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The New York Times

Circ: 1,187,950

DEC 7 1999

Ford Announces Its Withdrawal From Global Climate Coalition

By KEITH BRADSHER C20

DETROIT, Dec. 6 — In a concession to environmentalists, the **Ford Motor** Company said today that it would pull out of the Global Climate Coalition, a group of big manufacturers and oil and mining companies that lobbies against restrictions on emissions of gases linked to global warming.

Ford's decision is the latest sign of divisions within heavy industry over how to respond to global warming. British Petroleum and Shell pulled out of the coalition two years ago following criticisms from environmental groups in Europe, where there has been more public concern than in the United States. Most scientists believe that emissions from automobiles, power plants and other man-made sources are warming the Earth's atmosphere.

British Petroleum and Shell were so-called general, or junior, members of the lobbying group. Ford is the first company belonging to the board that has withdrawn, and the first American company to leave the coalition, said Frank Maisano, a spokesman for the coalition.

Ford's chairman since the beginning of this year, William C. Ford Jr., is a great-grandson of Henry Ford and has long been active in environmental causes. He has said that global warming is an international problem that requires action, although he has echoed other industry leaders in opposing the global warming agreement reached two years ago in Kyoto, Japan. That agreement, signed by more than 100 nations, calls for reducing man-made emissions of carbon dioxide and other global warming gases by industrialized countries.

Environmentalists had questioned whether Mr. Ford's company had shifted its position much, and demanded that Ford leave the coalition. "Over the course of time," said Terry Bresnihan, a spokesman for the auto maker, "membership in the Global Climate Coalition has become something of an impediment for Ford Motor to credibly achieving our environmental objectives."

Mr. Bresnihan said Ford remained opposed to the Kyoto agreement because developing nations are largely exempt from its rules. Connie Holmes, the coalition's chairwoman, said that the group opposed the Kyoto agreement and wanted more scientific research into whether global warming was a problem, adding that she did not believe Ford's current position was much different from the coalition's.

Mr. Ford's predecessor as chairman, Alexander Trotman, who became a British life peer earlier this year, had been one of corporate America's most outspoken leaders in opposing international pacts on global warming. Lord Trotman and his counterparts from General Motors and Chrysler met with President Clinton in October 1997, and tried to talk him out of seeking an agreement two months later in Kyoto. After meeting the President, Lord Trotman held a news conference outside the White House and denounced the administration's position.

Los Angeles Times
Circ: 1,104,651

DEC 7 1999

Ford Says Global Warming Exists

■ Environment: Auto maker pulls out of lobbying group that opposes Kyoto climate treaty.

C18

From Associated Press

WASHINGTON—**Ford Motor** Co. has withdrawn from a lobbying group that leads opposition to the Kyoto climate treaty, saying credible evidence of global warming exists and companies should work together to find technological solutions.

Ford is the latest example of a Fortune 500 company quitting the Global Climate Coalition and saying global warming must be dealt with. Other companies that have left the group in the last two years include **British Petroleum**, **Shell Oil** and **Dow Chemical**.

The Global Climate Coalition is a Washington-based group that argues there is insufficient scientific evidence to confirm serious warming of the Earth due to so-called greenhouse gases. The coalition has more than 40 corporate members, including oil companies and auto makers such as **General Motors** Corp. and **DaimlerChrysler**.

Many scientists believe the Earth is gradually warming because of greenhouse gas emissions—mainly carbon dioxide from automobiles, factories and power plants.

Ford's chairman, William Clay Ford Jr., is a self-described "lifelong environmentalist" and promised last year to make the world's No. 2 auto maker the industry leader in developing clean vehicles.

"Over time, being in GCC has become something of an impediment to pursuing our environmental initiatives in a credible way," Ford spokesman Terry Bresnihan said.

"We do believe there is something to climate change. There is enough evidence that something is happening that we ought to start looking at this seriously," he said.

Ford favors working with other companies on technology-based solutions, Bresnihan said.

Ford has made a series of announcements in the last two years that its light trucks would meet tougher emissions standards than the government requires. And Ford and other auto makers have been working on hybrid cars that get much greater mileage.

Global Climate Coalition spokesman Frank Maisano called Ford's decision "a little disappointing" and said he believes the company and the group share similar positions on global warming.

"Our intent at Ford is to move forward in progressive and constructive ways to address environmental issues," William Clay Ford wrote in a letter Friday explaining the company's decision to Dominican Sister Patricia Daly of the Interfaith Center on Corporate Responsibility.

Environmental groups applauded Ford's move. Ozone Action Director John Passacantando called it "a signal that corporate America is recognizing the reality of the threat."

If ratified, the 1997 climate treaty reached in Kyoto, Japan, would require that the United States reduce greenhouse emissions to below 1990 levels by 2008-2012, a cut of more than a third from where emissions are expected to be by then.

The Washington Post

DEC 7 1999

Circ: 852,262

Ford Shifts on Global Warming

Automaker Decides to Quit Coalition Battling Kyoto Treaty

By Warren Brown
and Martha M. Hamilton
Washington Post Staff Writers

Ford Motor Co. said yesterday that it is resigning from a coalition of oil companies, automakers, electric utilities and others opposed to the Kyoto Treaty, an international agreement to reduce emissions from fossil fuels that have been blamed for global warming.

