Global Climate Change

*By Brian P. Flannery**

I'd like to discuss an environmental, social and economic issue that is surely one of the most important of our time–global climate change. The debate over climate change involves many players with different perspectives and objectives. By and large the media and advocates treat climate change strictly as an environmental issue. They fail to acknowledge the significant trade-offs and social costs required to address the issue. Increasingly, they seek to dismiss the views of those who point out the very real difficulties of proposals such as the Kyoto Protocol.

Of course, all of us are touched by news coverage of natural disasters like floods and hurricanes, and the loss of life, property, and livelihood they can cause. Some would like you to believe these events are evidence of global warming. Others say it's *just like what we can expect* from global warming. They know some listeners will conclude that warming caused the current problem while others will become concerned that future generations will experience more frequent severe events.

Good Advocacy. It goes straight to the heart. Bad Science. The facts aren't there.

But perhaps there is a chance humans may be changing the climate, so shouldn't we be doing something now? Science may never know all the answers... or maybe it will be too late to act when we do? We all want to be environmentally and socially responsible in the way we live... for ourselves and for future generations.

I'd like to address the science and economics of the Kyoto Protocol to put this issue into perspective, and to describe Exxon's position and our actions. In a nutshell, there are underlying concerns about human influence on climate, but also many gaps and uncertainties in the science. Taken as a whole, this suggests we should go forward with care, taking preventive steps that make economic sense while we learn more. It also means we should reject premature international initiatives like the Kyoto Protocol, which have the potential to cause economic harm for most nations, severely impacting some, while doing very little to influence the climate.

What should we be doing now? Let me use Exxon as an example. We have redoubled our own efforts in energy conservation. Cooperative programs are under way with auto companies and others to increase substantially the efficiency of fossil fuel powered vehicles. We also support scientific and technology assessment initiatives and promote active public discussion and debate.

As scientific understanding progresses, we must respond accordingly, but we shouldn't prejudge the outcome now by setting unworkable, legally binding targets and timetables.

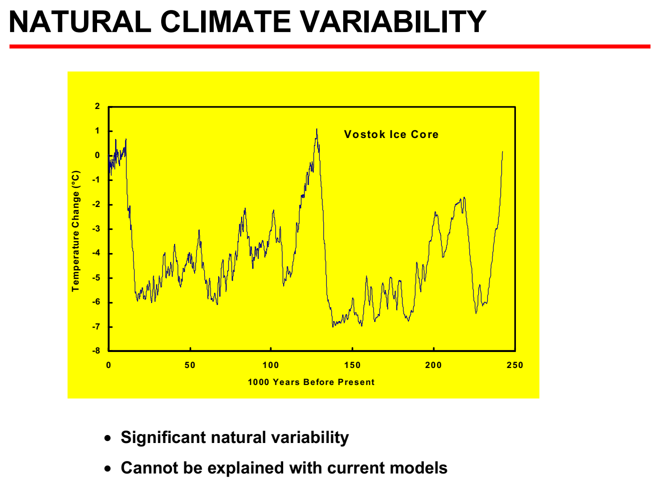
Let's start by looking at the science. The essential question is whether the use of fossil fuels–oil, natural gas and coal, will cause the earth's climate to change in ways that present a danger to its inhabitants.

Vostok Ice Core

Earth's climate is affected by many complex variables, such as sunlight, clouds, orbital variations, ocean circulation, ice, and volcanoes. Climate has fluctuated between periods of cooling and periods of warming. Some of those changes lasted hundreds of years, others hundreds of thousands.

One way scientists can determine temperatures from the distant past is through analysis of cores taken from large, thick and ancient ice masses. Figure 1 shows the substantial fluctuations in temperature over a 250,000-year period indicated by the Vostok ice core in Antarctica.

Figure 1

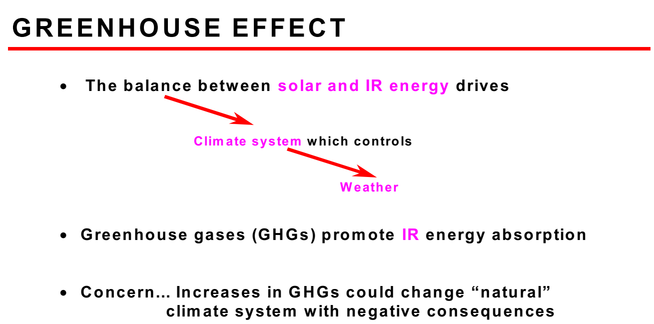


More recently, over the past century, there has been a slight warming trend — about one-half degree Centigrade — in surface temperatures. The key questions are whether the use of fossil fuels is contributing to this warming and whether continued warming would be good or bad. On both counts the answer is: we don't know.

