



# Global Climate Change: Fact Or Fiction? It Doesn't Matter— The Issue Is Here To Stay

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While science is unlikely to provide unequivocal answers to the debate, governments and markets are likely to act on their perception of the science. The only certainty right now: these actions will have an impact on global businesses.

When The Conference Board conducted a benchmarking study among its members in 2000, the top strategic environmental threat to business identified by 45 diverse member companies was the evolving climate change regime under the Kyoto treaty. Similarly, at the 2000 World Environmental Forum in Davos, Switzerland the world's business and government leaders identified climate change as the top challenge facing the world.

Since then much has happened:

- The California energy crisis brought home the dependence of the U.S. economy on reliable supplies of high quality energy, once taken for granted but now less reliable;
- The events of September 11<sup>th</sup> made not only energy security, but physical security a pressing issue; and

- The whipsawing of energy prices in response to September 11 and the more recent crisis in the Middle East has underlined the close tie between energy security and price stability and events outside the United States.

Although acknowledging the potentially dramatic effects that climate change may have on environments in the United States, the U.S. government has chosen not to participate in the Kyoto Treaty, proposing an alternative approach to climate change. Meanwhile the European Union and many other countries press forward on ratification. A combination of the intrusion of other priorities and the lesser emphasis placed on climate change in recent months has decreased the saliency of climate change in the public and business agendas, especially in the United States.

## The Kyoto Treaty and The World Summit On Sustainable Development

On December 11th, 1997 an international agreement to combat climate change was negotiated by 171 countries in Kyoto, Japan. The overall agreement calls for a 5.2 percent aggregate cut by industrialized nations in heat-trapping greenhouse gas emissions, such as carbon dioxide, below 1990 levels by the period 2008-2012. There is an active global effort to ratify the Kyoto protocols (which requires at least 55 countries that account for 55 percent of the 1990 carbon dioxide emissions) by the time of the World Summit on Sustainable Development in August 2002. The European Union committed to ratification in

March. Japan came onboard this spring, and many of the less developed countries have already signed. Key “swing” countries, such as Russia, which are considering ratification, are considered “critical” to ultimate success. Canada and Australia appear less certain to ratify, although they have indicated intent. Top-level European and American environmental representatives, meanwhile, met in Washington D.C. in April and agreed that while they disagree over the Kyoto protocols, it is essential to maintain an active dialogue and seek solutions to the challenge of climate change.

## Fact or Fiction, It Can't be Ignored

Climate change is an issue business executives ignore at their peril. A recent report prepared by Innovest Strategic Value Advisors for CERES, a non-profit group seeking to promote business social responsibility, suggests that business may be heading into the eye of a “perfect storm that will result from the convergence of several important trends. Key among the 13 trends that CERES/Innovest identified are:

*Strengthening Scientific Consensus.* Although dissenting voices exist, both the Intergovernmental Panel on Climate Change and the U.S. National Academy of Sciences, have warned that climate change poses a real threat.

*Increasingly Aggressive Actions by Governments.* Although the United States has withdrawn from the climate change negotiations, other countries have not. The Kyoto protocols may well become reality with or without the United States.

*Growing Shareholder Interest.* CERES/Innovest point to several trends that affect the shareholder side of the business equation: awareness on the part of mainstream international investment institutions such as AMP Henderson and Friends Ivory & Sime, growing market participation and globalization of pension investment, and growing shareholder activism. Increasing public disclosure requirements, in turn, reinforce these trends. The bottom line is that financial stakeholders care more than they have in the past about what companies do with respect to climate change, and companies' climate change policies influence their investment decisions.

The CERES report and other recent developments remind us of four realities that will affect most business' energy planning:

1. **Science is unlikely to provide unequivocal answers.** Although the scientific consensus is growing, uncertainty as to the reality of climate change, its effects, and the usefulness of mitigation measures will persist. It is unlikely that any breakthroughs in the foreseeable future will provide definitive answers one way, or the other.
2. **Governments and markets are likely to act on their perception of the science.** Increasingly, this perception is swinging toward a belief that climate change is an urgent priority that must be addressed through a variety of measures. This perception, not the underlying science, will most affect industry.
3. **Corporate boards will be increasingly expected to evaluate the potential risks associated with climate change.** The frequently cited "Enron effect" will likely result in increased pressure on boards to evaluate potential costs and risks associated with mitigation either of carbon emissions or of the effects of actual climate changes
4. **The global economy will make a transition to a less carbon-intensive economy.** As Sheikh Yamani, the former Saudi oil minister is credited with saying, "The Stone Age did not end because we ran out of rocks." So too, carbon-based energy will give way to cleaner, cheaper alternatives. The real questions are what the pace of the transition will be and who will be the winners and losers.

