

# Examining the Rhetoric: The Strategic Implications of Climate Change Policy

Andrew J. Hoffman

Many companies today are taking proactive steps on climate change by reducing or even sequestering their greenhouse gas emissions. But one cannot, as many now do, generalize from these examples the proposition that all companies can benefit from greenhouse gas reductions. Climate change controls represent a market shift; the formation of new markets in pollution, pollution credits, money and emission abatement technology. And in any such transition, there will be winners and losers, those that embrace the shift and those that resist it. The difference between these two postures lies in strategic factors such as capital asset management, market competencies, global competitiveness and managing institutional change. The paper discusses each in turn and concludes with commentary on how present US policy towards the Kyoto Protocol is actually contrary to business interests. © 2002 Elsevier

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*"The debate about the existence of climate change is over; there is now a broad scientific consensus that we humans are having a major impact on our planet's climate".*

**Hon. Timothy Wirth, Undersecretary of State for Global Affairs.**

*"We acknowledge two facts: first, CO<sub>2</sub> concentrations are rising; second, world temperatures are rising...We, as a company, believe that it is time for action and action on our part".*

**Steven Percy, Chairman, CEO & CFO, BP America, Inc.**

*"I, for one, do not believe that the science debate is over...And I am concerned that we are blindly accepting a policy that would result in permanent and destructive changes to our economy".*

**Roger Stone, President & CEO, Stone Container Corporation.**

*"I find myself both in sympathy and in disagreement with all three of the previous speak-*

*ers...I'd like to suggest that actually protecting the climate will be highly profitable...the uncertainties in the climate science don't matter at all because we ought to do the same things about the issue just to make money, whether we think the problem is real or not".*

**Amory Lovins, Director of Research, Rocky Mountain Institute.**

This exchange of ideas took place on May 23, 1997, in a meeting prior to the treaty negotiations in Kyoto, Japan.<sup>1</sup> And now, five years later, it appears that some agree with Lovins' provocative conclusion. Despite the Bush administration's decision to withdraw from negotiations on the Kyoto Protocol, many large US corporations have initiated voluntary reductions in carbon dioxide emissions. In 2000, seven multi-national companies (DuPont, Shell, Alcan Aluminum, BP,

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Suncor Energy, Pechiney and Ontario Power Generation) joined in a voluntary reduction partnership with the environmental group Environmental Defense. More recently, DuPont has pledged to cut emissions by sixty-five percent by 2010 and claims to have already achieved half that goal while improving its energy efficiency. BP Amoco and Royal Dutch/Shell Group have each committed to a ten percent reduction by 2010.<sup>2</sup> Alcoa has a target reduction of twenty-five percent in the same time frame (while also reducing SO<sub>x</sub> by sixty percent, NO<sub>x</sub> by thirty percent, VOC by fifty percent and mercury by eighty percent).<sup>3</sup> And in many of these examples, companies claim to be increasing profits.

But, to use these companies as examples of the "it pays to be green" principle<sup>4</sup> and generalize that all companies can enjoy such opportunities would ignore the many market

implications of a climate treaty. For many strategic and economic reasons, companies face different financial and technical realities based on their installed capital base, market competencies and strategic position in the political and social arenas. Not all companies can make money reducing carbon dioxide emissions, just as on the broader level, quantitative analyses, comparing financial and environmental data remain largely inconclusive.<sup>5</sup>

It is not always true that economic opportunities in climate change are being overlooked by business leaders. Or, as Paul Portney, President of Resources for the Future, argued in reply to Lovins' comment, "I'm willing to make a concession to Amory. It is that markets are not as perfect as at least some people in the economics profession sometimes suggest that they are. If I could just get you to concede that business men and women are not as stupid as you persistently suggest that they are. The notion that we have to put a gun to business men and women's heads to get them to take advantage of all this free money is silly".<sup>6</sup>

To put this argument in perspective, it is important to recognize that controls on greenhouse gas emissions represent a market transition, of some as yet undefined form. Rather than simply a regulatory response to an environmental issue, this is more accurately a market transition triggered by an environmental issue. It is not unlike those that have occurred in other sectors. As consumer needs change and technology advances, companies face new competitive environments, some declining while others rising to fill their place: the typewriter industry was virtually eliminated by the computer in the early 1980s; the compact disc replaced the phonograph album in the mid-1980s; the 1984 dissolution of the Bell System wrought structural changes in the telecommunications industry.

