

**Facsimile Cover Sheet**



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**Regarding: Bush Team for IPCC Negotiations**

*Attached is a brief memo outlining the issues related to the on-going IPCC negotiations on the Third Assessment Report. I have also attached other material that may be useful to you.*

*I will call to discuss the recommendations regarding the team that can better represent the Bush Administration interests until key appointments and re-assessments are made.*

*Randy*

## Global Climate Science-Issues for 2001

### A. Intergovernmental Panel on Climate Change (IPCC)

1. The IPCC is on schedule to issue in late September 2001 its Third Assessment Report (TAR), composed of three Working Group Reports on the science, impacts and mitigation of climate change and a Synthesis Report. The IPCC is headed by Robert Watson, an American who is also the chief science person at the World Bank (Director, Environment Dept.) Watson was hand picked by Al Gore and served in the Clinton/Gore White House Office of Science and Technology policy. His tenure at the IPCC ends with the completion of the TAR. However, he could be extended at an IPCC session this year or next.

During the Hague meeting in November, Watson presented a sneak preview of the Third Assessment Report with the following caveat " *None of the conclusions presented in this report are taken from the TAR, but are consistent with the draft conclusions, which are subject to change until final government approval and acceptance early next year.*" His statement belied his real intent, which was to get media coverage of his views before there was a chance for the process to challenge his personal agenda.

#### ***Issue: Can Watson be replaced now at the request of the U.S.?***

The Working Group Reports are prepared by scientists, economists, engineers, and others, including some persons from industry and environmental organizations. **Each report includes a "Summary for Policy Makers" (SPM) that is approved by IPCC governments by consensus in a line-by-line review at a Working Group session with the underlying report (approx. 1000 pages) accepted by the Group at that session.**

In the case of the Working Group I report on science, the Group met in plenary in Shanghai, China on January 17-20, approved the SPM, and accepted the report. The US delegation (Moitke lead) was satisfied to raise no objections on the tone and content of the report. To avoid accountability to the Bush Administration, the meeting actually ran until 1:00 a.m. on January 21 which was exactly January 20, 12:00 noon in the U.S. The U.S. was represented by Clinton/Gore carry-overs with aggressive agendas:

1. State Department: **Jeff Moitke**, Deputy Director, Global Change Office, Oceans and International Environmental and Scientific Affairs (and Deputy Chief of Mission, Lesotho)
2. White House Office of Science and Technology Policy: **Rosina Bierbaum**, Associate Director, Environment,
3. White House U.S. Global Change Research Program: **Michael MacCracken**, Executive Director, National Assessment Coordination Office.

## Global Climate Science-Issues for 2001

Bierbaum and MacCracken were both actively involved in the production of the US National Assessment that has been roundly criticized for its political and scientific bias. The National Assessment was driven by a political schedule to help the Gore campaign. Several controlled leaks were used to get maximum media attention since Congressional oversight forced a delay in the release of the report.

**Issue: Have Bierbaum and MacCracken been removed from their positions of influence?**

**Issue: What was the U.S. position on the WG1 Report? Did it reflect the comments received?**

While the SPM was written to highlight the "human fingerprint", it also states that "Further research is required to improve the ability to detect, attribute and understand climate change, to reduce uncertainties, and to project future climate changes."

According to an AP story, Watson, in commenting on the report, which was released by the Group, but which has not yet been accepted by the full IPCC, said:

"The United States is way off meeting its targets," said Watson. "A country like China has done more, in my opinion, than a country like the United States to move forward in economic development while remaining environmentally sensitive."

China, of course, has no commitments under the Kyoto Protocol and its greenhouse gas emissions are growing and will soon exceed those of the U.S.

**2. Working Group II is scheduled to meet on the "Impacts of Climate Change" in plenary in Geneva, Switzerland, from February 12-16. Reportedly, the U.S. has submitted comments on the draft report by January 8, which was the deadline. Those comments have not been made public.**

**Issue: Who has reviewed those comments?**

**Issue: What is the U.S. position on the report?**

**Issue: Who will represent the U.S. at this meeting?**

## Global Climate Science-Issues for 2001

3. **Working Group III** is scheduled to meet on "Mitigation of Climate Change" in plenary in **Accra, Ghana, from February 28 to March 3**. Government comments on that draft report/SPM are due to be submitted by January 29.

**Issue: Who has reviewed those comments?**

**Issue: What is the U.S. position on the report?**

**Issue: Who will represent the U.S.? What is U.S. position?**

4. On **April 4-6, 2001**, the full IPCC is scheduled to meet in plenary in **Nairobi, Kenya**, to accept by consensus the results of the three Working Groups.

**Issue: Will the U.S. revisit the Working Group I comments of the Clinton/Gore representatives?**

**Issue: Who will represent the U.S. and what will be the U.S. position?**

**Issue: Can this report be deferred until the US has provided updated input(30-45 days)?**

5. The last element of the TAR is the **Synthesis Report (SR)** that is still being drafted under **Robert Watson's** control. A draft of the SR, including its SPM, is to be sent out for simultaneous expert and Government review and comment with a deadline of May 29. A second draft is scheduled to be given to Governments only for their review and comment on July 6 with a deadline of August 31. **The IPCC plenary will meet in London from September 24-29 to adopt/approve the Synthesis Report by consensus.**

**Issue: Can this report be deferred at least 45 days?**

Thereafter the entire TAR will be released(in time for political use at COP-7).