## No Economy Is An Island

The 17<sup>th</sup> century English poet John Donne wrote that "no man is an island." The same might be said of national and business economies. With globalization, the line between domestic and international influences on business strategy has blurred. Michael Porter, for example, argues in *The Competitive Advantage of Nations*, that "national demand conditions that anticipate global demand conditions" are a key determinant of the competitiveness of a nation's industries.

The case of the United States is instructive. Relatively low energy prices, hitherto abundant and reliable energy supplies, and a low level of national concern with climate change result in comparatively low investment in energy efficiency. U.S. consumers are less insistent on energy efficient products than their counterparts in other countries, government is less prone to regulate greenhouse gas emissions, and shareholders are less concerned with a company's energy and climate-related actions. In the short term, companies in the United States benefit because they are less energy-constrained than those in other countries.

## Place Your Bets—Win Big; Lose Big

Companies that choose to ignore climate change in their planning are betting that worldwide concern about climate change will prove illusory. If they bet right, additional scientific evidence will demonstrate that concern with climate change has been overstated. Abundant, reliable and stable supplies of fossil fuels will remain available at least long enough to permit an orderly transition to an economy that is less dependent on fossil fuels. These companies will retain a competitive edge because they avoided ill-considered and unnecessary process changes and renewable energy investments.

But what if they bet wrong? What if “national demand conditions” in Europe and Japan, for example, anticipate global demand and those in the United States lag global demand? Companies that ignore climate change will be lower on the learning curve; innovations developed in other markets may disrupt their markets and they will be forced to play a game of technological catch up. Perhaps more importantly, they will lack the management know-how and familiarity with energy and climate change issues to operate effectively in a carbon-constrained world.

#### Disruptive Technologies: Consider or Else

Disruptive technologies are those that seemingly overnight alter the terms of competition in an industry. The disruption of the mainframe and mini computer businesses by the personal computer industry is the classic case. There are many examples in the environmental arena. For example, when Dupont introduced viable substitute chemicals for ozone-depleting chloro-fluorocarbons (CFCs), it made possible the Montreal Protocols that banned CFCs in most applications and disrupted the CFC industry (and, incidentally, created a new market for substitutes).

In an article in the Spring 2002 issue of *Sloan Management Review*, Clayton M. Christensen (who originally developed the concept of disruptive technologies) writes, “...in our interviews with managers that failed to capitalize on disruptive opportunities, not once did anyone say, ‘We just never thought of it.’ In fact, the executives had actively considered and usually experimented with the disruptions that eventually disrupted them. A lack of good ideas is not the problem.” The failure was one of imagination and management, not of science and technology. What are the possible carbon-related disruptive technologies in your industry? Who is developing them? How can you introduce them? How can you avoid being disrupted?

#### How Do You Hedge Your Bets?

Prudent business executives will want to hedge their bets concerning global climate change and carbon management. Here are a few things they can do:

*Measure, measure, measure.* It is a management maxim that you manage what you measure. It is even truer that if you don’t measure it, you have no chance of managing it. In the case of greenhouse gases, measurement is important for two additional reasons:

**Stakeholders increasingly expect it.** For example, the Global Reporting Initiative ([www.globalreporting.com](http://www.globalreporting.com)) guidelines for public sustainability reports include carbon reporting.

**Monetary credit for reductions may be available.** If the Kyoto protocols are adopted they will include a “cap and trade” international market for saleable certified emission reduction credits, much as is currently done with sulfur dioxide emissions reductions. For emissions reductions to be certifiable they must demonstrate significant, well-documented reductions and be part of a clear carbon reduction strategy. The first step in attaining saleable emissions is to measure the baseline.

The World Business Council for Sustainable Development and the World Resources Institute have recently prepared a “user friendly” greenhouse gas accounting system for various industry sectors (<http://www.ghgprotocol.org/>).

*Get smart about climate change.* A good place to start is the World Resources Institute ([www.wri.org](http://www.wri.org)). This site also includes links to other websites. What are the climate change-related issues in your industry? How does it affect you if you are not a “high-impact

industry?” What are your competitors doing both domestically and globally? What do your shareholders and other stakeholders think and expect?