The company advised the Global Climate Coalition—a Washington-based group that argues there isn't enough evidence of global warming—that it would not renew its membership. A Ford spokesman said the company is still opposed to the Kyoto Treaty but believes that there is evidence of global warming and that companies should work together to reduce carbon emissions.

The resignation from the GCC is in keeping with a strategy launched by Ford Chairman William Clay Ford Jr. and Jacques A. Nasser, the company's chief executive, to improve the company's image on environmental issues.

Both executives have vowed to cooperate with environmental initiatives whenever practicable, and to remove their company from the ranks of automakers and other businesses that traditionally oppose environmental and related regulations.

"We believe that some things can be done [to improve the environment] and we will work to do those things whenever possible," Ford said in a recent interview.

The resignation of a major U.S. manufacturing company was a blow to the Global Climate Coalition, one of the highest profile opponents of the Kyoto Treaty. BP Amoco Corp. and Royal Dutch/Shell Group previously had resigned from the coalition—but both companies are based in Europe, where environmental concerns traditionally have more sway among corporate leaders. Dow Chemical Co. also has resigned.

Supporters of the treaty immediately hailed Ford's move as a major coup. "In the same way that the GCC's power over the years has represented industry's unwillingness to acknowledge global warming, its current disintegration is a signal that corporate America is finally recognizing the reality of the threat," said John Passacantando, executive director of the environmental group Ozone Action.

Connie Holmes, senior vice president of the National Mining Association and the head of the GCC, which has more than 40 corporate members, said she was surprised by Ford's decision but played down its significance.

"We're quite disappointed that they chose to go on their own way," she said. "It's clearly up to them, but I'm sure that we're not that far apart on any of the issues that matter."

The New York Times

CONTINUED

Circ: 1,187,950

DEC 7 1999

The third study, by nine researchers headed by Dr. Konstantin Y. Vinnikov of the University of Maryland, analyzed data from five different sources and found that sea ice in the Northern Hemisphere as a whole had decreased by about 7 percent in the last 46 years.

Computer models of the ocean-atmosphere system reconstructed this trend accurately, said Dr. Alan Robock of Rutgers University, a member of the research team. The model simulations also determined that the trend was much larger than what would be expected to result from the climate system's natural variability. This assumes that the models can reproduce natural variability with some accuracy, an assumption that many experts question.

Fresh water flow may hold a key in global warming.

Nevertheless, Dr. Robock said that the study provides "strong support for the theory that humans are causing the climate to change."

If the climate is indeed warming because of human activity, many scientists say, the influx of fresh water to the North Atlantic could increase. Melting ice in the Arctic is not the only potential contributor. Water from melting glaciers in Greenland and other Arctic and sub-arctic islands could also contribute. Last year, scientists reported that the southern half of the Greenland ice cap was melting back by about two cubic miles a year, enough to cover Maryland with a sheet one foot thick.

(Runoff from melting glaciers contributes to a rising global sea level. Melting sea ice does not; like an ice cube in a glass of water, its change in state does not raise the water level.)

A third contributor to an influx of fresh water could be increased precipitation. A warmer atmosphere causes more water to evaporate from the oceans, and some scientists believe that some of this increased atmospheric moisture would be transported to the far north, where it would produce a heavier runoff of fresh water into the North Atlantic. This alone, some computer models indicate, would be enough to weaken the North Atlantic heat conveyor drastically in the 21st century.

How much fresh water might be necessary to halt, slow or weaken the conveyor is a crucial question that scientists cannot yet answer. Nor do they know how close the world might be to an abrupt change in the conveyor's behavior.

"I don't think there's any accurate assessment out there that would tell us," said Dr. Peter Schlosser, a geochemist at the Lamont-Doherty Earth Observatory.

If a warming atmosphere pumped enough fresh water into the ocean to shut down the conveyor, what would it mean? Dr. Schlosser and others say the magnitude of the resulting climate change might be different from those observed in the last glacial cycle. But, he said, "It might put the system into a state that might be a precondition for further change."

What might such a change entail?

Temperature and precipitation patterns could be drastically altered, much as El Niño alters them, and Dr. Schlosser says the alteration's effects would probably be felt throughout the Northern Hemisphere. But exactly how the patterns would change and therefore what their down-to-earth effects would be, he said, is an open question.

Los Angeles Times
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White House Climate Change Task Force

734 Jackson Place, N.W. • Washington, DC 20503

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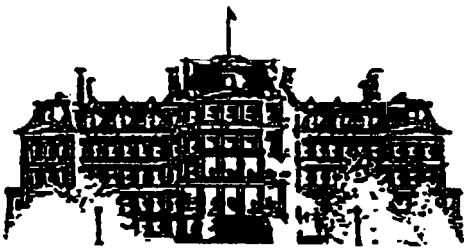

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ROOM: 319 - OEOB **TEL NUMBER:** (202) 395-1455

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NEWS RELEASE

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FOR IMMEDIATE RELEASE
June 9, 1998

Contact: **Frank Maisano**
(202) 628-3622

FIRST COMPREHENSIVE POST-KYOTO STUDY SHOWS TREATY WILL COST FAMILIES $2,700 A YEAR

WASHINGTON, D.C. – The climate treaty negotiated in Kyoto, Japan, last December will cost the typical American family of four $2,700 a year in higher costs for such things as energy, manufactured goods, and food, according to a study released today by the Global Climate Coalition.

