps to companies, facility by facility, through a National Allocation Plan (NAP). In 2005 these allowances were granted to approximately 11,500 sites across the EU. Each site must verify and report on its CO<sub>2</sub> emissions on an annual basis, and may buy units to reach their quota or sell excess credits.

#### Box 4. Operation of the EU ETS

The ETS currently covers only CO<sub>2</sub> emissions, and focuses on energy-intensive industries, primarily the energy, mining and metals, manufacturing, and paper sectors. The industries covered during phase 1 are: combustion installations, oil refineries, coke ovens, iron and steel production, glass manufacturing, cement clinker and lime production, brick and tile manufacturing, ceramic products, and pulp and paper. In the UK, the scheme covers approximately 1000 operations and 50% of the UK's CO<sub>2</sub> emissions.<sup>10</sup>

### 3.2. Current debates and future outlook

**The crash in CO<sub>2</sub> prices.** Following the end of the first full year of trading under the EU ETS, the price of a tonne of CO<sub>2</sub> fell from approximately €30 to €9 in late April 2006.<sup>11</sup> Data from the first year of trading showed that this resulted from overly generous assignments of emission allowances by a majority of member states.<sup>12</sup> The crash in CO<sub>2</sub> prices underlines the market's dependence on an efficient distribution of allowances, and the volatility that can result where these are not appropriately distributed. This will be a key issue in the success of the ETS in providing incentives for business to reduce emissions. Phase 2 of the ETS will cover 2008-2012 and allocations are expected to be significantly smaller than in Phase 1. Member states' draft allocation plans were due to be announced at the end of June, however,

<sup>10</sup> HM Government, *Climate Change – The UK Programme 2006*, March 2006

<sup>11</sup> The Carbon Trust, 'Analysis of EU ETS News Flow for an Investor Audience,' June 2006

<sup>12</sup> The Carbon Trust, 'Analysis of EU ETS News Flow for an Investor Audience,' June 2006

several countries, including the UK have only recently released their NAPs for phase 2.

**Uncertainty surrounding Phase 2 and 3 of the ETS.** Additional developments in Phase 2 and 3 include the likely expansion of the ETS to other sectors, for example aviation. The Carbon Trust highlighted in a recent study that in order to encourage long-term investment and allay concerns that the ETS could negatively impact the competitiveness of UK business, there must be clarity with regard to arrangements for Phase 3 of the ETS after 2012. It has put forward proposals to address concerns regarding both the distribution of allocations and competitiveness, with a view to securing improvements in the ETS operation in the future.<sup>13</sup> The UK government is also committed to developing the third phase of the scheme in order to provide more certainty to business as to investment and the future energy strategy within the UK.<sup>14</sup>

**Future growth of EU emissions trading.** Although the specifics surrounding phases 2 and 3 of the ETS are unclear, several factors signal the continued expansion of the greenhouse gas emissions market in the EU. Trading in CO<sub>2</sub> through the EU ETS reached 362 million tonnes last year, with large growth also seen in contracts for CDM and JI projects.<sup>15</sup> Along with the EU, the UK government will seek to develop and expand the ETS, such that it becomes a key tool for emissions reductions beyond 2012. Furthermore, the EU Linking Directive<sup>16</sup> will allow companies participating in the ETS to use credits from CDM and JI projects (from 2005 and 2008, respectively) to meet a percentage of their emissions reduction targets under the ETS. This has set the stage for continued expansion and linkages among markets.

