

THE EARTH'S CLIMATE has gone through many changes over millions of years, but there is no longer any doubt that we have entered an extraordinary period in this planet's climatic history.

"Temperatures are getting hotter, and they are getting hotter faster now than at any time in the past"

Michel Jarrud, Deputy Secretary-General, World Meteorological Organization

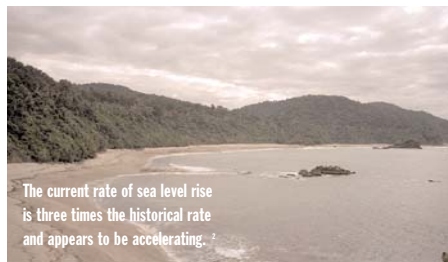


Indicators of a Global Shift

Climate change has the potential to affect the economies and environments of every nation, as well as the lives of every citizen of the globe.

"Although, like many other countries, New Zealand is not a major greenhouse gas producer on a global scale, we are nonetheless on the receiving end. Climate change is not a phenomenon that recognizes political borders. So we have a major stake in getting action by all countries to reduce greenhouse gas emissions."

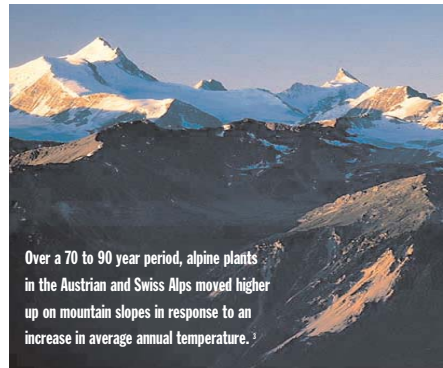
Honorable Pete Hodgson, Minister of Energy, New Zealand



Considering the potential scope of this challenge, the members of PCA believe that we must all find our places in the solution. Considering the indications that this challenge is already upon us, we also believe that the time to do so is now.

"We have to accept that greenhouse gases already accumulated in the atmosphere will cause some degree of climate change. For this reason I want Scotland to be proactive in dealing with these changes so we can avoid much of the misery and expense of dealing with the aftermath of extreme weather events such as flooding."

Rhona Brankin, Deputy Environment Minister, Scotland



¹ Los Angeles Times, December 18, 2001

² Stevenson, C. 1998. Horn Point Laboratory, University of Maryland Center for Environmental Sciences.

³ Grabherr, G.M. Gottfried, and H. Pauli. 1994. Nature 369: 448.

The Science of Climate Change

THE “GREENHOUSE EFFECT” is essential to sustaining life on Earth. Without it, the sunlight which heats the planet’s surface and atmosphere would bounce back into space, leaving the average temperature on Earth at roughly 0°F (-18°C) instead of 60°F (16°C). Problems begin to arise, however, when the concentration of greenhouse gases (e.g., carbon dioxide) increases. When that occurs, more solar radiation remains trapped within our atmosphere, and global temperatures start to rise.



Over the past 140 years, the average global temperature has risen about 1°F. While some still debate the cause, there is scientific consensus at both national and international levels that

human activity is instrumental. In a report to US President George Bush, the National Academy of Sciences concluded that global warming is real and that human activities are a primary contributor. And in January 2001, the Intergovernmental Panel on Climate Change (IPCC) asserted, “There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.”



These “human activities” include the burning of fossil fuels—gas, oil, coal—and the burning and clearing of forest lands. Such actions increase the emission of greenhouse gases and decrease the ability of the planet to absorb these gases (as opposed to letting them linger in the atmosphere.) If this warming trend is allowed to continue unabated, the IPCC projects that the average global temperature could rise another 2.5°F to 10.4°F by the end of this century. To put those changes in perspective: an increase of 10°F would make the earth as warm as it was in the age of dinosaurs.

More importantly, it would almost certainly lead to weather events and other problems more severe than anything experienced in the last century.



ACKNOWLEDGING the serious potential threats posed by global warming, countries around the world agreed to work collectively under the guidance of the United Nations. In 1988, the UN Environment Program and the World Meteorological Organization established the Intergovernmental Panel on Climate Change (IPCC). The IPCC, comprised of 2,500 of the world's leading experts on atmospheric science, has been charged with the task of quantifying the change in Earth's climate, analyzing its causes, and projecting future impacts.



As the nations of the world continue to debate the terms of the Kyoto Protocol—with some moving

towards ratification and others (including the US) maintaining opposition—many nations are proceeding on their own:

- The UK has established an emissions trading program in which participating companies set reduction targets and can sell excess allowances in a competitive marketplace (i.e., benefiting financially from aggressive GHG cuts).
- Norway is moving forward to introduce a similar emissions trading program that will encompass 90% of the greenhouse gas sources in that nation.

- Australia established a national greenhouse office and currently has a number of voluntary reduction programs in place.