The study, conducted by the independent economic forecasting firm WEFA, Inc., projects that the treaty jeopardizes 2.4 million jobs in the mining, energy, manufacturing, agriculture, and service industries.

WEFA is the first independent organization to calculate, both nationally and on a state-by-state basis, the full economic consequences of the treaty negotiated in Kyoto. In addition, it looks at impacts in 20 representative cities, counties, and metropolitan areas across the nation.

"While scientists debate the extent of human impact on the global climate, there is no question that the Kyoto treaty will have a dramatic effect on what American families pay for gasoline, electricity, and food," said Mary Novak, WEFA Senior Vice President and lead author of the study.

The WEFA study's cost projections are based on several key assumptions: that the U.S. will cut greenhouse gas emissions to a point seven percent below 1990 levels by the years 2008 to 2012, as required by the treaty; that there will be no international system for emissions trading with developing nations; and that there will be no Clean Development Mechanism enabling U.S. companies to build efficient new facilities in developing nations and take credit for emissions reductions.

- More -

"These assumptions reflect the way things are today," Novak said. "None of the devices included in the treaty to ease the economic burden of cutting U.S. energy consumption by 35 percent or more exists. And there is no reason to believe they will be available in time to make a difference. The sad truth is, we need to be looking at this kind of worst case scenario because that's the reality Americans face."

GCC President Gail McDonald said the WEFA study confirms the worst fears the U.S. Senate expressed last year when it voted 95-0 to oppose any treaty that would harm the American economy. "This treaty is a threat to our new prosperity," she said. "The WEFA study proves conclusively that the Kyoto Protocol is impractical and it won't work."

###

The Global Climate Coalition is an organization of trade associations and private companies established in 1989 to coordinate participation in the scientific and policy debate on global climate change.

Philadelphia, Pennsylvania	43,000
Phoenix, Arizona	68,000
San Jose, California	27,000
Seattle, Washington	24,000

Global Warming: The High Cost of the Kyoto Protocol

National and State Impacts – Executive Summary

WEFA

Implementing the Kyoto Protocol Would Reduce Economic Prosperity and Cost US Jobs

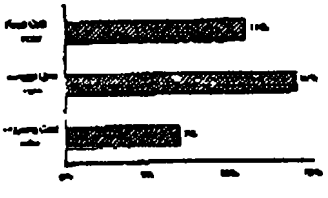
- Loss of 2.4 Million Jobs
- Loss of $300 billion in US GDP annually, an average loss of $2700 per household
- Loss of competitiveness to developing countries which refuse to commit to emission targets

Energy Prices Would Double for Businesses

(Percent increase from Baseline)

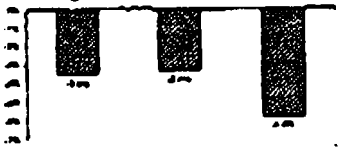
The Cost of Basic Necessities Would Rise

(Percent increase from Baseline)



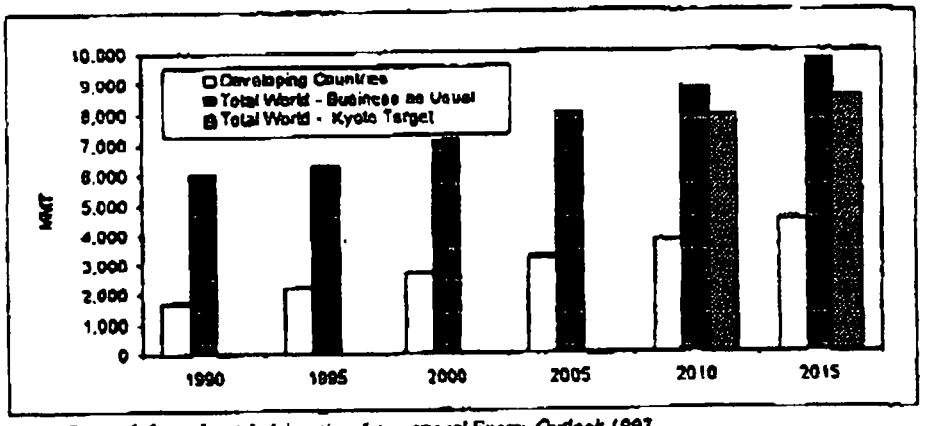
Every State Would Suffer Large Manufacturing Job Losses, Even Non-Energy-Intensive States

(Percent Decrease from Baseline)



The Kyoto Protocol is an international treaty that would commit the U.S. and other industrialized countries to reduce greenhouse gas emissions by late next decade. Developing countries would not commit to reduce their greenhouse gas emissions. Without the participation of the developing countries, the impact on global greenhouse gas emissions from implementing the Kyoto Protocol would be small.