Greenhouse Effect

To understand the science behind this issue, we need to talk about a natural phenomenon known as the "greenhouse effect." See Figure 2.

Figure 2



The earth is warmed by heat from the sun. Nature ensures that the incoming heat is balanced by infrared (ir) radiation flowing back to space.

Some of that heat is trapped by what are called "greenhouse gases," such as water vapor, carbon dioxide and methane. Without the greenhouse effect Earth would be too cold to sustain life.

Fossil fuels enter the picture because concentrations of CO_2 (and other greenhouse gases) have been increasing in the atmosphere since the 1800s. Concern arises that this accumulation will lead to global warming and climate change with

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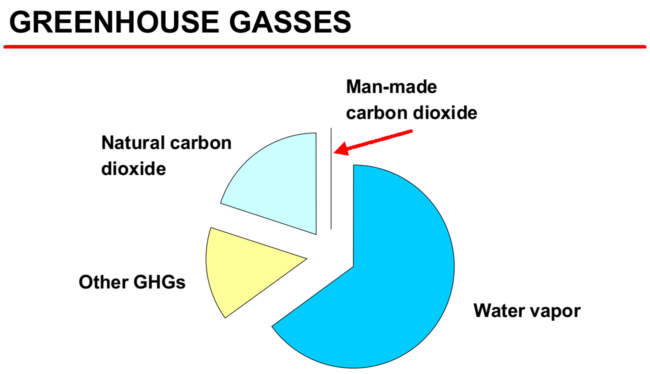
negative consequences for people and ecosystems.

Greenhouse Gasses

Figure 3 shows the relative contribution of various gasses to the present greenhouse effect. Water vapor–or water in the form of a gas, is the predominant greenhouse gas and accounts for about two-thirds of the greenhouse effect.

Figure 3



Other greenhouse gases, including natural carbon dioxide–or CO_2, make up most of the rest. The very small sliver on this chart represents the effect of increases in carbon dioxide over the past 150 years, about 0.6% (1.4 out of 240 watts per square meter ir radiation.)

Surface Temperature

The buildup of greenhouse gasses has been underway for over a century. So, it is reasonable to ask whether we have detected any warming yet. Figure 4 shows changes in *global average surface temperature*. The most obvious feature is the large year to year variability. This natural "climate noise" arises in part from volcanic eruptions and changes in oceanic upwelling (such as El Niño), and in part from random natural fluctuations. Contrary to what you may believe from media accounts, these observations still do *not* confirm that human activities have led to any global warming.

Figure 4

Warming amounts to about 0.5 °C over the last 140 years. *This increase is entirely within the range of natural variability*. The pattern does not agree with trends in greenhouse gasses. Much of the rise in temperature over the past century occurred before 1940, but most of the increase in the use of fossil fuels occurred after World War II.

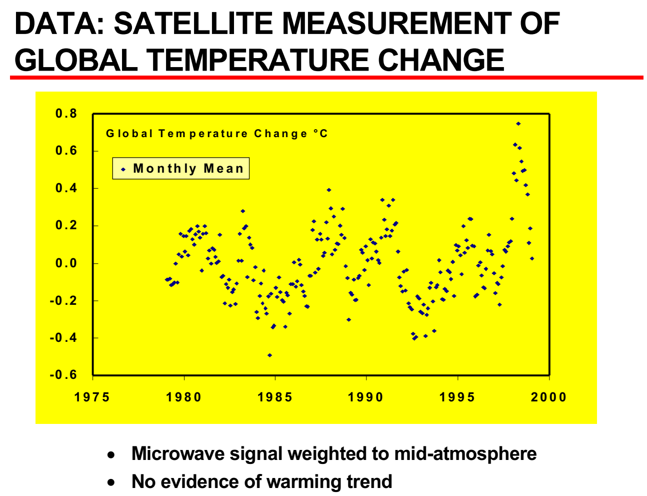
Studies of the warming that would have to occur to confirm "detection" conclude that it will be at least a decade before projected warming would exceed natural variability, *even if models were correct.*

Land-based measurements show several years of record temperature during the 1990s, and 1998 was by far the warmest year on record. Scientists agree that a powerful El Niño had a large influence on warming. However, it remains unclear how El Niño, a natural warming of the tropical eastern Pacific, would be affected by global warming.