Similarly, climate change amounts to the establishment of a new world-wide market in

pollution, pollution credits, money and emission abatement technology. And in any such market transitions, there will be winners and losers; those with an interest in resisting and trying to delay such a market transformation and those who will capitalize on it. It is important to consider the issue of climate change from a corporate strategy point of view before making any broad generalizations about the economic opportunities it creates.

### Climate Change in Terms of Business Strategy

Companies change and innovate when they perceive an opportunity that will further their own objectives and then pursue them using the competencies they have at hand. Corporate managers think strategically and opportunistically about many issues within the market environment. Environmental protection is just one of them. So, while carbon dioxide reductions may be in the strategic interests of companies such as Alcoa, BP Amoco and Shell, they may not be for others. With this in mind, this paper will consider four variables on which companies may differ in their stance on climate change strategy.

First, climate change is an issue of **capital asset management**. Corporations invest over \$700 billion per year in new plants and equipment and evaluate the profitability of those investments based on an expected useful lifespan. Premature retirement of that capital stock is a recipe for financial disaster. Forcing technologies to become obsolete before their time threatens corporate viability in terms of manufacturing and technology development as well as debt and expenditure flows.

Consider the list of energy companies in Fig. 1.<sup>7</sup> Many conclude from such a graph that highly carbon intensive companies will face an unattractive market environment under a carbon treaty and will be forced to make capital changes. Environmental liability will translate directly into competitive liability.

But, such thinking disregards the companies' commitment to their installed equipment. What is the debt load being carried for this capital infrastructure? What is the remaining anticipated operating life span of these plants? What are the other strategic and financial considerations that are important for deciding when or if to retire this installed base? Competitive climate change strategy involves the transition to cleaner technologies at a pace that is economically and technologically appropriate given past and future capital budgeting allocations. Companies often have no choice but to remain with existing infrastructure.

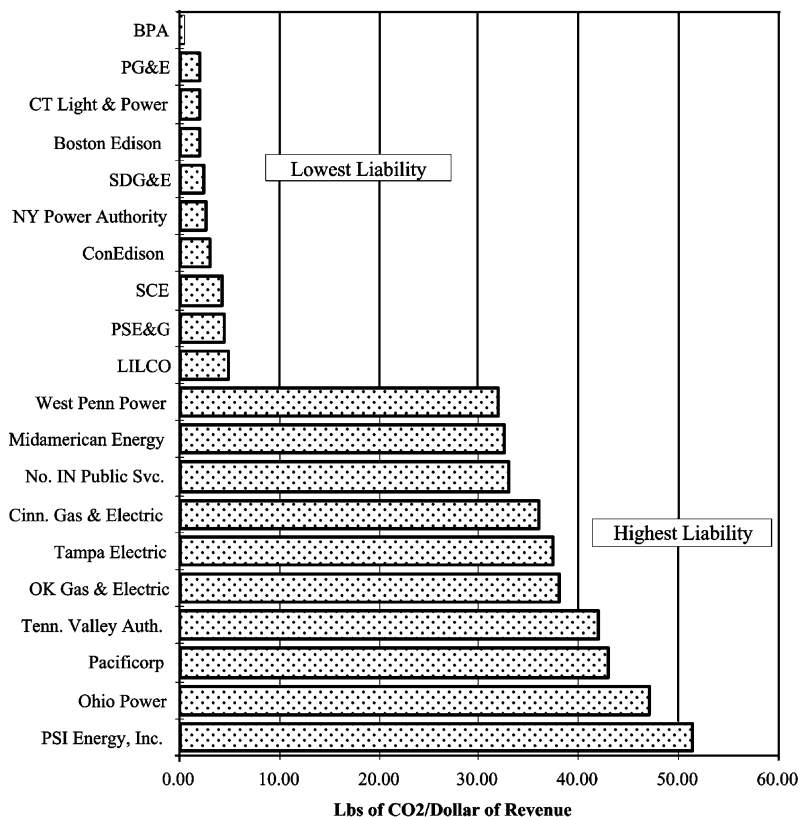
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For this reason, companies have pushed for flexible timetables for climate controls to be mandated, allowing users and developers of technology extended time horizons to plan for, develop and perfect substitutes. While the treaty proposed in Kyoto allows a four year time horizon (2008–2012) for meeting emission reduction goals, this time period may not be adequate for all companies. Many are now pushing for even greater flexibility by granting credit for early reductions between now and 2008.