**Emissions trading beyond the EU.** Emissions trading is also taking root beyond the EU ETS, through initiatives such as the New South Wales trading system and state level-initiatives in the US. Several state governments in the northeast of the US have banded together to develop their own greenhouse gas emissions trading arrangements, while the state of California recently announced its own cap and trade scheme which will require reduction of emissions levels to 1990 levels by 2020. Also in the US, the Chicago Climate Exchange, a voluntary emissions trading scheme with 120 members at present, has been trading emissions since 2003.<sup>17</sup> Through its subsidiary, the European Climate Exchange, the Chicago Climate Exchange is also active in emissions trading in the EU ETS, suggesting a move toward increased linkages between markets. It has been suggested that over the next ten years the efficiency, liquidity, number of participants and linkages between markets will dramatically increase, as oil and gas companies and other key sectors are

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<sup>13</sup> The Carbon Trust, 'Allocation and competitiveness in the EU Emissions Trading Scheme,' June 2006

<sup>14</sup> HM Government, *Climate Change – The UK Programme 2006*, March 2006

<sup>15</sup> Environmental Finance, Carbon Volumes Reach All Time High, 10 August 2006

<sup>16</sup> [http://ec.europa.eu/environment/climat/emission/pdf/dir\\_2004\\_101\\_en.pdf](http://ec.europa.eu/environment/climat/emission/pdf/dir_2004_101_en.pdf)

<sup>17</sup> More information on the Chicago Climate Exchange and European Climate Exchange is available at [www.chicagoclimatex.com](http://www.chicagoclimatex.com)

increasingly likely to get involved in markets as trading opportunities take shape.<sup>18</sup>

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<sup>18</sup> Fusaro, 'Green Trading: opportunities for the oil industry' *Pipelines*, August 2004

## 4. UK government policy

### 4.1. Background

The UK government has set goals above and beyond those required under the Kyoto Protocol, aiming to reduce domestic CO<sub>2</sub> emissions to 20% below 1990 levels by 2010, and to 60% below 1990 levels by 2050. However, the government admitted in March 2006 that the 2010 target is unlikely to be met, with an 18% reduction in emissions more likely.

A substantial portion of these cuts will be likely to fall on the private sector, with some estimating that between half and two-thirds of the cut in emissions will come from businesses.<sup>19</sup> The bulk of private sector emissions reductions are intended to be achieved through the UK government's commitment to the continued strengthening and expansion of the EU Emissions Trading scheme in phases 2 and 3.<sup>20</sup> Additionally, the Climate Change Levy, a tax on energy usage by the public and private sectors, will remain as a further incentive for business to increase energy efficiency.

Intended areas for emissions reductions have been identified in the Energy Review, released in July 2006, which aims to address the dual issues of climate change and energy security. Beyond the continued use of the EU ETS and the Climate Change Levy, key outcomes of the review are as follows<sup>21</sup>:

#### **Cleaner energy**

- The review signals a return to nuclear power. The government will take steps to address planning and other potential barriers to further nuclear development; however it will be funded by the private sector
- The government intends that 20% of energy supply will come from renewables by 2020. The level of the Renewables Obligation<sup>22</sup>, which specifies a percentage of energy that power suppliers must derive from renewable sources, will be increased, and its focus shifted to emerging technologies
- Emphasis will be placed on smaller-scale electricity generation closer to where it is used, while new investment in energy generation will focus on wind and gas-fired power
- The government will continue to investigate the potential of carbon capture and storage, particularly as these technologies may be relevant to existing coal and gas power generation

#### **Reduction in energy usage**

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<sup>19</sup> For example: Fiona Harvey, *Businesses to feel the heat over greenhouse gas cuts*, Guardian 29 March 2006

<sup>20</sup> HM Government, *Climate Change – The UK Programme 2006*, March 2006

<sup>21</sup> HM Government, *The Energy Challenge. Energy Review Report 2006*  
<http://www.dti.gov.uk/energy/review/>

<sup>22</sup> <http://www.dti.gov.uk/energy/sources/renewables/policy/renewables-obligation/page15630.html>

- Clearer information and incentives will be developed to reduce usage of energy
- Further options to increase energy efficiency within businesses not included in the EU ETS will be proposed.
- The government will work with retailers to increase energy efficiency standards for white goods
- Other measures will relate to home building, and transport fuel efficiency.