The Kyoto Protocol Would Have Little Impact on Global Carbon Emissions from Man-Made Sources



Source: Energy Information Administration, *International Energy Outlook 1997*

The US faces a daunting task: reducing greenhouse gas emissions to 93% of the 1990 level. Today, carbon emissions exceed the target by 16%; by 2010 -- 37% or more.

The Kyoto Protocol's Call for Near-Term Action Costs US Jobs

Economists at academic institutions and independent firms, including WEFA, have helped define climate policy options and their likely costs for more than a decade. All of their studies estimated high costs at both the national and individual state levels – without carbon limits, the economy and energy-use are expected to grow steadily. Reducing energy-use to achieve carbon emission reductions to or below 1990 levels within 10-12 years requires sending very powerful price signals through the economy. However, these powerful price signals, implemented by adding permit fees or taxes to energy prices, result in: premature retirement of capital stock, a decline in GDP, a rise in unemployment, less capital for business investments, and less disposable household income. The result is a picture of a less prosperous America.

A Better Strategy: Promote Technological Progress and Global Participation

WEFA believes the better climate strategy would be to match policy actions to an evolving understanding of climate science, as global warming is likely to be gradual and limited to only a small change in average global temperature. Measures consistent with this approach would be:

- increase investments in technology and gradually replace existing capital stock
- encourage voluntary actions to reduce greenhouse gas emissions
- insist that developing countries meaningfully participate

Unemployment Rate in 2010:

State	Base	Kyoto
Alaska	7.20	8.61
Alabama	3.63	6.33
Arkansas	4.72	6.13
Arizona	3.03	6.73
California	6.10	7.73
Colorado	3.75	5.32
Connecticut	5.48	6.97
Delaware	4.71	6.64
Florida	4.97	6.66
Georgia	3.92	5.48
Hawaii	6.55	8.15
Iowa	5.07	6.29
Idaho	3.92	5.28
Illinois	3.38	6.06
Indiana	3.65	6.16
Kansas	4.21	5.39
Kentucky	4.60	7.10
Louisiana	6.35	8.85
Massachusetts	4.32	5.60
Maryland	4.71	6.92
Maine	5.31	6.37
Michigan	3.80	6.64
Minnesota	3.45	4.93
Missouri	4.04	6.66
Mississippi	6.88	7.94
Montana	6.04	9.94
North Carolina	3.95	6.14
North Dakota	2.78	3.66
Nebraska	3.09	4.82
New Hampshire	4.38	6.12
New Jersey	6.15	7.84
New Mexico	7.26	8.68
Nevada	4.64	6.48
New York	6.24	7.76
Ohio	3.92	6.74
Oklahoma	3.83	5.41
Oregon	6.47	8.63
Pennsylvania	4.66	6.37
Rhode Island	4.57	5.27
South Carolina	6.48	6.99
South Dakota	3.23	4.81
Tennessee	5.41	6.61
Texas	5.21	6.32
Utah	3.09	3.89
Virginia	4.21	6.06
Vermont	4.12	4.79
Washington	5.35	6.76
Wisconsin	2.59	4.71
West Virginia	4.87	7.09
Wyoming	6.45	8.29
U.S.	5.43	6.95

Overview

In Washington, DC and throughout the nation, elected officials and key leaders are debating whether the Kyoto Protocol, an international treaty negotiated by the Clinton Administration that would legally bind developed countries to reduce their greenhouse gas emissions, should be signed and ultimately ratified by the US Senate. By the terms of the Protocol, the US would have to reduce its emissions 7% below 1990 levels by late next decade. And, unless developing countries agree to binding emissions targets, a competitive imbalance would be created between industrial and developing nations.

Meeting the goal of the Kyoto Protocol would be a daunting task. In 1997, carbon emissions from the energy sector, the majority of greenhouse gas emissions, exceed the goal established at Kyoto by 16%. By late next decade, WEFA projects that carbon emissions would exceed the goal by at least 37%. Due to population increases, on a per capita basis, the required reduction would exceed 50%.

WEFA has analyzed the economic consequences to the U.S. of achieving the Kyoto target through domestic actions. These consequences would be severe, a result that others analyzing even less onerous targets also have reported. These include the U.S. Department of Energy, leading academic institutions, and other independent consulting firms. Meeting the Kyoto target would:

- Nearly double energy and electricity prices, and raise gasoline prices an additional 65 cents per gallon.
- Cost 2.4 million US jobs and reduce US total output $300 billion (1992$) annually, 3.2% below baseline GDP projections, an amount greater than the total expenditure on primary and secondary education.
- Harm U.S. competitiveness, as developing countries will not need to raise energy prices (or product prices) to meet mandatory greenhouse gas targets.
- Reduce the average annual household income nearly $2700, at a time when the cost of all goods, particularly food and basic necessities, would rise sharply.
- State tax revenues would be reduced by $93.1 billion due to job and output loses attributable to lost US competitiveness in the global market and higher energy costs.

The sharp rise in energy prices would reduce economic growth opportunities. Compounding this effect is the loss of competitiveness the industrialized countries would suffer, as developing countries would not raise energy prices to meet greenhouse gas reduction targets. Although developing countries argue that full responsibility for mitigating the risk of global warming rests with industrialized countries, developing countries exempted themselves from emission limits because they recognize the role energy plays in their economic development.