Satellite Temperature

Satellite measurements of global average temperature (Figure 5) show little evidence of global warming over the period from the late 1970s through 1997. The data also shows the strong El Niño effect in1998. However, temperatures have fallen swiftly back into the normal range over the last several months.

Figure 5



Satellites measure a signal characteristic of temperature across the lower and middle atmosphere, rather than the surface. However, they are far more accurate and reliable in giving a direct global measurement, and they are calibrated to agree with thermometer-measurements from balloons. While some scientists argue that results from satellite and surface measurements may be consistent within their uncertainty, the continuing and growing discrepancy highlights a major gap in current understanding.

In 1995, a special United Nations panel set up to study global climate change issued an extensive report on the issue. In keeping with the practice of publishing research findings, peers in the scientific community reviewed the report before it was released. The scientists were careful not to make any firm conclusions about the connection between burning fossil fuels and global warming.

However, the executive summary of the report, the part most people read, was heavily influenced by government officials and others who are not scientists. The summary, which was not peer-reviewed, states that: "the balance of evidence suggests a discernible human influence on climate."

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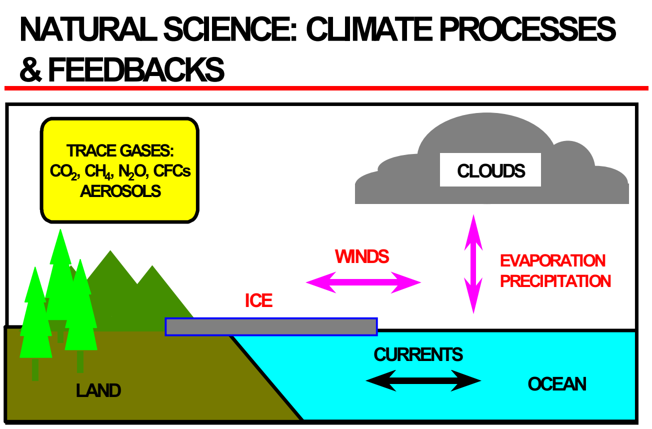
You'll note that this is a very carefully worded statement, recognizing that the jury is still out, especially on any quantifiable connection to human actions. The conclusion does not refer to global warming from increases in greenhouse gasses. Indeed, many scientists say that a great deal of uncertainty still needs to be resolved.

Climate Processes and Feedbacks

So far we have discussed climate observations. Any significant impacts from increasing greenhouse gasses will occur decades from now. To explore the possible consequences of future climate change we require climate models that can account for the complex interactions and feedbacks in the climate system.

Figure 6 illustrates some of the complex processes in climate. From fundamental physics we are certain that the atmosphere must absorb more IR radiation as greenhouse gas concentrations rise, *if nothing else changes*. However, other changes *will* occur. Once absorbed, heat triggers feedbacks that can amplify or reduce warming and climate change.

Figure 6



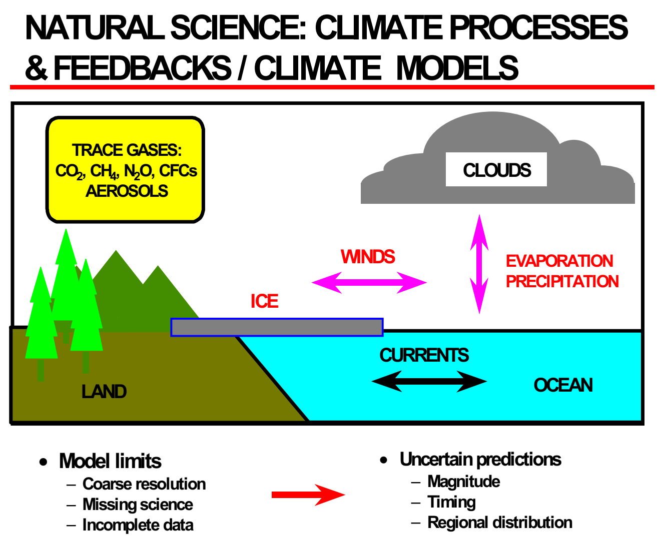
Models must account for heat transfer by winds and currents; the hydrological cycle of evaporation, precipitation, runoff and groundwater; formation of clouds, snow, and ice; all of which display enormous variability. We *know* that science today cannot properly describe these processes.