## 4.2. Current debates and future outlook

The review has highlighted that with the continuing emphasis on energy efficiency, all businesses will face increased costs related to greenhouse gas emissions. While the current scope of the EU ETS is limited to the most carbon-intensive businesses, the government states in the review that there is: "...wide potential to make cost-effective energy savings – around 1.2 MtC by 2020 – in many businesses and public services not covered by the EU ETS and we will bring forward proposals to incentivise making those savings. We shall consult on a proposal for a mandatory emissions trading scheme – an Energy Performance Commitment – alongside other options, for achieving our carbon reduction aims in this sector."<sup>23</sup> This makes clear that all businesses will increasingly face costs due to greenhouse gas emissions.

In addition to the clear impacts the review will have on the power generation sector and business use of energy, the review also highlights that specific sectors including transport, real estate development, retailers and manufacturers of electronics and white goods will be likely to come under increased pressure from the government to reduce emissions not only from their business activities but to increase the efficiency of their products and services. At the same time, companies that have invested in clean technology, carbon storage or nuclear development will be likely to benefit from increased usage of their technology.

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<sup>23</sup> HM Government, *The Energy Challenge. Energy Review Report 2006*, p.13

## 5. Shareholder Initiatives

### 5.1. Background

Institutional investors are increasingly taking part in joint initiatives in order to respond to the risks and opportunities presented by climate change. A key focus of these efforts so far has been on encouraging companies to disclose more and better information on their greenhouse gas emissions, develop strategies on climate risk, and take consideration of broader issues in investment decisions. For example, 211 institutional investors participated in the most recent request for companies to disclose information on greenhouse gas emissions, through the Carbon Disclosure Project.<sup>24</sup> Other recent initiatives in this area include the Investor Network on Climate Risk and the UN Principles for Responsible Investment.

**The Investor Network on Climate Risk.** Following the formation of the Investor Network on Climate Risk (INCR) in 2003, a key development in 2005 was the Investor Summit on Climate Risk,<sup>25</sup> at which institutional investors managing USD 3.22 trillion backed a call for capital market regulators to demand more rigorous corporate disclosure of climate risks.

A key outcome of the Investor Summit was the development of the Climate Risk Disclosure Initiative (CRDI). The initiative is aimed at enhancing corporations' climate risk disclosure, and seeks to make clear what information investors need in order to encourage companies to provide information that is easier to assess. The United Nations Environment Programme, the United Nations Foundation, and the United Nations Fund for International Partnerships all back the initiative. It was expected to be underway by summer 2006, but remains under development by CERES at present.

As a minimum, the initiative has recommended that companies' disclosure on climate change should include a statement as to the company's strategy on climate risk; disclosure of emissions and emission reduction targets; an assessment of physical risks due to climate change; an analysis of potential regulatory impacts on the company; and actions taken to address climate risks and opportunities.

As highlighted by the CRDI, it is apparent that a key issue relates to the quality of disclosure – investors should look for strategies and understanding of the issues involved. Indeed, PIRC's response to the draft consultation on the CRDI highlighted the importance of considering the time frames associated with climate risks, the inclusion of indirect emissions, and a clear commitment to the establishment of emissions targets.

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<sup>24</sup> See <http://www.cdproject.net/> for more information

<sup>25</sup> See <http://www.incr.com/>

A further outcome of the Investor Summit was the Forum for International Investor Cooperation in Addressing Climate Risk. Although this forum has not taken shape yet, the idea behind it is that it will seek to encourage investors to collaborate and share information about the financial risks and investment opportunities posed by climate change.

**The UN Principles for Responsible Investment.** In April 2006 the United Nations launched the Principles for Responsible Investment<sup>26</sup>, which were developed by the Global Compact and the UNEP Finance Initiative. The Principles are a voluntary initiative to which institutional investors and investment managers may commit. Those signing the Principles undertake to consider environmental, social and governance concerns in investment analysis and decision-making. Although climate change is not specifically addressed within the principles, the take-up of the principles may contribute to an increasing number of investors that are seeking to press companies to address risks and opportunities from issues such as climate change.

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<sup>26</sup> See <http://www.unpri.org> for more information. The Principles were circulated to LAPFF members in April 2006.