Second, climate change is a matter of **market competencies**. In essence, is there an opportunity to increase profits through the development of low carbon fuels, low emission vehicles or energy efficient processes? All companies differ on their core competencies and their resulting opportunities for using climate change controls to their own advantage. Such strategic opportunities lie in cost reduction and profit improvement in six general areas: operational efficiency, risk management, capital acquisition, market demand, strategic direction, human resource management. Given a company's particular competencies, their executives must ask



Note: Rankings reflect pounds of carbon dioxide emitted per dollar of electric revenues in 1995

Fig. 1 Environmental Liability Rankings of US Electric Utilities.

many critical questions. Can reductions in greenhouse gas emissions:

1. lower energy costs, improve material yield and resource utilization rates and thereby reduce costs per unit of product produced?
2. lower corporate insurance premiums?
3. reduce costs of capital investments in new sites, facility construction, and when starting-up or redesigning manufacturing lines and products?
4. enhance the market share for products and services by appealing to both end-use customers or buyers and up-front suppliers or vendors?
5. expose important information and insights for guiding new strategic directions by identifying changes in consumer prefer-

ence, media attention, community concerns and regulatory program trends?

6. increase workplace productivity by attracting higher caliber applicants and retaining them?

And for each of these questions, executives must balance many other strategic concerns. Climate change is but one of many strategic issues facing the corporation. And in fact, it is but one of many environmental issues as well. Consider the companies in Fig. 1 that are listed as facing the “least liability”. It might be worth noting that many companies with low carbon dioxide liabilities may also be heavily invested in nuclear or hydro power. While climate change may offer one set of advantages, these companies must still deal with the issues of nuclear waste disposal or habitat destroyed by dams.

Third, climate change is an issue of **global competitiveness**. In essence, is there a level playing field on which companies compete? And this is one of the most important sticking points for the Bush Administration. The treaty proposed in Kyoto does not push for the early entry of developing countries. The argument for this exclusion was based on the idea that (1) developed countries are the number one emitters of carbon and therefore, should cut back first, and (2) on an aggregate basis, developed countries have put more carbon into the atmosphere over the past fifty years than anyone else (have “fouled the nest”), and therefore, should take concerted action and assume leadership in responding. While this argument may make sense on an emotional level, it makes little sense on either an economic or an environmental level. Economically, by leaving the developing world out of the solution, industries in the United States, Western Europe and the rest of the developed world would be put at an economic disadvantage. By artificially altering world energy cost structures, many industries may be forced to compete with companies in countries where the standards do not exist and therefore, the cost of energy would be lower. Environmentally, countries in the developing world (particularly China, Brazil and India) are expanding their power generation base at such a pace that they will become the dominant carbon emitters by the early part of the next century. As such, they must be included in the solution. If they are not, any efforts by the developed world will be eclipsed and become futile. Environmentally and economically, the omission of the developing world would limit opportunities for competitive climate change strategy.

To reduce the impact of these exclusions, companies have pushed for “joint implementation” provisions in the Kyoto treaty which promote technology transfer to the developing world while assuring domestic companies an economic return on such transfers. So, if it costs \$100 per ton to eliminate carbon in

the United States and \$5 per ton to eliminate carbon in China, US companies can make

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the Chinese investment and receive domestic credit. This promotes technology transfer to the developing world while assuring domestic companies an economic return on such transfers and is extremely important when you factor in that power generation in the developing world is expected to increase by 45 percent from 1993 to 2008.