Inability to describe feedbacks dominates uncertainty in predicting climate change. For example, increasing CO_2 traps heat, warming the atmosphere slightly. The warmer atmosphere holds more water vapor, significantly amplifying warming... but this may promote cloud formation that can cool the surface by reflecting sunlight. Cloud changes could significantly reduce warming, or, depending on cloud properties, they might amplify warming. Other effects not well understood, like changes in ocean currents, aerosols, and the biosphere, could also amplify or reduce warming.

Predictions rely on computer models known as General Circulation Models (GCMs). They have serious and well-known limitations:

- GCMs have limited resolution. Even in the most advanced computers, resolution is limited to grid blocks hundreds of km on a side, say one block for Germany, several for the United States. Models must approximate effects, such as clouds and hydrology that occur on smaller scales.
- GCMs are incomplete in their scientific basis. Clouds are a most serious gap. Observations show that GCMs represent clouds poorly in *current climate*... yet the more complex need is to understand how clouds change if climate varies. Evaluation of climate change over decades requires far more reliable representations of oceans and the response of the biosphere than are available today.
- Data and methods to validate models are incomplete. Oceans especially lack adequate measurements. This is a critical scientific need.

Figure 7



Consequently, GCMs do a poor job matching past climate trends and current climate. They are well known to have limited ability to predict the magnitude, timing, and regional distribution of future climate change. Lack of reliable regional forecasts prevents meaningful assessment of most potential impacts of climate change. Different GCMs produce significantly different results, especially for critical factors such as precipitation, soil moisture, drought, and storms.

The many uncertainties in the science of climate have led one leading researcher, Professor Ronald Prinn of the Massachusetts Institute of Technology, to conclude "there is no doubt that our present understanding of climate–and our ability to predict climate–are inadequate to provide a sharp focus for policymaking."

The Precautionary Principle in the Climate Convention

The precautionary principle is often invoked for guidance in situations filled with this level of uncertainty. Clearly climate change presents the potential for serious long-term impacts. Equally, little is known about the actual risk today. Figure 8 quotes the precautionary principle in full, as referenced in the climate treaty.

The issue facing society is not a choice between action and inaction. The issue is how do we make choices under uncertainty? Knowing what we know today about the risks of climate change and the consequences of possible response actions, what decisions can we make?

Recognize that the precautionary principle provides no guidance on what actions to take in response to uncertain risk. Society must analyze proposed response options to determine whether they are effective, feasible, affordable, and equitable.

In climate change the stakes are especially high because many of the proposed *precautionary measures* come with very high, near-term economic and social costs.

Figure 8

THE PRECAUTIONARY PRINCIPLE IN THE CLIMATE CONVENTION

ARTICLE 3.3. The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost. To achieve this, such policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases and adaptation, and comprise all economic sectors. Efforts to address climate change may be carried out cooperatively by interested Parties.

PRECAUTIONARY MEASURES MUST BE TESTED FOR:

EFFECTIVENESS	FEASIBILITY
AFFORDABILITY	EQUITY

The Kyoto Agreement

In December 1997, representatives from many governments met in Kyoto, Japan. Ultimately, they put together an agreement... a legally binding agreement... to curb carbon dioxide and other greenhouse gas emissions in some countries. See Figure 9. The agreement would commit 38 developed countries, including those in Europe and the United States, to reduce their combined emissions an average of 5 percent below 1990 levels in the next 10 to 14 years. The protocol excludes more than 130 developing countries from any commitments at all. For the protocol to take effect it must be ratified by at least 55 countries, and these must include countries responsible for at least 55 percent of 1990 CO_2 emissions from developed countries.