The Administration has argued that new technology can drastically reduce the costs of implementing the Kyoto Protocol, and that international permit trading, sinks and other market-based mechanisms mentioned in the Protocol also will lower costs. WEFA has carefully assessed the ability of technology to reduce costs over the time period in question. Without very powerful price incentives, such rapid technology improvement is extremely unlikely. Hence, technology implementation does not invalidate the estimates determined through this analysis. As for permit-trading and other

international market mechanisms, the Kyoto Protocol leaves all such instruments undefined, to be worked out in the future among the parties. Further, according to the Protocol, they are to be supplemental to indigenous efforts, not primary mechanisms to reach country targets. And finally, there is great hostility on the part of many countries to their use. For these reasons, WEFA does not ascribe significant savings to them.

The high cost estimates reported would only be justified if catastrophic climate change were imminent.

The high cost estimates reported would only be justified if catastrophic climate change were imminent. As global warming may be gradual and largely due to natural causes, measures that more closely link economic cost to the still-potential threat of very long-term global warming may be more appropriate. Such measures include encouraging voluntary actions, supporting academic research and educational programs on climate, and investing in the development and deployment new energy technologies.

As global warming may be gradual and largely due to natural causes, measures that more closely link economic cost to the still-potential threat of very long-term global warming may be more appropriate.

Key results of this study of meeting the Kyoto target through intra-country tradable permits are:

Energy prices would double

The estimated costs of achieving the Kyoto target are high at both the national and state level because, without carbon limits, the economy, population and energy use are expected to grow steadily. Reducing energy use to 1990 levels within 10 years or more requires sending very powerful price signals through the economy. WEFA's analysis has determined that a $265 per metric ton of carbon (1992$) would be required. When added to energy prices, consumers would see an increase of 65 cents per gallon of gasoline and nearly a doubling of natural gas and electricity prices for businesses.

Energy Price Impact
of Limiting Carbon Emissions to 93% of 1990 Levels by 2008-2012
(Percent Difference from Baseline)

	2010	2015	2020
Carbon Permit Fee ($96/metric ton)	$265	$310	$360
Consumer Impacts			
Home Heating Oil	73.2	83.7	95.4
Natural Gas	65.7	78.3	94.3
Electricity	55.7	65.7	72.9
Motor Gasoline	47.5	53.6	60.2
Difference, Cents Per Gallon (96$)	59.1	68.1	78.2
Business Impacts			
Commercial Establishments			
Distillate Fuel Oil	98.3	112.0	127.3
Natural Gas	76.3	89.9	107.5
Electricity	60.2	71.3	79.4
Industrial Facilities			
Residual Fuel Oil	184.5	210.9	240.1
Natural Gas	118.6	135.5	156.4
Electricity	87.7	98.3	105.1
Trucking and Rail			
Diesel	56.2	64.4	73.6
Difference, Cents Per Gallon (96$)	68.3	78.8	90.7

Consumers would see price increases in excess of 55% for electricity and 70% for home heating oil by 2010.

Commercial establishments, including hospitals and schools, as well as industrial facilities, would see electricity price increases of 60% by 2010.

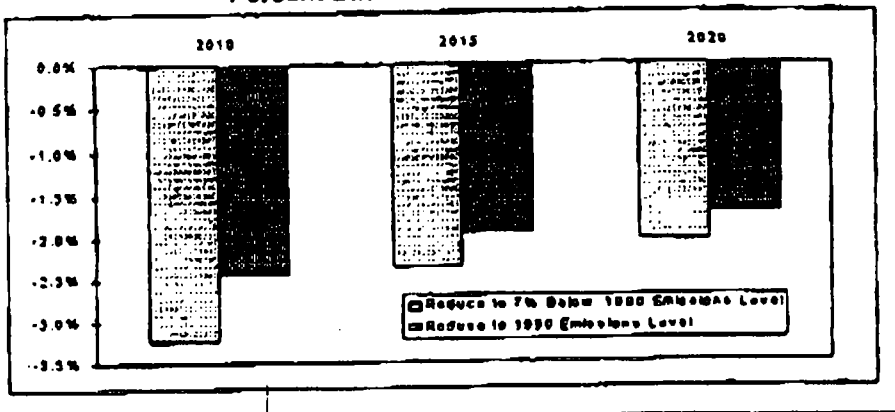
Truckers and railroads would see their fuel costs rise by nearly 70 cents per gallon by 2010.

Economic consequences would be severe: The U.S. would lose $300 billion in real GDP

The results paint a picture of a less prosperous 21st century America.

These powerful price signals result in premature retirement of capital stock, less capital for business investments, and less disposable household income as prices climb for electricity, gasoline, heating oil and air conditioning. As a result, the growth in GDP would be substantially slower, there would be a sharp rise in unemployment, salaries and wages would be lower, and prices for basic necessities such as food, medical care and housing would be significantly higher.

Percent Difference from Baseline GDP



Job losses would exceed 2.4 million; wages would be lower

Some workers would lose their jobs through a weaker economic environment.