COP-6, held in The Hague last November, ended without finishing its work on implementation of the Kyoto Protocol and with an understanding that it would meet again in 2001, but with no date established. The SBI and SBSTA are scheduled to meet in Bonn, Germany, from May 21-June 1. Some Parties want COP-6 to reconvene during that time. **COP-7 is scheduled to meet October 29-November 9 in Marrakech, Morocco, together with the subsidiary bodies.**

## Global Climate Science-Issues for 2001

### Recommendations:

1. Restructure the U.S. attendance at upcoming IPCC meetings to assure none of the Clinton/Gore proponents are involved in any decisional activities.
  - a. Appoint **Dr. John Christy**, University of Alabama-Huntsville(Lead Author-Working Group I) as science lead for the balance of the IPCC process. Phone: 256.961.7763  
This replaces Bierbaum and MacCracken.
  - b. Appoint **Dr. Richard Lindzen**, MIT,(Lead Author-Working Group I) as a co-lead to conduct an immediate review of the comments on the Working Group reports( I, II and III) and to review the US comments to be submitted(II, III). Phone: 617.253.2432
  - c. Detail **Dr. Joe Friday**, National Research Council-Board on Atmospheric Sciences and Climate(Coordinated the "Research Pathways for the Next Decade" report that the Clinton Admin tried to bury), to work with Christy/Lindzen. Phone: 202.334.3512
  - d. Detail someone from the State Dept to work under the direction of Christy/Lindzen for the "consensus negotiations". This replaces Moitke.
2. Request that the April 4-6 full IPCC meeting be deferred at least 30 days until a re-assessment of US input can be made.
3. Request that all action related to the Third Assessment Report is deferred until the IPCC process is complete (30-45 days). This must include the Watson release of the draft Synthesis Report.
4. Explore the possibility of asking Speaker Hastert to make Dr. Harlan Watson, Hse Science Committee, available to work with the team. Dr. Watson has been recommended for the Assistant Secretary of State for Oceans position.

**Senate Committee on Commerce, Science and Technology****17 May 2000****Written Testimony  
John R. Christy  
University of Alabama in Huntsville**

Mr. Chairman and Committee Members, I am pleased to accept your invitation to offer information on climate change along with my own assessment. I am John Christy, Professor of Atmospheric Science and Director of the Earth System Science Center at the University of Alabama in Huntsville.

**CARBON DIOXIDE**

The concentration of carbon dioxide (CO<sub>2</sub>) is increasing in the atmosphere due primarily to the combustion of fossil fuels. It is our great fortune (because we produce so much of it) that CO<sub>2</sub> is not a pollutant. In simple terms, CO<sub>2</sub> is plant food. The green world we see around us would disappear if not for atmospheric CO<sub>2</sub>. These plants largely evolved at a time when the atmospheric CO<sub>2</sub> concentration was many times what it is today. Indeed, numerous studies indicate the present biosphere is being invigorated by the human-induced rise of CO<sub>2</sub>. In and of itself, therefore, the increasing concentration of CO<sub>2</sub> does not pose a toxic risk to the planet. It is the secondary impact of CO<sub>2</sub> that may present challenges to human life in the future. It has been proposed that CO<sub>2</sub> increases could cause climate change of a magnitude beyond what naturally occurs that would force costly adaptation or significant ecological stress. For example, sea level rise and/or reduced rainfall would be two possible effects likely to be costly to those regions so affected. Data from the past and projections from climate models are employed to provide insight on these concerns.

**CLIMATE MODELS**

Climate models attempt to describe the ocean/atmospheric system with equations which approximate the processes of nature. No model is perfect, because the system is incredibly complex. One modest goal of model simulations is to describe and predict the evolution of the ocean/atmospheric system in a way that is useful to discover possible environmental hazards which lie ahead. The goal is not to achieve a perfect forecast for every type of weather in every unique geographic region, but to provide information on changes in large-scale features. If in testing models for current large-scale features one finds conflict with observations, this suggests that at least some fundamental process, for example heat transfer, are not adequately described in the models.