Finally, climate change is an issue of **managing institutional change**. Companies that are more adept at managing key constituents such as the government, the press and the public will find greater opportunities in managing the strategic elements of climate change. Consider that any attempt to limit the emission of greenhouse gases will have a direct impact on the price of energy. Any change in the price of energy will have a direct impact on the cost structure of virtually every sector of the economy. Some economic models predict a cost to GDP of nearly 2 percent, an amount roughly equal to the \$150 billion per year we presently spend on all environmental regulatory programs now in place in the United States. But, others predict that if these models use more optimistic assumptions, GDP could rise by an equal amount. A report by the World Resources Institute found that 80 percent of the variance in these economic models is caused by seven key variables.<sup>8</sup>

1. Alternative energy becomes cost competitive.
2. Markets respond efficiently to higher fuel prices.
3. Low-carbon options, like natural gas, expand.
4. International joint implementation of emission rights is instituted.

5. Government revenues from selling carbon permits are used as tax breaks to stimulate investments.
6. Costs (health and compliance) from air pollution are reduced.
7. Climate change damage, like droughts and floods, is averted.

While the validity of all of these assumptions is unknown, their outcome can be influenced to some extent by managing key constituents in the market and social environments. For example, some of these assumptions are dependent on policy-makers and the ultimate

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form of the final treaty, such as the development of international trading in emissions rights (much like the tradable permit program discussed in chapter two) or the use of government tax breaks to stimulate investments in low emission technologies. Others are dependent on consumers, such as the efficient response of the economy to higher energy prices and whether people will drive less or lower their thermostats if the cost of energy goes up. Finally, some assumptions are dependent on corporate action, such as the development of competitive forms of alternative energy or the expanded use of low-carbon fuels like natural gas. In each case, the issue is less environmental and more related to key business constituents. So, key questions become: Will governments negotiate a treaty that allows them adequate flexibility to respond strategically? Will consumers respond by buying low-emission products? Will insurance companies cut back on investments in and underwriting of carbon intensive industries? Will competitors take advantage of first-mover opportunities by adopting programs for early emissions reductions?

But unfortunately, many company executives have not been proactive in managing such constituents, instead trying to aggressively block any attempts at effective debate. Organizations such as the Global Climate Coalition, the Western Fuels Association and the American Petroleum Institute have variously argued that climate change controls will “have serious impacts on American industry and its job holders for the next 40 years”,<sup>9</sup> that “jobs will disappear and lifestyles will be pinched as our industrial infrastructure shrinks” with gasoline prices increasing “50 cents to \$1.50 per gallon”,<sup>10</sup> and “would boost the cost of production, lead to increased imports, slash employment and domestic output, and in some cases eliminate all US production”.<sup>11</sup>

Ultimately, little is gained from this kind of confrontational positioning and sensationally pessimistic appeals. It makes industry into the perfect villain for the public<sup>12</sup> and damages their credibility in the overall environmental arena. But this is familiar terrain. From claims that “the personal auto will be put out of financial reach of many Americans by politically inspired auto [emission] standards”<sup>13</sup> in the early 1970s (it wasn’t) to predictions that the 1990 Clean Air Act Amendments would cost electric utilities “between \$4 and \$5 billion a year”<sup>14</sup> (it didn’t), industry has repeatedly predicted economic disaster from environmental protection. As Bob Herbert points out, “The problem with the industry groups is that they lack credibility. They always claim that taking steps to improve air quality will lead to economic catastrophe”.<sup>15</sup>

Predictions of economic disaster from climate change fly in the face of more credible predictions to the contrary. In February 1997, more than 2,000 economists (including eight Nobel laureates) endorsed a report concluding that “global climate change carries with it significant environmental, economic, social and geopolitical risks, and that preventive steps are justified,” but “economic studies

have found that there are many potential policies to reduce greenhouse-gas emissions for which the total benefits outweigh the total costs. For the United States in particular, sound economic analysis shows that there are policy options that would slow climate change without harming American living standards, and these measures may in fact improve US productivity in the longer run".<sup>16</sup>

In the end, while particular companies continue to contradict the trajectory of social thought and institutional change, they become excluded from the political debate that continues to progress. The momentum for climate change controls has begun and will continue, with or without industry participation. While some in industry are attempting to paint a dismal picture of the costs for climate change control, others are attempting to shape the future of their business environment by engaging the debate in a more constructive fashion. And in strategic terms, it becomes a gamble between those who resist and those who embrace climate change controls over what the future market environment will look like.