All workers would face a slowing in their real wage growth as more workers compete for fewer jobs.

Implementing the Kyoto Protocol would have a devastating impact on workers. Some workers lose their jobs through a weaker economic environment while other workers lose relatively high paying manufacturing jobs and find only lower wage service jobs. All workers face a slowing in their real wage growth as more workers compete for fewer jobs. Hence, though the government compensates workers — through a refund of the fees collected to consume carbon-based energy resources — for their increased energy expenditures, total real disposable income falls due to reduced employment.

Families would suffer as the loss in aggregate income per household exceeds $2700

On a per household basis, the cost of signing the Kyoto Protocol results in an average real GDP loss in 2010 of $2,728 per household.

Real GDP Loss per Household	
2010	$2,728
2015	$2,083
2020	$1,876

Low and moderate income families would be hardest hit.

Low and moderate income families would be squeezed: higher costs, lower wages, fewer jobs.

Low and moderate income families would be hurt

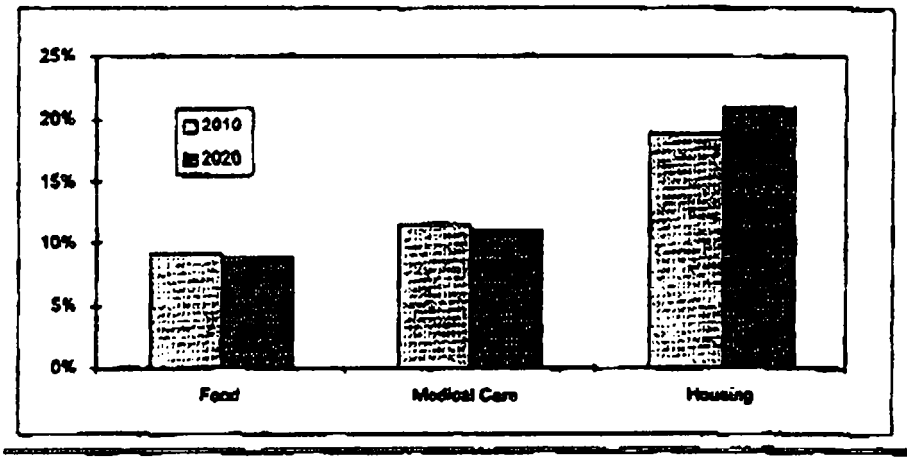
Low and moderate income families would be the ultimate losers under a carbon limits regime. Energy use is pervasive: all commercial activities require the use of energy, and energy is a necessity for households. Low and moderate income families spend a significant share of their income on basic necessities including energy. Raising energy prices would present an enormous hardship to these families. In combination with a weaker economy where workers are competing for less-well-paying jobs, families are projected to see a large rise in costs and a reduction in income.

Commodities such as food, medical care, and housing would be nearly 10% more expensive by 2020.

The cost of all necessities would rise substantially

Throughout the forecast period, food, medical care, and housing continue to become more expensive under the carbon stabilization case. By 2020, food is nearly 9% more expensive, medical care is roughly 11% higher, and housing is nearly 21% higher than the base case.

Inflation in the Prices of Food, Medical Care, and Housing: Percent Difference 7% Carbon Limitation Case and Base Case



The most severely impacted industries would be energy producing industries, industries that produce energy-intensive products, and industries that depend on export sales or face strong import competition.

As the imposition of carbon limits is not borne equally by all countries, U.S. exports would be relatively more expensive on world markets.