### GLOBAL AVERAGES

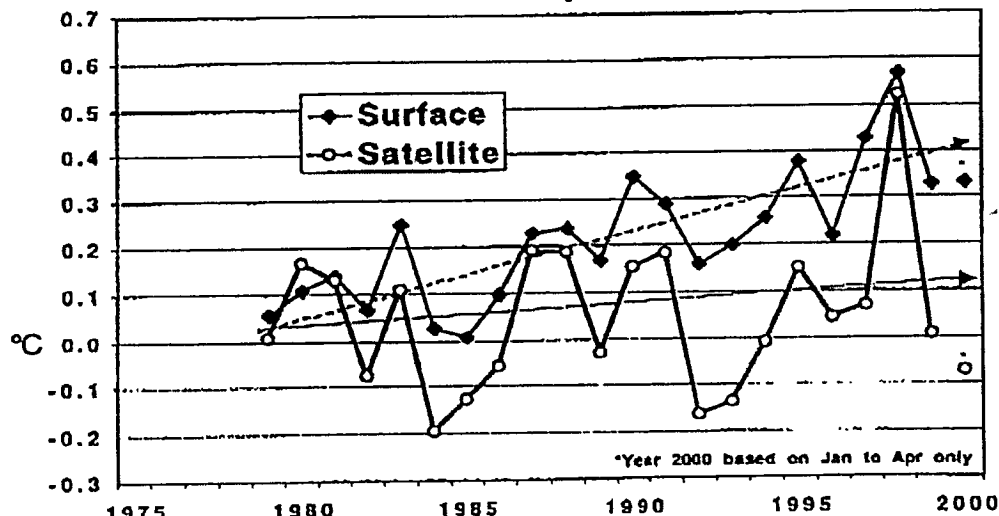
A universal feature of climate model projections of global average temperature changes due to enhanced greenhouse gasses is a rise in the temperature of the atmosphere from the surface to 30,000 feet. This temperature rise itself is projected to be significant at the surface, with increasing magnitude as one rises through this layer called the troposphere. Most people use the term Global Warming to describe this temperature rise.

Over the past 21-years various calculations of surface temperature do indeed show a rise between +0.45 and +0.65 °F (0.25 and 0.36 °C depending on which estimate is used.) This represents about half of the total surface warming since the 19<sup>th</sup> century. In the troposphere, however, the values, which include the satellite data Dr. Roy Spencer of NASA and I produce, show only a very slight warming between +0.09 and +0.18 °F (+0.05 and +0.10 °C) – a rate less than a third that observed at the surface. So, rather than seeing a warming that increases with altitude as climate models project, we see that in the real world the warming substantially decreases with altitude.



It is critically important in my view to correctly model tropospheric temperature changes because this is where much of the global atmospheric heat is moved about and eventually expelled to space. This layer also has a strong influence on surface temperature through radiation processes. It is conceivable that a model which retains too much heat in the troposphere, may also retain too much at the surface.

### Surface and Satellite Global Temperatures



John R. Christy  
University of Alabama in Huntsville

John R. Christy  
University of Alabama in Huntsville

The most recent modeling attempts which seek to reconcile this disparity suggest that when *some* of the actual climate processes are factored in, the models come very close to reality. These processes are events such as the Mt. Pinatubo eruption and slow changes such as ozone depletion.

On closer inspection of these studies, however, one finds that the apparent agreement was achieved only by comparing apples with oranges. The model experiments included *some* major processes, but not *all* major processes. When those additional processes are also factored in, such as real El Niños, the climate models do not produce the observed global average vertical temperature changes observed since 1979. In other words, the temperature of 60% of the atmosphere appears to be going in a direction not predicted by models. That, in my view, is a significant missing piece of the climate puzzle which introduces considerable uncertainty about a model's predictive utility.

It is certainly possible that the inability of the present generation of climate models to reproduce the reality of the past 21 years may only reflect the fact that the climate experiences large natural variations in the vertical temperature structure over such time periods. By recognizing this however, the implication is that any attention drawn to the surface temperature rise over the past two decades must also acknowledge the fact that 60% of the atmospheric mass has not similarly warmed.

#### WEATHER EXTREMES AND CLIMATE CHANGE

I want to encourage the committee to be suspicious of media reports in which weather extremes are given as proof of human-induced climate change. Weather extremes occur somewhere all the time. For example, you may have seen a recent report based on one version of the US surface temperature data stating that January through March of this year was the hottest ever recorded. The satellite data provide information for the entire globe and show that indeed tropospheric temperatures were much above average over the lower 48 states. However, most of the globe experienced below average temperatures in that massive bulk of the troposphere. It was our turn to be warm while in places such as the equatorial oceans and the Sahara Desert it was their turn to be cold.

Has hot weather occurred before in the US? All time record high temperatures by states begin in 1888. Only eleven of the states have uniquely seen record highs since 1950 (35 occurred prior to 1950, 4 states had records occurring both before and after 1950.) Hot weather happens. Similar findings appear from an examination of destructive weather events. The intensity and frequency of hurricanes have not increased. The intensity and frequency of tornadoes have not increased. (Let me quickly add that we now have more people and much more wealth in the paths of these destructive events so that the losses have certainly risen, but that is not due to climate change.) Droughts and wet spells have not statistically increased or decreased. Last summer's drought in the Northeast was remarkable in the sense that for the country as a whole, the typical percentage area covered by drought was below average. Deaths in US cities are no longer correlated with high temperatures, though deaths still increase during cold temperatures.





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### OPINION

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## Journal: Climate research beats drastic acts

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POOR CHICKEN LITTLE. Now he has even more to worry about than the sky falling. Humans are turning the planet into a frying pan, according to the latest global warming hysteria.

