

# Fiduciary Perspective

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## Climate Change: Its Impact on Business and the Investment Community

For years, weather has served as the quintessential safe topic for polite conversation. Find yourself with an awkward pause at a social setting and you can always look out the window for inspiration. Unfortunately, this no longer holds true. Nowadays, a discussion of the weather can lead to the topic of global warming and before you know it, your harmless comment could land you in the middle of a heated discussion on climate change.

Climate itself is fairly straightforward; it refers to the weather of a region measured over a length of time. Climates change with geography and climates change over time. Just hop a plane in January to the Caribbean and you'll experience an immediate climate change. Changes in climate over time are less spontaneous but are well documented in the earth's geological record. Beacon Hill was formed from glacial outwash – a fact hard to grasp on a sweltering July afternoon. Changes in climate over time are the result of multiple forces: natural factors such as volcanic activity, external forces such as variations in sunlight intensity and, possibly, human activities. It is this last force, changes that may be attributed to mankind, which has entered the regulatory spotlight.

Greenhouse gases (GHG) are part of our atmosphere and serve the important role of keeping our planet's surface warmer than it otherwise would be. Their major components are water vapor, carbon dioxide, methane and ozone. Earth scientists debate whether human activities affect greenhouse gases and what impact rising levels of GHG have on our climate. Practices such

as deforestation, agricultural techniques, industrial processes and mankind's use of fossil fuels may impact carbon dioxide levels, the second-largest component of greenhouse gases. Some researchers believe that, over time, increased concentrations of carbon dioxide levels change global weather and climate patterns, while others believe that global carbon dioxide concentrations and climate change vary naturally, independent of human activities.



Although scientific analysis and conclusions about the issue of climate change may be subject to debate, all would agree that the issue is receiving increasing attention from academics, politicians and policymakers, business leaders and the public at large. The political, regulatory and even legal pressures to regulate human activities as they might influence climate change have increased. These pressures represent potential risks and

opportunities for many of the companies in which we invest. In this *Perspective*, we will look at how business, the investment community and we as investors are approaching the issue of climate change regulation.

### What Gets Measured Gets Managed—Reporting and Disclosure

An efficient capital market awards the highest valuations to the most competitive or profitable companies. To assess “competitiveness,” investment professionals rely on a company's financial statements. However, the accuracy of their

analysis is heavily dependent on the quality of information. The issue of greenhouse gases adds a new variable to the analysis.

Within the investment community, institutional investors have taken the lead in requesting disclosure of a company's greenhouse gas profile. Organizations such as the U.K.-based *Carbon Disclosure Project* (CDP) and the U.S.-based *Investor Network on Climate Risk* (INCR) are pooling the efforts of pension funds and other long-term investors in this area. The goal of these groups is to better understand the financial risks and investment opportunities posed by climate change. Both organizations encourage the annual disclosure of a corporation's carbon policy and profile.

Currently, the CDP's *Greenhouse Gas Emissions Questionnaire* is the industry standard for a carbon profile. It represents the largest registry of corporate GHG emissions data in the world. The survey focuses on the FT Global 500, an index of the world's 500 largest public companies. Corporations are heeding the call. This year, the response rate increased to 77%, up from 47% in 2003. In general, corporate disclosure of GHG emissions is better documented by European-domiciled companies (the response rate for companies in the S&P 500 was 56%). This is due in part to the adherence of many EU countries to the Kyoto Protocols, an agreement that targets greenhouse gas emissions by country. Information in the CDP's questionnaire ties into the EU's Emission Trading Scheme, a publicly traded exchange that quantifies the cost of carbon dioxide emissions.

## In a carbon-sensitive world, businesses with larger carbon footprints may be at a competitive disadvantage.

Closer to home, the Securities and Exchange Commission is fielding requests from institutional investors, state officials and environmental groups to require publicly traded firms to assess and disclose their financial risks from climate change. The petitioners believe that the existing regulations pertaining to "material information" should include information related to climate change. For instance, including climate change information on SEC filings would capture the financial impact of U.S. companies with overseas operations located in countries subject to the Kyoto Protocols.

On an individual level, shareholder proposals regarding climate change are surfacing. Institutional Shareholder Services reports that forty-three of these proposals were filed in 2007, with the majority of the resolutions concerning the issue of reporting criteria. From professional to personal investors, there is increasing demand for the creation of accounting standards for carbon regulation.