Figure 9

KYOTO AGREEMENT

- **Commits 38 industrialized nations to cut emissions to ~5% below 1990 levels by 2008-2012**

  6% Japan   7% US   8% EU

- **No emissions commitments for developing countries**
- **Entry into force requires**
  - **Ratification by 55 countries**
  - **Including developed countries with at least 55% of 1990 CO_2 emissions**

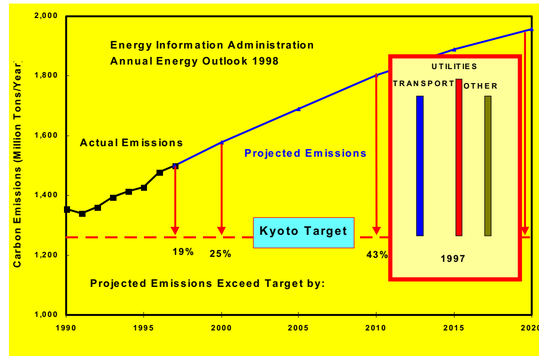
While 5 percent may sound like a small amount, it is important to understand that emissions are growing in nearly all countries as a result of economic growth and increasing populations. Relative to where emissions are projected to be, the target will be extremely difficult to meet in most countries.

Projected U.S. Emissions and the Kyoto Target

For a moment let me focus on the United States, a critical country in this process. The target is to cut carbon dioxide emissions 7 percent below 1990 levels. Figure 10 puts the target in an entirely different light. U.S. government forecasts project that emissions in 2010 will exceed the Kyoto target by 44 percent. Already at the end of 1997 they were 19% above the target.

Figure 10

US CARBON EMISSIONS: PROJECTED & THE KYOTO TARGET



The insert panel shows the target relative to emissions from various sources in 1997. To reach the target, the United States would have to stop all driving, or close all electric power plants or shut down every industry, or reduce emissions in each area by over 1/3. I leave you to consider whether this enormous change in emissions could be achieved in ten years.

A related economic analysis found that meeting the targeted reductions in fossil-fuel use would mean a 45-percent increase in gasoline prices and similar increases for other fuels. These and other price hikes could cost the average American family of four about $2,700 a year.

At least some developed countries would probably have to impose significantly higher fossil fuel taxes, rationing, or lifestyle changes such as mandatory carpooling.

Recognizing these difficulties in the United States, diverse groups–including labor, farming, consumer groups and many industries, have serious reservations about the agreement.

The U.S. Senate dramatically reflected those concerns before the Kyoto conference in the fall of 1997 when it voted 95-0 to oppose any agreement that excluded developing countries or that seriously harmed the U.S. economy. The Kyoto agreement fails both tests. Note that, in the United States, it must be ratified by the Senate to have force of law. Nonetheless, the Clinton administration signed the treaty in November at a conference in Buenos Aires.

Carbon Emissions/Kyoto Target: 2010 VS. 1990

Consider how the world might limit CO_2 emissions.

One way is to use less energy voluntarily. Energy conservation is always prudent, but the emissions reduction targets are so severe that voluntary actions alone won't be enough.

Countries can also look for alternative energy sources that produce fewer greenhouse gases. Nuclear energy is one and could help fill the gap over the long term, but public opposition to nuclear shows no signs of abating. Another possibility includes renewable energy sources such as solar power, biomass, or wind. After three decades of research, however,

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renewable sources still make up only about 1 percent of the world's energy supply. It could be quite some time before renewables contribute in a significant way.

Selective "fuel switching" can also help. This simply means moving to lower-carbon fuels when possible — for example, from coal to natural gas in the electricity sector.

It is possible to offset emissions of greenhouse gases. This could be partially accomplished through reforestation, since trees absorb carbon dioxide. In addition, technologies to separate and dispose of the gas are feasible, but costly, with today's technology.

Governments could impose new energy consumption taxes to *force* lower demand.

They could also invent complicated schemes of emissions permits, which are a form of energy rationing,

They could impose forced standards for energy efficiency, or limit fuel availability or driving hours.