The Intergovernmental Panel on Climate Change, which five years ago reported there was "a discernable human influence" on rising global temperatures, on Monday said, "The rate of climate change this century is expected to be greater than it has been in the past 10,000 years."

We can't go on like this, the panel warns, or global temperatures could rise by 10.5 degrees over the next 100 years. In the most extreme projections, the panel said, melting Antarctic ice could raise sea levels by up to 10 feet over the next 1,000 years.

The hot air at the Shanghai, China, conference precedes May negotiations in Germany on how to carry out the Kyoto Protocol, the U.N.-sponsored agreement to reduce greenhouse gases to 5 percent below 1990 levels by 2010.

The protocol, championed by former Vice President Al Gore, would place the burden of reducing emissions of carbon dioxide and greenhouse gases on 32 industrialized nations and exempt 132 developing nations — including China, India and Mexico.

Talks in November failed to finalize a deal — and fortunately so, since participants had refused to hold off until the new U.S. administration took office.

But one little fact is conveniently neglected. Humans are responsible for just 4.5 percent of the 173.1 billion tons of greenhouse gases produced annually. The rest is nature — volcanic eruptions, sea-water evaporation and decaying matter, for example. And if nature decides to raise temperatures or melt Antarctic ice, there's not a darn thing that we or the Kyoto Protocol will do to change it.

Which is why it makes perfect sense for President Bush to continue his stance that more research on mankind's impact on world climate is needed, and to oppose the Kyoto Protocol.

Of course, the climate change panel of scientists from 99 nations supports the

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protocol and is sponsored by the United Nations and the World Meteorological Organization ([www.wmo.ch](http://www.wmo.ch)), whose "science" is liberally salted with a sociopolitical agenda. It did no original research, picking and choosing instead from other climate studies.

Experts and even peer reviewers of the report have questioned the panel's conclusions, arguing that opposing evidence that would have provided balance was excluded.

Meanwhile, nobody's discussing how reducing emissions unnecessarily will have major implications for mankind by causing international economic hardship, including higher energy costs and less energy investment, fewer jobs, higher taxes and costlier goods. But hey, that's OK. Because the taxpayers of the United States and other industrialized nations are expected to pay the price.

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**S. FRED SINGER**

# Global warming rewarmed

**W**ith Al Gore's election defeat, global warming has lost its most dedicated governmental sponsor. Mr. Gore may not have invented climate change but he certainly has been its most zealous advocate. He repeatedly proclaimed a non-existent scientific consensus, labeling skeptical scientists as naysayers who view global warming (in his words) as the equivalent of the Easter Bunny.

Now that he has retreated to the Columbia University School of Journalism in New York City, will the global warming scare fade from the scene? Don't bet on it. There are too many now whose perks, power and prestige depend on keeping the myth alive — not to mention the billions of governmental dollars flowing out to these eager recipients. Annual conferences in attractive cities around the world, involving some 180 (yes, count them) national delegations, with committee meetings in high-priced resort hotels in between: It's a great lifestyle and a full-time career for a growing number of scientists, bureaucrats and politicians, paid by the hapless taxpayers.

Don't expect these folks to pay any attention to climate science. For them, it is "settled" and "compelling" — to use Bill Clinton's words. The UNEP science panel sponsored by the United Nations Environment Program keeps coming up with ever-more fantastic predictions of coming disasters.

Last fall, this group leaked a summary of their findings to influential newspapers, hoping to boost Mr. Gore's chances of being elected and also providing added urgency to negotiations at The Hague on how to put teeth into the Kyoto Protocol. This international accord has not been ratified by any of the industrialized nations; if adopted, it would restrict their energy use by between 30 percent and 40 percent within the next decade. So, if you like the California power crisis, you'll love Kyoto.

The Hague talks last November collapsed over relatively minor disagreements; but Kyoto is not yet dead. Its proponents are not giving

up not just yet, at any rate. What will finally stamp out Kyoto? The U.S. Senate, which would reject such a treaty once President Bush submits it for ratification. Senators of both

*The science panel sponsored by the United Nations keeps coming up with fantastic predictions of coming disasters.*

parties recognize the economic danger of energy restrictions and are becoming aware of the shakiness of the science that purports to back the Kyoto Protocol.

To counteract this trend, the U.N. science panel has just rehearsed its same old tired predictions of last fall. They managed to get front-page attention from The Washington Post, which accepted uncritically the not-yet-approved summary of the U.N. climate report. It claimed that the climate had warmed in the last 50 years and that computer models predict a rise of more than 10 degrees F in the next 100 years, with all sorts of dire consequences. Other scientists (including myself) see little or no

warming since about 1940 and therefore do not put much faith in these theoretical forecasts.

Laymen are understandably confused when scientists disagree. The explanation is simple. The U.N. group gets a warming trend by averaging data from all surface thermometers, including poorly characterized measurements of the sea surface. The so-called "skeptics" point to the absence of a temperature rise from well-controlled weather stations in the United States and Europe, where the local heating from urban effects can be eliminated. More important, the truly global data from weather satellites show no appreciable warming trend since 1979, and these results are independently confirmed by instruments carried in weather balloons.

