

# **ADDRESSING CLIMATE CHANGE AND GROWING THE GLOBAL ECONOMY: CAN WE DO IT?**

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Thank you very much. It is a great pleasure to be here with such an interesting and distinguished group of business and investment leaders. And how appropriate to be discussing the implications of global climate change against the backdrop of the beautiful Victoria Glacier and glacier-fed Lake Louise. In assessing the future of this remarkable area under a global warming scenario, I can't help but borrow from the investment lingo and say this: the glacier may not have much of a future, but there are real growth opportunities for the lake.

Seriously, I truly appreciate this opportunity to provide you with some perspective on: 1) what is happening on the issue of climate change today; 2) how this might affect your business and investment decisions in the years ahead; and 3) more fundamentally, whether we can address climate change and still maintain a growing global economy.

In preparing for my speech, I found it helpful to think of it as a visit to the ski slopes. I will take you up the lift with a brief overview of where things stand today, and then we will be free to explore the trails ahead. Rest assured that I fully intend to avoid any extreme plunges or expert runs. I am reminded of the old definition of a skier as someone who pays an arm and a leg for an opportunity to break them.

One of the messages I want to convey to you today is that climate change is real. The earth is warming, and the human hand in this warming is becoming clearer and clearer. A report due this spring (and already leaked) from the United Nations' Intergovernmental Panel on Climate Change suggests that the upper range of global warming over the next 100 years could be far higher than previously thought, with temperatures rising by 11 degrees Fahrenheit since 1990. By comparison, average temperatures today are 9 degrees Fahrenheit higher than they were at the end of the last ice age.

Even at the low end of the projected warming range, we can expect to see significant changes in weather patterns and sea-level rise. Such changes will be accompanied by effects on areas as diverse as human health, managed ecosystems (such as agriculture and water supply systems), and natural ecosystems. You may have heard that these changes could bring with them potential benefits as well as risks for certain regions – particularly parts of North America, where temperature increases could lead to longer growing seasons. But it is important to note that any positive impacts from global warming are

unlikely to be sustained as the globe continues to warm. At higher temperatures, even high-latitude areas will eventually face decreased crop yields and negative impacts.

In the same way that we must accept that climate change is real, we must also accept that the time will have to come when we become significantly less dependent on the sources of energy that have fueled the world economy since the dawn of the Industrial Revolution. Environmental necessity, combined with the relentless drive to improve efficiencies and reduce costs, will spur a movement away from fossil fuels and toward a new energy future. And while it will be neither cheap nor easy, rewards will surely come to the early adopters and first movers. The task at hand is to allow these first movers the ability to experiment and innovate, while at the same time establishing the framework that sends clear signals to the market about what must be done in the long term.

### **Where Things Stand Today**

So where do we stand today on responses to climate change? As we board the ski lift, I caution you to heed the advice of an actual sign on a lift in Taos, New Mexico. The sign reads: “No jumping from lift. Survivors will be prosecuted.” That reminds me of another actual sign I heard about that read—and I quote—“Door Alarmed.” Nearby, someone had posted a hand-made sign reading, “Window Frightened.”

Well, in November, a great many people became both frightened *and* alarmed—or at the very least, somewhat concerned—about the current status of the international negotiations on climate change. As all of you know, that was when negotiators from 180 countries gathered in The Hague for the latest round of global climate talks. The goal of the meeting—officially known as the Sixth Session of the Conference of the Parties to the Framework Convention on Climate Change, or COP 6—was to put the finishing touches on the rules needed to implement the Kyoto Protocol. The Kyoto Protocol is the international agreement negotiated in 1997 that commits industrialized countries, including Canada and the U.S., to binding reductions below 1990 levels in their emissions of greenhouse gases.

The talks in The Hague, however, failed to reach their intended outcome. One of the key sticking points was how to account for the role of forestry and land-use practices in keeping carbon dioxide out of the atmosphere. There also was no agreement on whether there should be limits on how much of a country’s emission reductions could be achieved by actions taken abroad, either through emissions trading, the Clean Development Mechanism or joint implementation.

But the standoff in The Hague should not have come as a complete surprise. There is no escaping the fact that expectations for the talks were too high. I can only compare it to the expectation that Washington, D.C. will become a partisanship-free zone in the wake of the 2000 presidential election. If you believe that one, then I have a bridge to the 22nd century that you might be interested in purchasing.