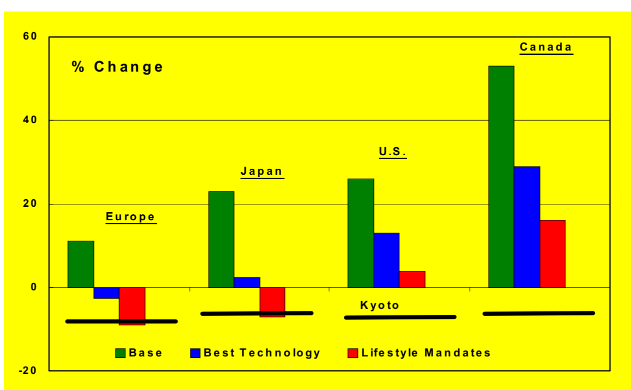
Or they could provide incentives, such as tax credits, for industries that develop or install energy-efficient technologies.

Some of these measures would have a noticeable impact on our quality of life and cost of living. But would those measures allow countries to reach the Kyoto reduction targets? That's another story.

Figure 11, showing results for several countries and for Europe, is based on a typical energy forecast. Here we see the Kyoto emission reduction targets, compared with 1990 levels, for several developed areas of the world.

Figure 11

CARBON EMISSIONS: 2010 VS 1990



The left-hand bars show projected increases in CO_2 emissions in the years ahead, assuming no Kyoto agreement or any other initiative. Note the substantial increases anticipated to occur by 2010.

The middle bars reflect the changes in emissions we might expect with full adoption of the best technology available. This assumes immediate turnover of energy-consuming devices. If a more efficient refrigerator than your two-year-old model comes on the market, this assumes you replace your old one right away. Technology turnover makes a substantial difference, but it still doesn't achieve the Kyoto targets.

The right-hand bars assume full adoption of the best technology as well as mandated lifestyle changes to limit energy use. These would include steps such as keeping your house warmer in summer and cooler in winter, mandatory car pooling or substantial improvements in new car fuel efficiency.

Europe and Japan could come close to their targets. But the United States, Canada, and Australia would still be far away. Here's why. The Kyoto agreement calls on participating countries to reduce emissions below 1990 levels. Since 1990, the United Kingdom has converted much of its coal-fired electricity generation to gas. In Germany, highly polluting factories and generating plants in the former East Germany have been shut down. And Japan proposes to rely increasingly on nuclear power.

Another factor is population growth, which was not taken into account in setting the Kyoto targets. U.S. population is projected to rise, which means more energy use. Little population growth is expected in Europe.

All in all, Kyoto will have a significant impact on most countries and it is difficult to imagine what practical policies would allow them to achieve the targets.

Effects on Developing Countries

Projections of future emissions show that most growth will come in the developing countries, including China, Mexico, Brazil and India. See Figure 12. Those four nations alone hold about 40 percent of the world's population. If burning fossil fuels proves to be a significant factor in global climate change, then excluding developing nations from the agreement raises the question of whether or not it is fair — and more important, whether or not it will work.

Figure 12

DEVELOPING COUNTRIES

- **Predominant source of future emissions**
- **Energy producing countries: large negative impacts**
- **Other developing countries: wide variation, but most hurt by reduced exports & trade effects**

For developing countries, the impacts would be mixed. Energy exporting countries would suffer serious losses.

Kyoto restrictions would lower demand for goods in industrialized nations, decreasing the imports from most developing countries. That could significantly disrupt global trade and economic growth. Because they would be exempt from requirements to cut carbon dioxide emissions, developing nations may attract more industry and jobs from industrialized countries that do restrict fossil fuel consumption. That means fewer jobs in countries that do impose such limits.

Bear in mind that developing countries face enormous challenges, such as alleviating poverty and raising living standards, extending life expectancy, and expanding educational opportunities. Meeting these basic human needs requires economic growth. And economic growth requires energy.

Exxon is in the energy business, and most of that energy is in the form of fossil fuels. Obviously, adopting the Kyoto agreement would have a tremendous impact on our company. But I think it's clear it would have an equally harsh impact on many segments of society in many parts of the world.

Gaps in the Kyoto Protocol

Many provisions of the Kyoto Protocol remain to be resolved in future negotiations:

- The protocol is silent concerning compliance, a factor that many governments regard as essential before making commitments that affect their economic security.
- Kyoto authorizes nations to utilize emissions trading and credits from projects with developing countries to meet commitments. However, procedures must be negotiated.
- Similarly, procedures to account for changes in forests and other sinks must be agreed.
- Finally, the issue of how to involve developing countries in future participation in emissions commitments has not been resolved.