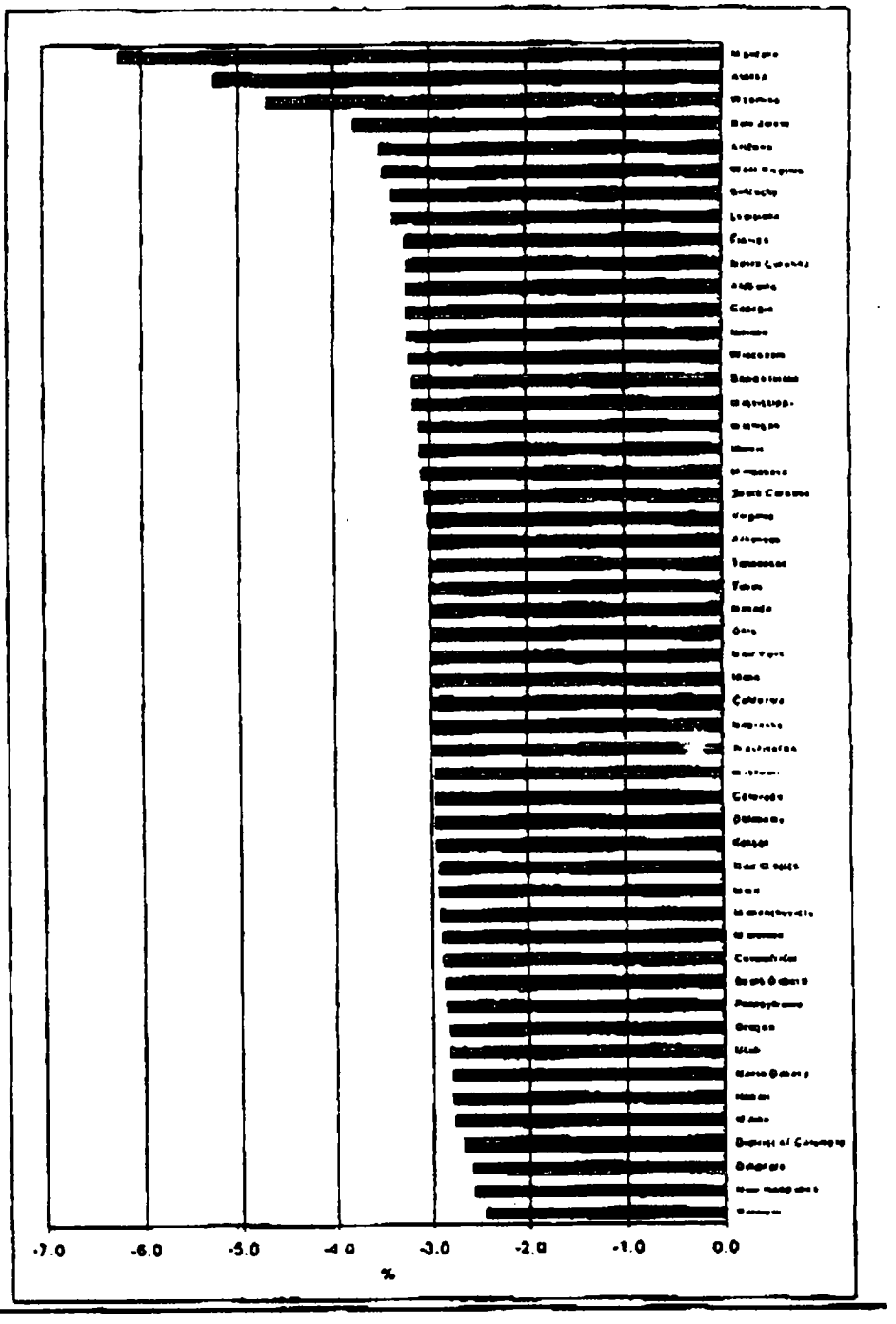
Every state would suffer output and job losses

The most severely affected industries would be energy producing industries, industries that produce energy-intensive products, and industries that depend on export sales or face strong import competition. Because the imposition of the carbon target and permit system is not borne equally by all countries (the developed economies of the OECD face comparable energy price increases, but the developing countries do not) U.S. exports are relatively more expensive on the world market. As a consequence, real exports are lowered dramatically, while imports are increased substantially, affecting:

- the chemicals and paper industries, which are both energy-intensive and already subject to stiff price competition from new producers in developing countries,
- the textile and apparel industries, which have difficulty competing on price due to higher U.S. labor rates, and
- the computer and electronic products industries, particularly from imports. (It is worth noting that the trade deficit in this area would escalate dramatically under the carbon emission limitation case.)

As a result, all states would suffer output and job losses that would persist as long as developing nations exempt themselves from the similar constraints on carbon emissions.

Real Gross State Product:
Percent Difference from Baseline in 2010



Proponents of ratifying the Kyoto Protocol offer a rejoinder to WEFA's analysis: 1) technology can greatly reduce the cost to the US economy; and 2) several conceptual mechanisms in the Protocol – such as sinks and international emission trading – can reduce the economic impact on the US. In response:

The Kyoto Protocol's Call for Early Action Reduces the Role Technology Could Play in Mitigating the Risk of Global Warming

Implementing the Protocol would require significant reductions in energy use.

The Administration has argued that the economic cost estimates from WEFA, the Energy Information Administration, and other independent firms and academics are overstated. Relying on its own technology assessments, the Administration concludes that substantial technological progress is available with little or no price incentives.

WEFA, through its on-going assessments of energy technology and analysis of the aggregate performance of the economy in improving energy use, comes to a different conclusion. Substantial improvements in energy-efficiency, particularly in newly restructured electric power markets, are included in WEFA's baseline. Further efficiency gains would be increasingly expensive. The extraordinary efficiency gains required for achieving the Kyoto target would only occur in response to extraordinary price incentives.

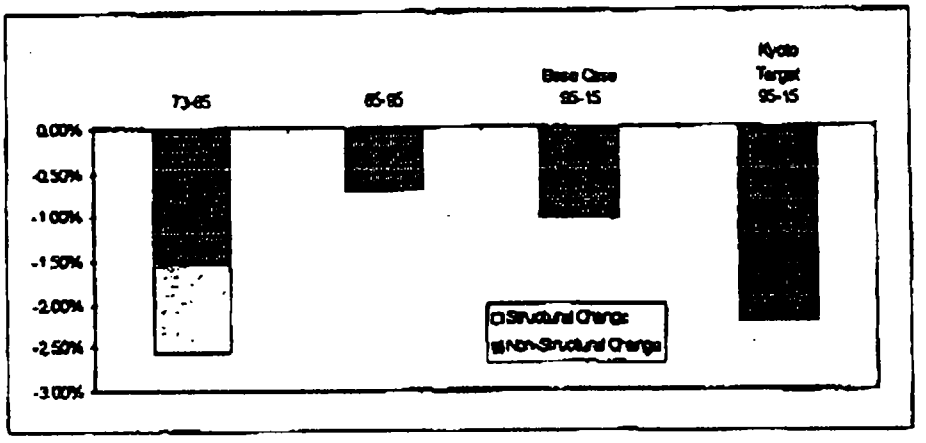
Any carbon permit fee must be high in order to provide the economic incentive for dramatic improvements over a base case, which already includes many technology advances and lower carbon emission estimates.