### Climate Change and Business Risks

Climate change poses a number of challenges for businesses, including those related to property, litigation, reputation, competition and regulation. All these risks are important, but competitive and regulatory risks are especially noteworthy.

**Competition:** In a business setting, greenhouse gas emissions are a surrogate for fossil fuel use since carbon dioxide is created when hydrocarbons are burned. As businesses report their emissions data, they are in effect recording their fossil fuel use in GHG terms. Emissions data can be used to determine a *carbon footprint* for a company or the amount of GHG emitted over the full life-cycle of a company's product or service. In a carbon-sensitive world, businesses with larger carbon footprints may be at a competitive disadvantage.

**Regulation:** Regulation can have a significant impact on an industry. Regulation of greenhouse gas emissions can impact the "cost" and "size" of a company's carbon footprint. The extent of most regulation is regional or national; however, climate change regulation has the additional dimension of being global in scope.

Internationally, the United Nations is leading the regulatory initiative. Recognition of climate change began with the Earth Summit in 1992 and the subsequent passage of the UN's Framework Convention on Climate Change, a treaty aimed at reducing GHG. Signatories, which include the United States, are split into three groups: 1) industrialized countries, 2) developed countries, a subset of industrialized countries that can earn credits against their emissions quotas by investing in CO<sub>2</sub> reduction plants in developing countries and 3) developing countries.

Initially, no mandatory CO<sub>2</sub> emission limits were set until the drafting of the Kyoto Protocols that took effect in 2005. Under this agreement, ratifying countries agree to reduce their emission of GHG to a level below their 1990 level by 2012. Critics of the Kyoto Protocols cite the uneven treatment between industrialized and developing economies. For instance, the U.S., currently the world's leading emitter of CO<sub>2</sub>, would be subject to mandatory emission reductions whereas

China, which is expected to surpass the U.S. in emissions this year, is exempt. Current protocols are set to expire in 2012, and this past May, negotiations began to draft the next round of targets. Kyoto is a “cap and trade” system that imposes national caps on emissions and permits trading of carbon credits. Carbon credits are tradable instruments with transparent pricing, an example of which is the EU’s Emissions Trading Scheme. In practice, nations meet their cap by targeting specific emissions-intensive sectors. As a result, “heavy” industries, such as coal-fired utilities and cement production, are the first to be scrutinized. Ultimately, a country meets its emissions target by regulating businesses domiciled within its borders.

In the United States, proponents of regulation are separating into two camps: a *cap and trade* approach similar to the Kyoto system or a *carbon tax* levied on each ton of carbon emitted. Lawmakers, businesses and environmental groups favor cap and trade. This approach sets a clear emissions target and creates a price for carbon through its trading mechanism. It also avoids the word “tax.” Economists endorse a carbon tax or fee because it is transparent, easily understandable, and can be quickly implemented. All of our major presidential candidates have voiced their opinion on the issue and a number of proposals are currently working their way through the legislative process.

### Business Participation in the Regulatory Dialogue

The domestic regulatory initiative was advanced in April of this year when the Supreme Court ruled in *Massachusetts vs. Environmental Protection Agency* that CO<sub>2</sub> is a pollutant and must be regulated by the EPA, unless the agency can prove CO<sub>2</sub> does not contribute to global warming. Initially, business resisted regulation, but more recently, corporations seem to view it as inevitable. Businesses recognize that climate change policy will quantify carbon costs and want to be part of the process.

*The United States Climate Action Partnership* or USCAP speaks for U.S. companies that believe climate change represents an economic opportunity. The organization is in favor of policies that establish a market value of GHG emissions and that provide a flexible approach for companies to meet their emission targets that includes cap and trade and other market-based incentives. Legislation should be national in scope and implementation should not be contingent on simultaneous action by other countries. This last principle is especially noteworthy since it does not require regulatory parity. The signatories represent all major sectors of the economy and include companies ranging from Duke Energy and Alcoa to PepsiCo and GE.

Duke Energy and its new chairman, Jim Rogers, have had additional impact in another important industry group – the Edison Electric Institute. Electrical generation, especially coal-fired, is the leading GHG-producing industry. It is responsible for a quarter of the world’s GHG emissions. In January of this year, the members of the Institute, which include all major U.S. utilities, agreed to approve “regulation” of greenhouse gas emissions. Although they did not embrace the term “mandatory,” their endorsement represents a significant change in their regulatory approach.