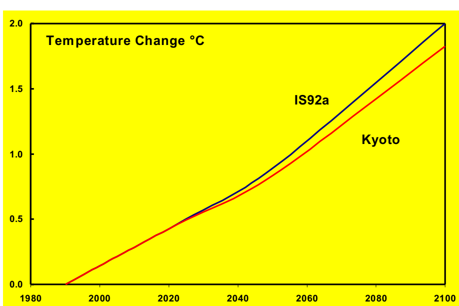
Nations met last November in Buenos Aires to further develop concepts agreed in Kyoto, but they made very little progress — an indication of how complicated and unworkable the protocol really is. They did develop a plan for future negotiations that looks toward taking decisions two years from now.

Climate Implications of the Kyoto Protocol

Climate change is truly a long-term issue that requires a long-term approach. Figure 13 shows projections for global temperature change through 2100 with and without the Kyoto emissions restrictions. The net effect on global temperature is quite small. In effect, the protocol slows warming in 2100 by only about ten years.

Figure 13

CLIMATE IMPLICATIONS OF KYOTO



• Conclusion: Kyoto achieves very little

• Additional steps may be needed

Difficult as the Kyoto limits may be to achieve, far more onerous emissions reductions would be necessary if climate change proves to be serious. Clearly, any effective approaches would need to limit global emissions and that must involve developing countries. Such severe limits would also require the development and global deployment of new, currently non-commercial technologies for energy supply and use.

Professor Richard Schmalensee, a noted economist at the Massachusetts Institute of Technology and dean of MIT's Sloan School of Management, points out: "With our current understanding of the science and economics of climate, we know enough to take the global warming issue seriously. We don't, however, know enough to do anything drastic."

Fortunately, all indications are that climate change is a very long-term phenomenon. The U.S. Congressional Office of Technology Assessment concluded, "Delaying the implementation of emissions controls for 10 to 20 years will have little effect on atmospheric concentrations of greenhouse gas emissions."

We can make good use of that time. Researchers need to be able to gain a better understanding of climate science. There is a lot of research going on–about $2 billion worth a year in the United States alone. Exxon itself has funded studies by several major research organizations.

Exxon's Position

Exxon's position on climate change is consistent with sound scientific and economic analyses.

We oppose the Kyoto Protocol because:

- the science is uncertain,
- it achieves little environmental benefit, but
- it entails large near-term costs.

We favor a long-term approach that

- provides for global involvement,
- includes R&D for innovative technology,
- is responsive to evolving knowledge,
- involves viable near-term actions.

Finally, we call for an open debate that acknowledges the powerful trade-offs involved in responding to climate change.

Exxon's Actions

Exxon does not believe that uncertainty is an excuse for doing nothing. We acknowledge that global climate change is a legitimate concern and we are taking steps now that we believe will lead in the right direction.

First, reducing the scientific uncertainties is essential. We must have a strong scientific foundation on which to base policy. Exxon has participated in and supported scientific and economic research in climate change for nearly two decades. We have supported research to improve understanding of oceans and clouds, policy options, and health impacts, among others.

Second, implementing options that make economic sense *now* can make a significant contribution to addressing climate concerns. At Exxon, our refineries and chemical plants are 35 percent more energy-efficient today than they were 25 years ago. In addition, we operate or have an interest in 26 cogeneration plants around the world. Cogeneration makes steam and electricity simultaneously, using 30 percent less energy than making them separately. Exxon has undertaken a new energy conservation initiative to insure that our performance is second to none in our industry. Some steps are relatively simple. Planting trees provides a natural means of absorbing carbon dioxide, and numerous other benefits. Exxon has been supporting reforestation programs for more than a decade. By the year 2000, we will have helped plant more than two million trees throughout the world.

Third, we are involved in long-term research on vehicles and fuels to improve transportation efficiency. One example is the partnership between Exxon and General Motors to develop gasoline-powered fuel cells for automobiles. Fuel cells may double a car's gas mileage and sharply reduce emissions. Another is our strategic alliance with Toyota to investigate options for advanced vehicles including hybrids.

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Fourth, we seek to promote clear assessments and an open debate on the merits and trade-offs of various policy proposals to address climate change.