Finally, we have additional temperature data that don't rely on instruments at all but come from "proxies" like tree rings, ice cores, and ocean sediments. While they all evidence a pre-1940 warming trend (starting in the 19th century when human influences were minor), they do not show a trend since about 1940. (Melting glaciers, shrinking Arctic sea ice and sea level rise, while real, are likely the delayed result of an earlier pre-1940 warming of the world climate that has little to do with human activity.)

Hence our conclusion: The balance of evidence suggests climate has not warmed appreciably in the past 60 years. We expect future climate effects from human activities to be barely detectable and certainly inconsequential. Let's see if Al Gore and the School of Journalism picks up on this. I am taking bets.

*S. Fred Singer is professor emeritus of environmental sciences at the University of Virginia and former director of the U.S. Weather Satellite Service (now part of the National Oceanic and Atmospheric Administration).*

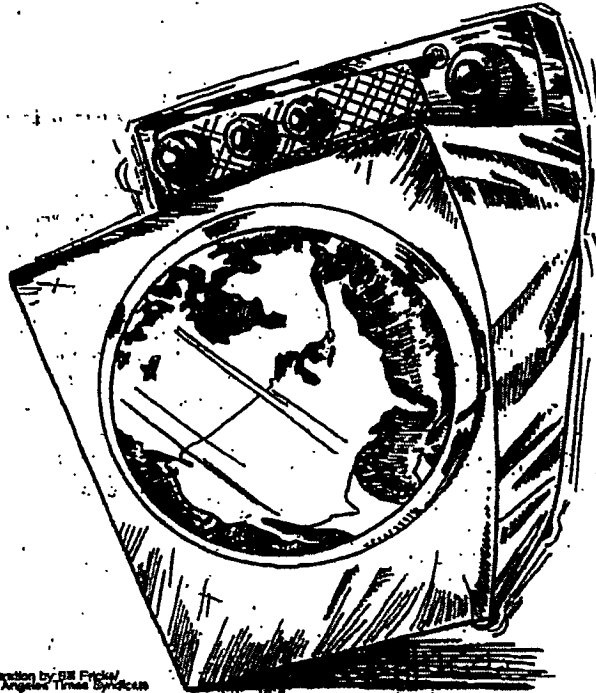


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January 24, 2001

## Hot Heads

The latest global warming predictions are hype, not hard data.

By Ronald Bailey, Reason Science Correspondent

"Scientists Issue Dire Prediction on Warming" blares the lead headline in the January 23 *Washington Post*. The earth's temperature could rise by as much 10.4 degrees Fahrenheit by 2100 and sea levels could rise by 34 inches, warns the *Post*. The headline and the data derive from the new "Summary for Policymakers," just issued by the United Nation's Intergovernmental Panel on Climate Change (IPCC), which has been meeting in Shanghai. In 1995, the last time the IPCC officially predicted the 21<sup>st</sup> century's weather, the maximum projected temperature increase was just 6.3 degrees Fahrenheit. So things must be really heating up fast, right?

Not exactly. "The catastrophic warming projections are based on one set of scenarios that are way off the chart," says John Christy, a professor of Atmospheric Science and director of the Earth System Science Center at the University of Alabama at Huntsville.

The headline-grabbing projected temperature increase comes from the IPCC's most extreme scenario, out of some 35, that it dreamed up for possible future greenhouse gas emissions. In this ultra-worst-case scenario, a rapidly growing world population merrily burns more and more fossil fuels with virtually no improvement in technology. Then this gloomy econometric forecast is fed into the global climate model most sensitive to perturbations and voila!—cataclysmic catastrophe.

In other words, the prediction that the world might drastically heat up is achieved by combining the outputs from notoriously inaccurate models of economic, demographic, and technological change, and then mixing those results with atmospheric models that are even more fraught with great uncertainties. The last time governments were urged to drastic action by concerned scientists on the basis of computer model results was the *Limits to Growth* fiasco in the 1970s.

Back then, the Club of Rome solemnly told world leaders that humanity would likely be completely out oil, gas, copper, zinc, gold, and tin by now. If that wasn't bad enough, the Club also said we'd be choking on pollution and experiencing massive famines. President Jimmy Carter commissioned the infamous *Global 2000 Report*, which seconded the projections made by the limits-to-growth crowd.

Such predictions have been spectacularly wrong: The world has yet to run out of any of these minerals, food has never been cheaper, and pollution levels have been declining in developed countries for three decades. Air pollution is even going down in Mexico City, one of the most heavily polluted cities on the planet.

"The climate models are still not able to reproduce what we've seen in the past few decades," says Alabama's Christy. In fact, they predict much more warming than is shown by highly accurate satellite temperature data that's been collected over the past 22 years. The satellites find almost no atmospheric warming, with the earth's lower atmosphere warming at only about 0.04 degrees Celsius per decade.

The IPCC acknowledges that the satellite data don't show much warming. It insists, however, that "the global average surface temperature has increased significantly by +0.15 degrees Celsius per decade." The summary then mildly notes that differences between the satellite data and the surface "are not fully resolved." Nevertheless, the IPCC summary boldly claims that "confidence in the ability of the models to project future climate has increased." Such confidence, however is unwarranted. The models predict that the atmosphere's temperature should be going up more rapidly than the surface temperature. Yet the opposite is occurring.