Recognizing a need for action now, these and many other nations are making commitments to curbing emissions of greenhouse gases in the near term. It is this proactive philosophy which led to the creation of PCA.

The Response

Around the World



Responding to the IPCC's conclusion that greenhouse gas emissions were a significant contributor to global warming, the UN Framework Convention on Climate Change launched an international effort to control or cut these emissions. Beginning in 1994, annual meetings were scheduled to draw up an emissions-reduction plan. At the third meeting in Japan, the Kyoto Protocol was adopted as a first step in a world-wide effort to slow the process of global warming.

Partners of PCA

Alcan

One of the largest aluminum and packaging companies in the world. Alcan has been reducing GHG emissions since the early 1990s and building on past achievements is committed to reducing GHG emissions over the long-term. Alcan's near-term objective is to reduce GHG emissions by 500,000 tonnes between 2001 and 2004 with subsequent year targets being set on an annual basis.



BP

A leading global energy company, the largest oil and gas producer in the U.S., and the seventh largest corporation in the world. BP has committed to reducing its GHG emissions to 10% below 1990 levels by 2010.



DuPont

DuPont is a science company delivering science-based solutions that make a difference in people's lives in food and nutrition; health care; apparel; home and construction; electronics and transportation. DuPont has committed to reducing GHG emissions to 65% below 1990 levels in addition to making major energy efficiency gains.



Entergy

Based in New Orleans, the company owns, manages, or invests in power plants generating more than 30,000 megawatts of electricity. Entergy has committed to initially stabilizing its GHG emissions to year 2000 levels during a projected period of rapid growth.



Environmental Defense

A US-based nongovernmental organization with 300,000 members, Environmental Defense links science, economics, and law to create innovative, equitable and economically viable solutions to current environmental problems.



Ontario Power Generation

This Canadian power utility generates 85% of the electricity consumed in Ontario and has installed production capacity of roughly 25,000 megawatts. OPG has committed to stabilizing its GHG emissions at 1990 levels.



Pechiney

Europe's largest producer of primary aluminum and the fourth largest world-wide, Pechiney operates in all facets of aluminum production and packaging. The company has made a commitment to reduce its GHG emissions to 15% below 1990 levels by 2012.



Shell International

One of the largest global energy companies and the eleventh largest corporation in the world with operations in more than 130 countries, Shell has committed to reducing its GHG emissions to 10% below 1990 levels by 2002.



Suncor Energy

Based in Calgary, Suncor is a major independent energy company with integrated upstream and downstream operations. The company has committed to reduce its GHG emissions to 6% below 1990 levels.



AROUND THE WORLD, many companies recognize there is sufficient scientific evidence to merit immediate action. At the same time, they believe that the response to the challenge of global warming must be compatible with the fundamental imperative for economic growth. In 2000, eight forward-thinking businesses joined with Environmental Defense, a non-governmental organization based in the US, to form the Partnership for Climate Action.

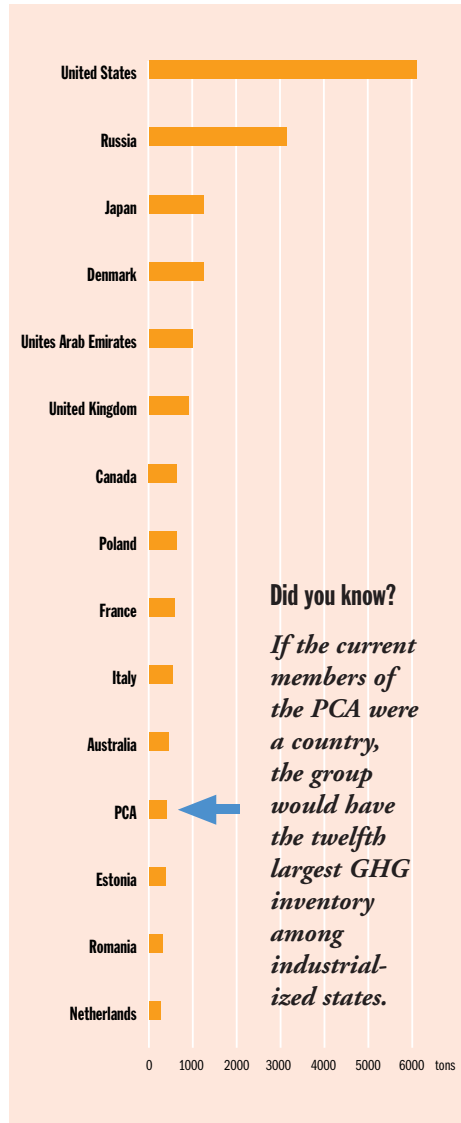
PCA is dedicated to climate protection, its members are committed to limiting and reducing their greenhouse gas emissions (GHGs), and all are willing to share their knowledge with other companies who seek the same goals.