As we consider why the November meeting failed, as well as what needs to happen now, it is important to remember how we arrived at this point. The Kyoto Protocol was negotiated in recognition of the fact that the emission reduction provisions outlined in 1992's U.N. Framework Convention on Climate Change were not effectively limiting atmospheric concentrations of greenhouse gases. It had become eminently clear that the *voluntary* measures spelled out in the Convention were inadequate. Few developed countries were on track to reducing their emissions to 1990 levels by 2000, as they voluntarily agreed to do.

Under the Kyoto Protocol, industrialized countries agreed to *binding* emissions reductions during the period from 2008 to 2012, with countries' targets averaging about 5 percent below 1990 levels. The Protocol also began to outline how countries could achieve their targets—for example, by trading emission credits or by using “sinks” such as forests to remove carbon from the atmosphere. However, further elaboration of the rules that would allow the Kyoto Protocol to enter into force was still needed.

The breadth of the agenda for the meeting in The Hague--approximately 275 pages of text covering the full spectrum of tough political and technical issues—was enough to give new meaning to the term “full plate.”

But the fact that the agenda was dominated by many complicated political and technical issues was not the only reason the talks failed. The U.S.-EU split on the issue of carbon sinks was emblematic of a deep divide between Europe on one side and the United States on the other over how best to respond to climate change. The EU takes as its starting point the need to effect widespread—and immediate—behavioral changes to address this problem: using public transportation, for example, and keeping our houses colder in the winter and warmer in the summer.

In contrast, the United States, Canada, Australia and Japan come down on the side of short-term, cost-effective actions, coupled with an effort to develop and deliver the technologies that will be needed for the long-term.

The negotiating positions inherent in these distinct philosophical approaches proved too far apart to bridge in The Hague. And there were other difficulties as well. These included the inability of the European Union to reach internal agreement on how to proceed; the position of the United States and others that credit should be given for “business as usual” activities and practices; and the virtual neglect of the developing world, which had important contributions to make to the discussion, and which would have to be a part of any consensus that emerged from the meeting.

The result of all these difficulties was a failed meeting, and although most countries are anxious to pick up the scattered ideas and pieces of negotiated language and meld them back together again, it is clear that this can only happen if there is a willingness to compromise. And, in this instance, compromise will mean the acceptance of different approaches under a common Kyoto umbrella. Hope is not a strategy, but I am hopeful that over time, we will develop a framework that will allow for these differences of view.

## The Response from Business

So now we have taken the lift to the top of the mountain with an overview of where things stand today. I hope you are all still with me, and trust that no one has jumped off into the snow. (If you did, I understand that the Canadians have a wonderful health care system, and you will be back on your feet in no time.)

As I promised at the start of my speech, I will use the time I have left to explore the trails ahead. And I can think of no better place to start than by exploring the role of business in national and global efforts to reduce the risk of climate change.

Over the past several years, we have witnessed a remarkable shift in business activity and thinking on the issue of climate change. Many corporate leaders in North America and throughout the world no longer view climate protection efforts as a threat. Rather, they acknowledge the strength of the scientific case for action. And they accept that businesses must play a leading role in the global effort to reduce emissions.

I found it particularly interesting, in fact, that it was not just government officials and environmentalists who were disappointed in the unhappy ending to the talks in The Hague last November. Business leaders, as I mentioned before, also were notably glum. As a representative of the International Chamber of Commerce put it in an interview with the *Los Angeles Times*:

*“We came here expecting a decision which would have clarified the rules and guidelines of the Kyoto Protocol. We now walk away as empty-handed as everyone else and leave as confused as when we arrived about the role we might play in contributing to solutions.”*

Or, as another business representative said, “There was industry, all dressed up with nowhere to go.”

But all hope is not lost. Disappointing as the meeting in the Hague was for the progressive business community, most companies will forge ahead with existing programs to reduce their emissions, encourage greater energy efficiency, begin a switch to less carbon intensive fuels, and continue to develop alternative energy technologies. What they may not do is to undertake activities that are dependent on the Kyoto rules. For example, some industries are eager to pursue emissions-reducing power projects in other countries. But they are unlikely to move ahead vigorously until they know what kinds of projects will be eligible for credits under the Protocol. Similarly, there are many companies in a variety of industries that would like to begin participating in global emissions trading. And while they may begin these activities, they will hold off on major transactions until the climate negotiations paint a clearer picture of exactly how the market in emissions might work.