What could account for the differences in the surface temperature trends and the atmospheric temperature trends? Roger Pielke, Sr., professor of Atmospheric Sciences at Colorado State University, argues that with regard to surface temperatures "land use changes are probably more significant than the radiative effects of doubling carbon dioxide." Pielke believes that the IPCC has misinterpreted increased surface temperatures resulting from land use changes like deforestation, farming, suburbanization, and urbanization, as being changes in atmospheric temperatures caused by increased levels of greenhouse gases. Taking the effects of land use changes into account could explain the discrepancy between the IPCC's surface temperature data trends and the satellite trends. If that's the case, then increased carbon dioxide levels as a result of burning fossil fuels recedes as a climatological worry.

Pielke also points out that the global climate models do not account for the effects of increased carbon dioxide on plant growth. For example, doubled carbon dioxide levels leads to greater plant growth and improved water-use efficiency. In a grassland model that he ran, the net effect was cooler day-time and warmer night-time temperatures, not apocalypse.

The IPCC summary openly acknowledges that current models can't account for clouds. This is vital, since clouds act as shades during the day and as blankets at night; they lower daytime temperatures while increasing nighttime ones. The IPCC finds that cloud cover has increased by 2 percent in the last century and that nighttime daily minimum temperatures are going up at twice the rate of daytime high temperatures. What appears to be happening in reality, though not in the models, is that most of the warming over the last few decades is occurring during winter nights. This means that growing seasons are lengthening in the temperate zones, as frosts end earlier in spring and start later in autumn.

"There is clear evidence that we are changing the climate, but we have no idea if the net effect is warming, cooling, moistening, or drying," concludes Pielke.

Despite these vast uncertainties, Klaus Toepfer, head of the U.N. Environment Program, has proclaimed, "The scientific consensus presented in this comprehensive report about human-induced climate change should sound alarm bells in every national capital and every local community."

Adds Robert Watson, chair of the IPCC: "This adds impetus for governments of the world to find ways to live up to their commitments...to reduce emissions in greenhouse gases." Pushing that "impetus" may be the real point of the summary: to scare the bejesus out of skeptical politicians and the public, the better to bring both back to the bargaining table.

Last November, the negotiations at the Hague over the Kyoto Protocol, which sets limits on the levels of greenhouse gases that countries would be permitted to emit by 2010-2012, collapsed. The negotiations fell apart because the Europeans refused to go along with the sensible American point that if one counts everything that adds carbon dioxide to the air, then one should also count things that subtract carbon dioxide from the air, such as forests and farms, which the U.S. has in abundance. Negotiations are slated to resume in Bonn this May, and a few headlines about searing temperatures by the end of the 21st century couldn't hurt the Protocol's supporters.

Perhaps the best way to think of the Kyoto Protocol is as an attempt to plan the entire world's energy future for the next century. Just how quixotic this is becomes obvious when you think of how such an effort would have fared at the beginning of the 20<sup>th</sup> century. Even the smartest council of scientists and politicians in 1900 would have been unable to project how energy would be used today. In 1900, there were essentially no cars and no electric lighting. Telephones were rarities and airplanes, refrigerators, televisions, radios, and air conditioners were unknown. Virtually no one had central heating, and computers and other electronic gadgets were not even on the drawing board. The list of such energy-using inventions that are central to our daily lives is nearly endless.

It is simply ludicrous to think that a 1900 version of the IPCC could have planned our energy supplies for today. Given the relentless pace of technological change, today's IPCC is arguably in an even worse position to predict what the global energy mix will be 100 years from now.

But don't expect the IPCC to admit as much. "The United States is way off meeting its targets," scolded Watson. "A country like China has done more, in my opinion, than a country like the United States to move forward in economic development while remaining environmentally sensitive." Say what? China has been developing economically at a blistering pace, but breathing the air in Shanghai is like smoking a pack of cigarettes per day—and that's not to mention continuing deforestation and the much-loathed Three Gorges Dam project. Perhaps more to the point, under the Kyoto Protocol, China, like most developing countries, is not obliged to cut back on any greenhouse gas emissions whatsoever.

"They present the summary as a consensus," says Colorado State's Pielke. "But it's really a selective advocacy document. It's not science. They ignore data and criticisms that don't fit their hypothesis of atmospheric warming."

So what is really happening with global climate? The summary correctly concludes that during the 20<sup>th</sup> century, global average temperatures have increased by around 1 degree Fahrenheit and the sea level has risen 4 to 8 inches. Most scientists agree that the carbon dioxide emitted from the burning of fossil fuels accounts for some, but not all, of the increase in temperatures that has occurred in the 20<sup>th</sup> century.

And what about the future? The satellite data are telling us the results of an ongoing global climate experiment. Projecting the satellite trends into the future means that the world can expect about 1 degree Celsius of warming by 2100. That's not nothing, but it's also not the sort of prediction that conjures scare headlines.