The carbon fee has to bring about a large reduction in the demand for energy services, major improvements in energy efficiency, as well as improve the opportunity for substitution of low carbon and non-carbon emitting fuels. The required change in energy efficiency to meet the goal is unprecedented. As shown in the chart, energy use per dollar of real GDP would need to improve at a rate in excess of 2.0% per year. Historically, the only period that experienced a similar rate of energy improvement was the late 1970s and early 1980s -- and nearly half of that improvement is attributable to structural changes in the economy (the loss of energy intensive well-paying manufacturing jobs overseas.) Without price incentives, the goal would not be reached.

Historically, the only period that experienced a rate of energy improvement similar to the one needed to meet the Kyoto target was the late 1970s and early 1980s.

Nearly half of that improvement is attributable to structural changes in the economy (the loss of energy intensive well-paying manufacturing jobs to overseas competitors.)

Compound Annual Growth Rates in the Energy to GDP Ratio (Quadrillion BTU/Billion 1992$)



Trading, Sinks And Other Mechanisms

Measures not included in WEFA's analysis are international emission trading, sinks, the inclusion of an additional three gases, and mechanisms for promoting technology transfer.

While the Kyoto Protocol includes provisions that have been touted by its proponents as a means for alleviating the cost of complying with the Protocol's goals, these measures have not been tested and have been heavily discounted in WEFA's analysis. These provisions are currently only conceptual or have very uncertain implications for meeting the target. Measures not included in WEFA's analysis are international emission trading, sinks, the inclusion of an additional three gases, and mechanisms for promoting technology transfer (Joint Implementation and the Clean Development Fund).

However, these "market based" mechanisms are undefined in the Protocol and hence have to be negotiated by a large number of UN nations, many of whom have expressed open hostility toward such ideas. Further, the Protocol itself indicates these may only be supplemental to a country's internal programs. And finally, most are limited in scope--emissions trading, for example, won't involve the developing nations--, have no history in international relations, will be costly and difficult to administer, and may conflict with existing GATT or other agreements. For these reasons, it is premature at best to assume costs can be significantly reduced by these measures.

The Kyoto Protocol Is Not the Only Option

WEFA believes that a better climate strategy would be to match policy actions to an evolving understanding of climate science.

As the present study and the work of others make clear, the Kyoto Protocol forces policymakers to decide whether they are willing to risk the economic well being of their nation. From both economic and risk-assessment viewpoints, WEFA believes that there is a better climate strategy; namely to match policy actions to an evolving understanding of climate science; to increase investments in technology (should it prove necessary to substantially reduce fossil fuel use); and to gradually retire existing capital stock.

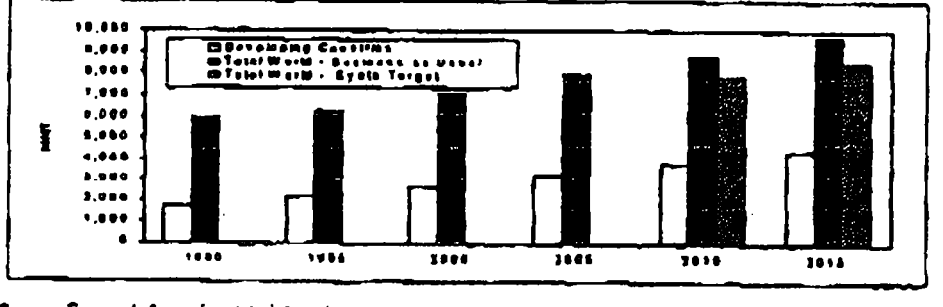
The developing economies of the world will not meaningfully participate in a greenhouse gas emission reduction or limitation program *until* technological alternatives exist that provide an equal or better opportunity for economic growth than is offered by fossil fuels.

Further support for investing in a technologically based solution is evident from the chart below. It is the developing countries that are the principal contributors to annual global emission increases. Driven by their expanding economies and their rising populations, the less developed economies of the world will emit more emissions than the industrialized economies by 2015. The reduction in carbon emissions that would result from the developed economies fully meeting their targets under the Kyoto Protocol would not significantly affect the annual global emissions. The developing economies of the world will not meaningfully participate in a greenhouse gas emission reduction or limitation program *until* there are technological alternatives that provide equal or better opportunities for economic growth than is offered by fossil fuels today.

The principal contributors to GHG emission growth are the emerging economies.

Reducing carbon emissions from participating industrialized countries by 5% would not substantially impact global emissions.

Global Carbon Emissions from Energy Use ***(Million Metric Tons)***



Source: Energy Information Administration, International Energy Outlook 1997