This turnaround in business behavior has been most evident in statements and actions from the companies associated with the Pew Center's Business Environmental Leadership Council. This Council now comprises 28 major corporations, including ABB, Alcoa, American Electric Power, Baxter, Boeing, BP, Dupont, Enron, Georgia-Pacific, IBM, Intel, Shell, Toyota, United Technologies, Weyerhaeuser, and Whirlpool. And just for comparison purposes, it is interesting to note that the combined annual revenues of these companies is in excess of \$770 billion per year, greater than the GDP of most countries. In fact, it would rank number 11 in the world, ahead of Mexico, Canada, Russia and 180 other countries.

The fact remains, however, that industry efforts to meet the challenge of climate change will not be applied as broadly or as seriously as they need to be in the absence of a viable framework for national and international action on this issue. So to those who argue for an even greater commitment to protecting the climate on the part of the private sector, I say it will come. But only if we see a similar commitment on the part of national governments throughout the world to develop an environmentally effective, private-sector friendly framework for action. Companies will not sit on their hands and wait for governments to catch up, but governments will have to provide clear direction.

### **Speeding Technology Development**

The way I see it, the business response to the issue of climate change in the years ahead will go through three phases. The first, short-term phase is the one I have already described, where companies are investing in energy efficiency and exploring and participating in emissions trading and carbon sequestration. The second, medium-term phase (and these are not sequential – there will clearly be overlap) will see a shift to fuels that are less carbon-intensive, particularly natural gas, but also to other fuels, including hydrogen, in those cases where the existing fossil fuel infrastructure can still be used.

The longer-term outlook is dramatically different. As individual countries and the international community finally come to grips with the need for serious, long-term action to reduce greenhouse gas emissions, we are destined to see a flood of new attention and new investment going to those technologies that are essentially carbon free. The development and delivery of these new technologies will be absolutely crucial to the success of national and international efforts to reduce worldwide concentrations of greenhouse gases. In fact, there is no other possibility. Behavioral changes, no matter how drastic (and drastic ones are politically impossible as we have seen over last summer and this winter in both North America and Europe), will not be sufficient to address the problem. What we need is a second industrial revolution, but one that allows us to move to a brave new world in an orderly and systematic way, a way that meets both our environmental and economic objectives.

In fact, I believe we are beginning to see attention being paid to this kind of phased approach. Industry leaders are now beginning to make serious commitments to everything from solar energy, biomass and other renewables to fuel cell technologies. Of course, many of you know more about this than I do, but let me offer a couple of

examples from the companies that are part of the Pew Center's Business Environmental Leadership Council:

- ?? BP—which, as we all know, now stands for “Beyond Petroleum”—announced in June of last year that it was planning to invest \$500 million in renewable energy projects. BP Solar, the world's largest solar electric company, now provides photovoltaic energy technology in 150 countries around the world, with major, multi-million dollar contracts for rural electrification in Indonesia and the Philippines. BP Solar's revenue projections for 2007? Over \$1 billion.
- ?? Also making a significant investment in solar power and other alternative energy technologies is Shell. Shell Hydrogen was formed in 1999 to develop business opportunities related to hydrogen and fuel cells on a global basis. Among other activities, Shell is now cooperating with both Daimler Benz and Zevco (which stands for the Zero Emissions Vehicle Company) in the development of hydrogen fuel cells and the necessary infrastructure to support the supply and distribution of hydrogen fuels. The company also is investing \$500 million in Shell International Renewables, with projects on forestry, photovoltaics, and biomass.
- ?? Toyota, for its part, also is working to develop fuel cell vehicles. The year 2000 marked the introduction of the Toyota Prius, the first mass-produced hybrid gas-electric car. The car's fuel efficiency rating is a remarkable 52 miles per gallon in *city* driving. This is a dramatic improvement, of course, over where we now stand on fuel efficiency for vehicles. And greater improvements, and more innovative technologies that will take us beyond hybrid vehicles, are now under development.
- ?? And finally, let us look at United Technologies, which through its International Fuel Cells (or IFC) subsidiary, produces the world's only commercial fuel cell power plants. More than 200 units have been installed in 15 countries on four continents to date. Since 1996, all U.S. manned (and womanned) space flights, including the Space Shuttle, have been powered with fuel cells supplied by IFC. And in 1999, IFC delivered its first hydrogen-fuel power unit to BMW.