*Ronald Bailey (rbailey@reason.com) is Reason Magazine's science correspondent.*

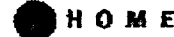


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# Feature /

## WORLD CLIMATE REPORT



### 11°F Warming? How U.N.-Scientific!

Here's the newest old story we know: The United Nations announces that global warming will be even worse than they thought.

It's as old as the IPCC Director, Robert T. Watson, who knows this ploy well. In 1992, he announced that stratospheric ozone depletion was "worse than we thought" and that an ozone hole over the Northern Hemisphere was imminent. Then-Senator Al Gore called it an "ozone hole over Kennebunkport," referring to the summer home of the father of our new President.

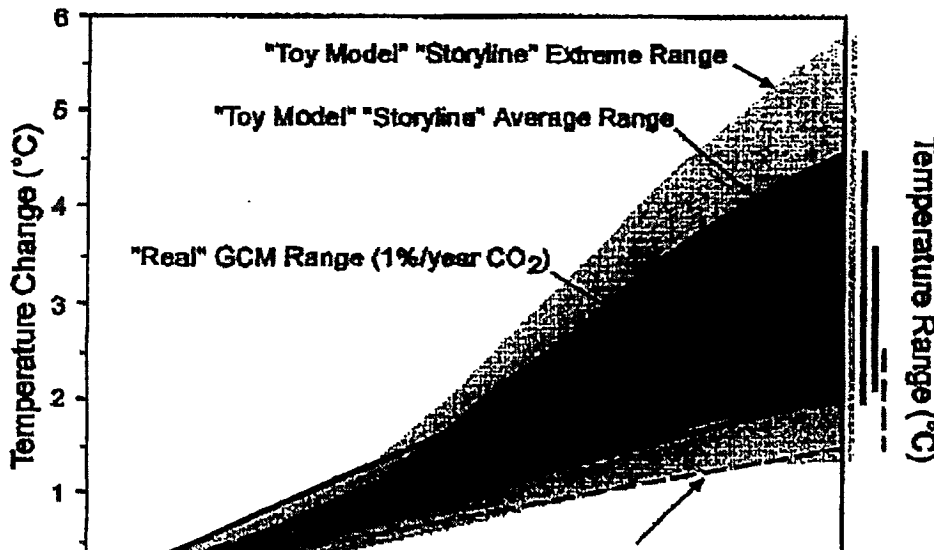
Watson's purpose was to stampede the U.S. Senate into legislation on chlorofluorocarbon refrigerants; within days he got his wish, 99-1. The ozone hole never appeared. But the law remains.

They just tried the same ploy on global warming. Fortunately, the Senate's environmentalists have bigger fish to fry, such as Interior Secretary- Designate Gale Norton, so this time they are not biting.

This time, Watson and the United Nations Intergovernmental Panel on Climate Change announced that warming in this century could be as large as 10.5°F (5.8°C), based upon new calculations that were approved by all the governments the U.N. could gather in Shanghai on Jan. 21, 2001.

Along for the ride were five U.S. representatives, including Mike MacCracken, head of the U.S. Global Change Research Program (USGCRP), and Rosina Bierbaum, Associate Director of the White House office of Science and Technology (IPCC head Bob Watson's previous post). Those two rather powerful figures raised no objections to this preposterous scenario.

That's right: preposterous. After all, what is there to believe about it? Nothing! The nearly 11°F figure, in fact results from only *one* of 245 separate combinations of social "storylines" (that's their word, not ours) and their toy climate models.



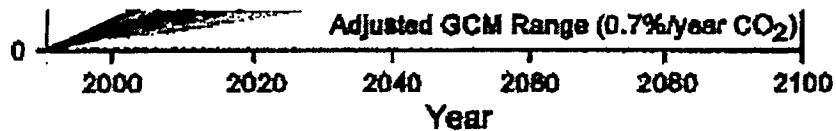


Figure 1. The nearly 11°F (5.8°C) of warming is the most extreme result produced by the 245 possible combinations of "storylines" and "toy models." The full range of these combinations (1.4°C–5.8°C) is depicted by the light gray region above. The dark gray shading depicts the range of the model average for each storyline. The solid lines encompass the range of nearly 20 full-scale general circulation models run with a storyline in which carbon dioxide increases at 1 percent per year. The dashed lines encompass the range if the results of these models are adjusted to better reflect an observed increase of about 0.7 percent per year. Notice the extreme temperature rise in this range is about 4.5°F (2.5°C)—less than half of the IPCC's exaggerated result of 10.5°F (5.8°C).

## REDUCTION IN FORCE

Our words may seem inflammatory, even for *World Climate Report*, but they're probably an understatement. In fact, the U.N. and the global warming crowd have gone from future "forecasts" (issued decades ago), to "scenarios" (from the 1990s) to "storylines." Consistent with the other outgoing Administration policies, each step allows the presenter less and less personal responsibility for failure.

As an example, how many times did the U.N. insist in the 1990s that its failed forecast for midwestern U.S. drought wasn't a forecast at all, but merely a "scenario"?