*Identify productivity opportunities.* Numerous companies around the world have found opportunities to reduce carbon emissions – directly or indirectly – that save money, improve market share, and reduce the potential for negative publicity on their industry. In the year 2000, for example, some 7,200 U.S. companies participating in the U.S. Environmental Protection Agency’s and Department of Energy’s ENERGY STAR<sup>®</sup> program reduced 15.5 million metric tons of carbon equivalent by making products and incorporating building upgrades that save energy. Hewlett-Packard’s energy conservation efforts in its American manufacturing and field offices between 1999 and 2001 have led to electricity savings of 11 percent (95 million kWh) and natural gas savings of 22 percent (1.88 million therms). This translates to a cumulative reduction of 39,000 metric tonnes (86 million pounds) of CO<sub>2</sub> emissions to the atmosphere. As they expand efforts to their global operations, HP expects much greater total reduction. And such achievements in the United States are considered only first steps compared to efficiencies achieved in such countries as Japan or the Netherlands.

*Monitor the leaders:* BP recently announced a corporate commitment to maintain their CO<sub>2</sub> emissions at 1990 levels through 2010. Because BP has an aggressive growth strategy, this figure implies a 50 million ton reduction from projected 2010 emissions. When John Browne, Group CEO, announced this commitment, he made it clear that he does not know how these reductions will be achieved, but he clearly feels that meeting the target will generate internal innovations that will create a competitive advantage

for BP as climate change becomes more important. Already BP has met a goal set in 1998 to reduce CO<sub>2</sub> emissions to 1990 levels (a 14 million ton reduction) achieving net savings of \$650 million. The innovations required to meet this target, including an internal emissions trading system, have opened new markets for BP. As a result BP has been able to sell emissions credits in the recently established British market at an auction price of \$76 per ton.

The 37 companies that have joined the Pew Center on Climate Change in the United States (for a list of corporate members go to [www.pewclimate.org](http://www.pewclimate.org)) and 10 companies that have joined in an MIT consortium on carbon sequestration believe that the issue is real, that it is not going away soon, and that developing successful, demonstrated voluntary approaches for greenhouse gas reduction is preferable to having legislated and regulated solutions in the future. Huge multinational companies such as Swiss Re are preparing to enter the credit trading business. Companies such as Environmental Synergy, Inc. are finding profits in planting forests in Mississippi to function as “carbon sinks.” Traditional energy companies, such as Florida Power and Light, are investing in renewable sources such as wind. In addition to the business benefits, conservation organizations are seeing increased opportunities as companies around the globe that seek to hedge their carbon emissions invest in preservation or restoration of forests.

*Think holistically.* Fossil energy management is often viewed as an issue of *either* improving process efficiency and productivity, *or* of securing reliable supplies of high quality energy, *or* of avoiding whipsawing energy prices *or* of hedging against climate change requirements.

*The key is to think of a bundle of attributes that result from carbon reductions: lower costs and less vulnerability to energy supply fluctuations and to energy price volatility, as well as an enhanced ability to capitalize on competitive opportunities created by greenhouse gas regulations. To account for potential greenhouse gas regulations, some companies have established a “shadow price” of \$5 to \$15 per ton of carbon when they evaluate the energy programs; others have established internal markets for carbon emissions reductions.*

**Look ahead.** The one thing we can say about the future is that it will be different from the present, and this may include the role of fossil fuels in the economy. Companies that are concerned about the impact of uncertain future events on their businesses often project future scenarios to evaluate what their business will look like 5, 10, 30 years in the future and how they will compete in that new competitive environment. Climate change (and more broadly, energy) should be a part of those future scenarios.

**Think globally.** Because climate change is a global phenomenon it will be important to anticipate its business impacts from a global perspective. Companies with international operations have an advantage because they can anticipate trends by tracking “local demand conditions” in countries where climate change related pressure is greatest. Even if your company does not have operations in countries where demand for climate change action is greatest, it makes sense to track those markets as they may anticipate what will become a global phenomenon. The basic rule: it is important also to keep abreast of the international negotiations on climate change.

## Climate Change: Fact or Fiction?

It doesn't matter.

Climate change as an issue for business leaders will not go away. It will increasingly affect the way business is done. But here's the good news: by effectively meeting the challenge of climate change, businesses will also deal effectively with several other issues (energy costs, reliability, and volatility) that affect competitiveness. New business opportunities will very likely be discovered in the process. Forward-looking business managers who approach climate change from this perspective can expect to gain long-term competitive advantage as a result.

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