As these examples show, there is a remarkable transition going on in how industry views environmental issues such as climate change. These issues are no longer considered mere opportunities for public relations gambits. Rather, they are serious problems that demand serious solutions. And, equally important, they represent serious opportunities for continued growth, innovation and improved performance.

The key in the years ahead, I believe, will be for governments in the U.S., Canada and elsewhere to work with industry to craft long-term policies that will enable a smooth transition. These policies can include incentives and support for research and development as well as conservation and energy efficiency, and, most importantly, clear goals and strategies for reducing greenhouse gas emissions both domestically and throughout the world.

## **The Future of the Kyoto Protocol**

To return to the skiing metaphor for a moment, allow me to make the observation that the trails ahead for government and business may not be one and the same, but they certainly cross at important points. And the goal for the future should be to make a serious effort to coordinate and manage these crossings so there are as few collisions as possible. Speaking of collisions on the slopes, how could I forget the words of the minister at the funeral for a fallen skier: "We are gathered together on this slalom occasion." (You will be glad to know that is my final ski joke for the day.)

So where do the trails ahead for business and government cross? The answer is in the use of market-based strategies to achieve environmental progress. This has become a bedrock principle of national and global efforts on issues from climate change to reducing acid rain. The Kyoto Protocol reflects this principle by including a number of market-based strategies among the avenues that countries can pursue in order to meet their targets for reducing emissions.

Emissions trading, the Clean Development Mechanism, the use of carbon sinks, and other elements of the accord all rely to varying degrees on markets and business initiative to work effectively. It is my belief that all of these elements, which will keep costs down as they promise environmental improvement, will have to be part of a final agreement. I also believe that governments and industry will need to be granted a high degree of flexibility in how the market mechanisms are applied.

Right now, the EU nations and many countries in the developing world do not fully appreciate how market mechanisms can be put to work for the betterment of the environment. This must change, and I believe it *will* change

Of course, the alternative to reaching consensus on *international* action is to put the negotiations on hold and to proceed with *domestic* actions on a piecemeal basis. But everyone knows this is not a real solution. Global climate change is a global problem. And it can only be solved if the nations of the world work together to create an effective yet flexible regime for reducing atmospheric concentrations of greenhouse gases.

This does not mean that Canada and the United States and other nations should sit idly by while we wait for the negotiations to produce a final agreement that we all can live with. Rather, at the same time that we are working on this issue internationally, our nations must begin to take serious action at home to reduce our contribution to climate change. The United States in particular has a clear responsibility to move forward on this issue. With only 4 percent of the world's population, we are responsible for 24 percent of global emissions of greenhouse gases. And we have yet to forge a coherent national policy for significantly reducing our emissions.

A priority for the United States, I believe, should be to design a straightforward system that will recognize and give credit to corporations that want to take early action to reduce

greenhouse gas emissions. Put very simply, these companies need to know that reducing their emissions now will not put them at a competitive disadvantage down the line.

In addition to addressing the early action issue, governments must put in place the kinds of programs that will pave the way for dealing with this issue over the medium and long-term. We need to do more to improve the energy and carbon intensity of our economy, and we need to provide incentives for the development and diffusion of the best technologies that we are capable of producing. Governments can play an important role by setting targets that are ambitious, but not impossible to meet. And industry can do what it does best: experiment and innovate, until we have found the most effective and efficient ways of moving forward.

In short, we need to accept once and for all that this problem is real—and that real programs will be taking shape in the coming years that will require the world to shift away from fossil fuel combustion and implement changes in land use practices, such as deforestation, that are altering the global climate.

Now that we have concluded our little visit to the slopes—and our exploration of the trails ahead for climate change—I would like to leave you with two quotes to consider as you head out for a ski this afternoon. The first is from a great American outdoorsman who visited this area in 1915 and called the landscape here “as lovely as it is varied.” President Theodore Roosevelt, in his inaugural address, told Americans, “There is no good reason why we should fear the future, but there is every reason why we should face it seriously.”

The second is from a former Saudi Arabia Oil Minister, Sheik Ahmed Zaki Yamani, who, in speaking about the potential of alternative fuels, said, “The Stone Age came to an end not for a lack of stones, and the Oil Age will end, but not for a lack of oil.”

Looking ahead, we would be wise to keep these words in mind as we consider how to address one of the critical challenges of our time.

Thank you very much.