The Role for PCA

Specifically, each member company of the PCA has made the following commitments:

- To publicly declare a global GHG emissions limit backed by the management actions, policies and incentives necessary to achieve that limit;
- To measure, track, and publicly report net GHG emissions;
- To employ innovative strategies to work with other members of PCA, customers, and suppliers to maximize opportunities through demonstrations, products and services to reduce greenhouse gas emissions;
- To lead through example, positive engagement, collaboration, public communication and sharing of experience-based knowledge and effective technology.

PCA's member companies recognize that market mechanisms such as those evolving under the Kyoto Protocol have the potential to be the most cost-effective response to global warming. Moreover, by utilizing these mechanisms now, PCA members believe they will be operating ahead of the curve in a growing global marketplace.



ALTHOUGH our partnership is still young and growing, we are pleased to report progress in our continuing efforts to reduce emissions of greenhouse gases:

- **Alcan** has reduced annual CO₂e emissions by 2.5 tonnes per tonne of aluminum produced when compared to the 1990 rate. For 1999, this translated to a reduction of more than 2 million tonnes of CO₂e emitted as compared to 1990, even with a 200,000 tonnes aluminum production increase.



Progress
not just Promises

- By the end of 2000, **BP** delivered a reduction in GHG emissions of 5% and can identify at least another 5% deliverable over the next 3 years to achieve its goal of a 10% reduction. To date, BP has traded over 5 million tons of emissions within its global operations and has reduced approximately 5 million tons of GHG emissions from its facilities.
- As of 2000, **DuPont** has achieved a 60% reduction in carbon dioxide emissions from global operations and a 15% improvement in energy efficiency as compared to 1990 levels.
- **Entergy** has reduced its greenhouse gas emissions by more than 35 million tons since 1991 and looks forward to further reductions as a result of efficiency upgrades at existing fossil-fired power plants and increasing investments in renewable energy sources.

- By applying 12.6 million tonnes of carbon dioxide emission reduction credits, **Ontario Power Generation** has offset 30% of its greenhouse gas emissions. OPG has also added 13 megawatts of green power to its energy mix and recently earned the designation “Gold Champion Level Reporter” from Canada’s Climate Change Voluntary Challenge Registry.



- While significantly increasing aluminum production between 1990-2000, **Pechiney** reduced GHG emissions in France by approximately 20% and nearly halved PFC emissions from aluminum smelters worldwide.
- **Shell** is on target to meet its aggressive goal of reducing its GHG emissions by 10% over 1990 levels by the end of 2002. Current estimates to the end of 2001 indicate that Shell has reduced emissions by 16 million mt of CO₂ equivalent gases throughout its global portfolio and will meet its target in 2002. Additionally, Shell is the first company to formally include the effective of the cost of carbon into our investment decision calculations for new projects that have the potential to produce emissions of 100,000 mt of CO₂ equivalent in a year.
- In 2000, the greenhouse gas emission intensity at **Suncor** was 16% lower than 1990 levels. Over a 10-year period, production increased by 54% but greenhouse gas emissions increased by only 29%. Steps taken from 1990 to the present have reduced greenhouse gas emissions by 10.6 million tons.

Indeed, the work has begun, but the members of PCA are committed to making more measurable progress in the years to come and to reporting that progress to interested parties such as you.

THE PARTNERSHIP for Climate Action invites world-class companies who can benefit from working with us, and who will help us take significant strides towards reducing the volume of greenhouse gases in our atmosphere to join.

Sharing of Best Practices

PCA offers its members an opportunity to discuss and compare greenhouse gas management issues and strategies with their peers. The breadth and



value of the knowledge gained through this collaboration will be optimized by inclusion of participants from a variety of industrial sectors with operations in all parts of the world.

Expert Assistance

Environmental Defense, a US nongovernmental organization with world class expertise in climate issues, helps PCA members ensure accurate GHG measurement, allocation, serialization, reporting and registration, demonstrating that business can be relied upon to engage in effective GHG management.

Working Ahead of the Curve

By joining PCA, partners are building foundations within their companies for



managing greenhouse gases and for assessing comparability within and across industrial sectors. The GHG programs they are developing now test policy designs at the ground-level and will serve as working models of how public

policies may function when they leave the floors of legislatures and arrive on the floors of factories.

Your primary responsibility as a member, though, is to your own company—to develop and enhance your internal greenhouse gas emission control program.

By joining PCA, you place yourself in closer contact with like-minded companies who are committed to helping you achieve—and even exceed—your goals. More importantly, you make a commitment to action, and that is the important first step we encourage you to take today.

To learn more about joining PCA, please contact the individual whose business card is enclosed with this folder. Inquiries may also be addressed to:

Sarah Wade, PCA Coordinator
c/o Environmental Defense
1875 Connecticut Avenue, NW
Washington, DC 20009

phone: 202.387.3500
e-mail: pca@environmentaldefense.org