## 6. Implications for Investors

The Kyoto Protocol, emissions trading, and the UK Government's policy toward climate change all signal a continued focus on reduction of greenhouse gas emissions in the private sector and a future in which the cost of emissions will be internalised to businesses through emissions trading, reduction targets, and taxes. These developments will present costs and opportunities to companies, and in turn may affect long-term value for investors. Therefore, it will be crucial for pension fund trustees to identify the present and future risks, costs and opportunities that developments in climate change policy will present to the companies in which they invest. Investors would be well advised to take action in the following areas:

**Assess potential risks, costs and opportunities within their portfolio due to future climate change initiatives.** While all UK companies will face increased costs from the regulation of greenhouse gases, certain sectors and companies have significant greenhouse gas emissions exposure and will likely be expected to deliver substantial emissions reductions in order to meet national emissions obligations. For example, companies in electricity generation, logistics, building materials, chemicals and industrial gases face potentially substantial impacts from greenhouse gas emissions exposure relative to levels of profit.<sup>27</sup> The oil and gas, electricity, mining, steel and leisure sectors have also been identified as accounting for 86% of the direct emissions generated by the FTSE 100.<sup>28</sup>

In order to assess risks to long-term value within their portfolio, investors would be well advised to:

- Determine whether companies, particularly those with high levels of emissions, have set in place a strategy for managing potential regulatory risks related to the Kyoto Protocol
- Assess the exposure of portfolio companies to the EU ETS, and whether companies have adequate plans in place to address likely developments such as decreased emissions allowances and the expansion of the ETS to other sectors
- Assess companies' preparation and actions taken in light of the outcomes of the Energy Review and UK climate strategy

**Consider engagement with companies in the areas of climate change disclosure, strategy, and actions taken to address risks, costs and opportunities.** The Carbon Trust has identified several key themes that institutional investors may wish to address in engagement with companies. These include whether or not the company has fully assessed its emissions exposure, including in terms of transport and its supply chain; whether the company has considered the implications of future regulation of its emissions; and whether the company has considered alternative scenarios which may

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<sup>27</sup> The Carbon Trust, 'Climate Change and Shareholder Value,' March 2006.

<sup>28</sup> Trucost, 'The Carbon 100: Quantifying the Carbon Emissions, Intensities and Exposures of the FTSE 100' June, 2005.

result from climate change, for example shifts in consumer demand, changes in the company's position relative to competitors, or access to new markets.<sup>29</sup> These themes may serve as a starting point for investors' future engagement with companies on climate strategy and risk.

Beyond these concerns, investors should also consider specific activities such as:

- Engagement with companies with high emissions to encourage the consideration of opportunities available through the CDM or JI mechanisms
- Engagement with particular companies, for example those in the transport or real estate development sectors, around actions taken in view of future developments signalled in the Energy Review
- Press companies to take steps to address energy efficiency within their operations. In addition to minimising risk, this may generate value for shareholders.

**Consider investment in those companies that may stand to benefit from future climate change policy, including the Kyoto Protocol, emissions trading, and the UK government climate strategy.** This may be difficult at present considering the lack of certainty surrounding future Kyoto commitments, however, early movers will have an advantage. Investors could consider investment opportunities related to energy efficiency technology, renewable energy, or clean technology, all of which may be well placed to benefit from the expansion of the Kyoto Protocol, emissions trading, and the UK Government's climate strategy. However, local authority pension fund trustees would need to be mindful of potential conflicts of interest, for example regarding the site selection for nuclear waste or wind farms.

**Consider collaboration with other institutional investors on climate change initiatives.** In light of the growing number of shareholder initiatives related to climate change, it will be important for investors to keep abreast of further developments amongst institutional investors.

- Investors should consider the potential benefits which may be gained from continued or new collaboration with other institutional investors in ongoing initiatives, particularly those related to disclosure of climate risks and opportunities.
- Trustees should consider the potential for further collaboration with other investor bodies through LAPFF, which is well placed to pursue such collaboration on a larger scale.

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<sup>29</sup> The Carbon Trust, 'Climate Change and Shareholder Value,' March 2006.