BP/Amoco was the first company to bet on a market environment with climate controls, publicly acknowledging the need for mitigating climate change and setting a strategic path towards responding to the issue. Initiated by CEO John Browne's speech in 1997<sup>17</sup> the company hopes to get in on the ground floor of what they expect will be a huge solar energy market. The company has spent \$160 million developing solar energy and enjoys 10 percent of the world's solar market. Further, the company has committed to research and development for improving environmental technologies and developing its own internal emissions trading system in conjunction with the Environmental Defense. For its efforts, the company has been winning accolades from government and environmental NGO's. But more importantly, the company is also engaging important stakeholders in an attempt to shape its future

business environment. The company is now in direct policy discussions with governments in Europe, the US, developing countries and key environmental groups. BP now enjoys direct input on the critical business issues in a final negotiated treaty.

But, the company's influence on the external environment does not stop there. By quitting the Global Climate Coalition, the company put pressure on other companies to defect from the lobbying group while enjoying the first mover advantages of such actions. Many other companies could have acted similarly. Royal Dutch Shell, for example, has been working to keep up, quitting the Global Climate Coalition as well and making a \$500 million commitment to solar energy and other renewable energy sources.

So, in any steps towards taking proactive and voluntary initiatives on climate change controls, companies must also consider, as BP/Amoco has, which constituents they must engage to improve their chances for strategic success. For example, any company that engages in voluntary programs to reduce greenhouse gas emissions or sequester carbon dioxide by purchasing and setting aside forests should accompany this activity with strategic efforts at engaging the scientific, regulatory and activist communities to develop support that these efforts do, in fact, accomplish the company's environmental goals. They should be developing scientific data that shows that trees adequately store carbon dioxide (and where possible, that the specific kinds of trees that they grow will store more carbon than the trees of their competitors.) Further, they should also be lobbying government for credits to be applied for this activity.

### **Market Uncertainty, Business Strategy and Climate Change**

So, while the "it pays to be green" principle does not apply across entire industry sectors, some companies can and are finding ways to integrate climate change controls with their

strategic objectives. Rather than asking whether climate change is happening, they are asking what form a final treaty or other pressures might take, what might the resultant business environment look like and what costs or opportunities it might create? They are trying to make predictions and create order out of the uncertainty of a post-Kyoto world. Unfortunately, the Bush administration has stymied many of those efforts.

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While they have reasons for skepticism of American involvement in the Kyoto Treaty, the Bush administration's decision to completely disengage from negotiations in the interest of American business was misguided. While many within the business community do not agree with all the provisions of Kyoto,<sup>18</sup> the Bush administration created what businesses dislike even more – uncertainty. Sooner or later, it is highly likely that US businesses will face some kind of climate controls. These may be in other world markets where the Kyoto Protocol is in force. Or, these may be within the United States should some future administration ratify the treaty. Unfortunately, in either case, American corporations will likely face a framework of rules dictated by others, namely the 178 countries who first ratified it and more specifically, Japan and the European Union.

The business environment is becoming increasingly fragmented and uncertain on this issue. Even domestically, the state of California has passed legislation to regulate carbon dioxide emissions of automobiles sold in the state. Such diversity requires multiple operating standards, a costly drain on resources.

The Bush administration has added to that uncertainty. To say their stance is “pro-busi-

ness” is inaccurate. They are favoring some businesses and business groups, supporting their claims that the costs of climate change control in the Kyoto Treaty are too high. And they are ignoring others, who have expressed an interest in reducing their carbon dioxide emissions and, through the Kyoto Treaty, helping to shape their future business environment. Many business leaders either recognize a need and accept the inevitability of a policy response to climate change. And although the Kyoto Treaty is not viewed as the optimal instrument for making this response, a treaty designed without America's business interests at the table is even more unfavorable because of its uncertainty. The administration's objective should be to change it, improve it, or stall it if necessary, but not withdraw. Ultimately, US business interests must have voice in its formation. Companies cannot make adequate assessments of future technology opportunities and capital investment decisions without a clear picture of future markets. The Bush administration's decision to stand on the sidelines has only clouded this picture for American businesses. By standing on the sidelines, Bush has sided with those who want to resist change and preserve the way the world is now rather than looking to the future of where the world is going.

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