This September, the Carbon Disclosure Project released its second annual survey of S&P 500 companies. The report represents the most comprehensive overview of how corporate America views climate change. Two hundred and eighty-two companies filed a *Greenhouse Gas Emissions Questionnaire*, a 20% increase from the prior year. Electric utilities had the highest response rate (84%) and consumer discretionary the lowest (37%). Eighty-one percent of the respondents consider climate change a potential commercial risk and 69% view it as a commercial opportunity.

Some items of note are:

- Half of the companies have assigned climate change responsibility to their board or senior management.
- Greenhouse gas reduction programs are in place for 29% of companies.
- Some 78% of these reduction programs target energy efficiency initiatives.
- Very little information regarding the impact of greenhouse gas emissions is disclosed in SEC filings.
- Only 8% factor carbon pricing into capital investment decisions.
- Just 19% provided data on energy costs representing \$87 billion in expenses.

### Business Response to Climate Change Regulation: Challenge or Opportunity?

Climate change provides two main strategies for business:

- Minimize the business challenge by reducing CO<sub>2</sub> emissions through energy efficiency.
- Maximize the business opportunity by meeting demands created by the climate change issue.

A good example of a company that is both responding to the challenge and pursuing the opportunity is Praxair, a global leader in the industrial gas industry. Its products are used in a wide range of applications, from carbonating soft drinks to improving the efficiency of pharmaceutical manufacturing. Industrial gases are grouped as either atmospheric or process and specialty gases. Atmospheric gases, such as oxygen, are produced when air is separated. Process and specialty gases, such as hydrogen, are byproducts of chemical production or recovered from natural gas.

Praxair emits GHG indirectly, by consuming electricity to create atmospheric gases, and directly, by creating hydrogen which emits CO<sub>2</sub> as a byproduct. Praxair, as a U.S.-domiciled company, is not subject to mandatory GHG emissions constraints, but it has targeted emissions reductions for its operations. By 2010, its goal is to reduce overall emissions intensity by 8% from 2000 levels through energy efficiency and by consolidating hydrogen production to more efficient plants. If Praxair achieves this goal cost effectively, it could translate into a competitive edge, as energy is 13.4% of total operating costs.

Expanded GHG regulations could create new business opportunities for Praxair in the areas of clean coal power and carbon capture and sequestration. This process has direct application in the coal-fired utility industry. For example, replacing air with pure oxygen in a coal-fired boiler changes the characteristics of the smoke stack effluent. Currently, the flue gas or CO<sub>2</sub> emitted from coal-fired plants is too diluted to capture economically. Praxair's process concentrates the CO<sub>2</sub> so that it can be captured and stored. The technology can be retrofitted to existing boilers or installed with new power plant builds.

### Climate Change Investing—Clean Energy

With much of the initial climate regulation targeting the energy sector, a new niche investment area focused on clean energy solutions has arisen. Businesses in this area range from solar and wind power to fuel cell technology. Many of these companies are potentially high-growth investments. However, many are also volatile, not profitable and based on speculative technology. In addition, tax incentives can impact profitability.

For this investment opportunity, Fiduciary recommends a basket approach, one that captures the growth potential but diversifies the risk among a number of participants. The *PowerShares WilderHill Clean Energy Portfolio* is an exchange-traded fund that tracks the WilderHill Clean Energy index, a group of companies whose business models should

benefit from clean energy and conservation. The holdings are spread among many stocks, with companies in the industrial and technology sectors each representing a third of the portfolio. The largest holding is American Superconductor Corp., a leader in wind-turbine design and in products that maintain the reliability and increase the efficiency of our power grids.

### Climate Change and Business—Going Forward

The issue of climate change is front and center in our national dialogue. Google “climate change” or “global warming” and you’ll find an endless range of reports and opinions from all disciplines. In this *Perspective*, we have examined one aspect of this dialogue: climate change and its impact on business and the investment community. The opportunities and challenges for business are immense. We believe understanding how different companies are pursuing the opportunities and/or managing the challenges should be an important consideration in our investment analysis for the foreseeable future.

The *Perspective* is a Fiduciary Trust publication that focuses on timely wealth management topics. This edition was authored by Alecia F. Manning, Vice President and Research Coordinator. She is also a member of the firm’s Equity Committee.

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