Finally, we are actively communicating our views to employees, shareholders, and the public.

Public Policy Systematic Approach–Principles

The public has long looked to Exxon, among others, to supply the quality energy products that people want and need. We have done our best to do so responsibly, efficiently and economically–our track record stands up well against anyone's. Our approach to public policy issues is no different than our approach to our business. We apply what some may call an obsession with the hard, cold facts. We believe that when a claim is made, the data should be there to back it up. We would be irresponsible corporate citizens and poor stewards of our owners' investment if we took any other attitude. These are qualities we've long held that we believe give us substance and credibility in the public policy debate.

Looking ahead, as the debate on climate change continues, I hope it will be shaped by some important principles that at times have been lacking.

Policy considerations must be driven by sound science and policy analysis. Policy options must be considered in terms of the best available science–not based on assumptions leading to dramatic but improbable forecasts. Science is not a consensus process. Answers are not determined by vote or the prestige of the scientist. They are found by testing theory against actual information–exposing hypothesis to the acid test of real-life data.

It's also very important to understand that policy analysis does not result from consideration of a single set of drivers alone. One has to consider the impact on energy, the environment, risks to the public and the costs of implementing various policies. While the Kyoto Protocol is portrayed as an environmental agreement, in fact it would affect economic growth, employment, trade, and investment while doing very little to address climate change. Integration identifies the need for balance between environmental and economic factors. Trade-offs are usually necessary. They need to be considered using the best analyses available.

Finally, the debate needs to involve all sectors of society— most certainly individual citizens like us who will have to live with whatever policy is finally crafted. That makes it all the more important to have a debate that is open and respectful of all views. Throwing bricks at each other just doesn't do any good. The debate over climate change is not a battle between good and evil. It is, or should be, a rational discussion among those with differing views looking to find the right way to approach an important issue.

This requires that we get solid information on the table, discuss and analyze it fully and openly, then make the proper decisions and get on with workable solutions.

Climate change is a long-term issue. Decisions should be taken now based on current understanding including its uncertainty. Our approaches should be flexible and responsive to new information. Exxon's actions and position on climate change have evolved over the years. They will continue to be responsive to emerging scientific and technical understanding in the future. Exxon has been in business for over 100 years and we intend to remain a profitable, responsible supplier of energy through the next century. As the climate change debate progresses, so too will our actions.

Report of the 1999 Annual General Membership Meeting and the Year 1998

President Hoesung Lee called the meeting to order at 6:40 pm, June 11, 1999 at the Grand Hotel Parco dei Principi, Rome, Italy and introduced Council members present.

Vice President and Secretary, Arild Nystad reported that membership stood at a little over 3300 and was stable. He cited several countries with significant membership numbers in which an affiliate could be formed. President Lee noted that at the Council meeting earlier in the week, a Long-Term Strategy committee had been formed to focus on membership development as well as future objectives of the Association. Peter Fusaro will chair this committee with Peter Davies, Michelle Foss and Mike Lynch as members.

Vice President and Treasurer, Jean-Thomas Bernard reported that 1998 had been a good year for the Association and subsequent to the meeting provided the following income and expense report for the year and balance sheet for the end of the year:

1998 Statement of Income and Expense

Income		Expenses	
Dues	$146,000	Admin. & Office Oprs.	$111,000
Meetings	33,000	Publications	110,000
Publications	92,000	Other	29,000
Interest	32,000	Total	$250,000
Other	13,000		
Total	$317,000	Net Income	$67,000

December 31, 1998 Balance Sheet

Assets		Liabilities & Fund Balance	
Cash & Equivalents	$658,000	Accounts Payable	$10,000
Accounts Receivable	15,000	Deferred Dues & Subscriptions	69,000
Total	$673,000	Total	$79,000
		Fund Balance	594,000
		Total	$673,000

Note was made of a number of unpaid affiliates and that Council had decided to provide these groups with one last change to pay their dues and if they were not forthcoming to inactive them and offer direct membership to their individual members.

The success of the scholarship program offered last year was noted as well as Council's decision to continue the program this year.

Some discussion occurred on the possible need to offer a jobs posting program, but no decision was made. Discussion also occurred on how to handle the problem of gratis registrations at the international meeting.

The meeting was adjourned at approximately 6:55 pm.

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