As early as March 1991, then-IPCC leader Sir John Houghton remonstrated this editor in a London debate that the U.N. future projections were the latter rather than the former.

By 1998, NASA Scientist James Hansen was writing in the *Proceedings of the National Academy of Sciences* that observed changes in net greenhouse gases were running at the lowest projections, so instead, the new concept of "storyline" was invented.

## THE STORYLINE STORYLINE

These "storylines" first surfaced in public in July 8, 1999, at the end of a blisteringly hot week, as MSNBC's "The News" put the revised estimates of future warming up as the lead story. They were the product of federal climatologist Tom Wigley, who at that time was releasing those estimates under the aegis of the Pew Foundation on Global Climate Change, a group that was nakedly advocating for the Kyoto Protocol on global warming and its mandated massive cuts in U.S. emissions.

Often, they are pure bunkum. For example, as originally published (the words have now been changed to protect the guilty), storyline A1 is a world where "people pursue personal wealth rather than environmental quality." Either/or. Everyone knows that is a contradiction: It is wealthy societies that invariably value (and can afford) environmental protection.

That storyline was then input into a highly simplified calculation model of warming that assumes, among other things, that the earth's temperature changes are uniform, and that there aren't any major ocean currents, mountains, or thunderstorms. That step was required because inputting the storylines directly to the much more complicated general circulation climate models (GCMs) would have taken far too long.



The upshot is that the "toy models" (which is what other scientists call them behind their creators' backs) produce a different mean level of warming than the more sophisticated GCMs (which themselves suffer from major problems).

## COAL COMFORT

The "storyline" that results in the nearly 11°F of warming is equivalently preposterous. It assumes that everyone pretty much stops burning coal, pronto.

Not very likely. Coal supplies 56 percent of U.S. electricity at the present time (and apparently not enough to California), and is the fuel of choice for many developing countries. Its combustion is not going to suddenly shriek to a halt. There are too many relatively new power plants paying off too many widowed wives who hold their bonds as a safe, conservative investment.

But that's not enough to pop out a big warming. After all, coal produces only a bit more carbon dioxide per unit energy than other fossil fuels. Rather, this storyline assumes that another coal-related emission—sulfate aerosol—stops at the same time, and that sulfates are currently responsible for a massive cooling of the atmosphere. Massive, as in about twice as much cooling as the earth has warmed in the last 100 years.

## THE SULFATE SCENARIO

And here's where UN-science really comes into play. The fact of the matter is that no one has ever measured the global cooling effect of sulfate aerosol. And estimates of it have been all over the map.

In 1997, NASA scientist James Hansen argued that their effect might be zero or even a slight warming. In 2000, NASA scientist James Hansen argued that they must be exerting a cooling on the atmosphere that is equal to the global warming caused by carbon dioxide. In that same paper, he argued that this was the only way to explain how little the planet had warmed!

The IPCC ought to have looked at the spate of calculations coming out of Texas A&M University demonstrating that the effect of sulfates must in fact be very small. Or it could have acknowledged that their own climate models that modify greenhouse warming with sulfate cooling have overestimated the temperature change averaged across the bottom layer of the atmosphere (the "Troposphere") by a factor of 10 in the last two and a half decades.

Frankly, it is doubtful that MacCracken or Bierbaum were aware of either of these facts. Both have done their level best to keep scientists who know this from having a federal forum.

For what it's worth, the other scientific member of the Shanghai team was Harvard's James McCarthy, the head of the IPCC's Working Group II (Climate Change: Impacts, Adaptation and Vulnerability) and also the intrepid reporter who last September got *The New York Times* to announce that his cruise boat had found open water at the North Pole and that the last time there had been such open water was 50 million years ago. Two weeks later they retracted that. And the U.N.'s own temperature records show that the recent polar warming is no larger than one that peaked about 70 years ago—long before it could have been caused by humans.

So all of these prestigious individuals sat mute while the U.N. adopted this UN-scientific position in Shanghai.

A few minutes after the meeting was rushed to a close, around 12:59 a.m., Sunday,

Jan. 21, something else happened that explained the urgency of the moment.

Because of time and dateline effects, that time coincided with High Noon on Jan. 20 in Washington, D.C. What happened? The U.S. representatives had lost their legitimacy.

So the final act of the outgoing Administration—after all the executive orders, land grabs, keyboard vandalism, and pardons—was to Shanghai global warming science.

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Phil - Fil

**PROPOSED US POLICY ON CONTROL OF CO<sub>2</sub> CONTENT OF THE  
ATMOSPHERE**

**By**

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**February 22, 2001**

**Abstract**

**Recent articles in *Science* magazine indicate that the US and Canada may be a net sink for CO<sub>2</sub>, not a net source. Natural sequestration by agriculture and trees appears to be the cause of the decrease in the atmospheric CO<sub>2</sub> content of the winds as they blow from west to east over North America. This sink is expected to diminish over time so that other sinks will be required. To maintain the balance, perhaps the best additional sink is by means of CO<sub>2</sub> sequestering through surface fertilization of the deep tropical ocean, which can handle the impact of a growing population and economy while removing the future pressure on agriculture land for additional CO<sub>2</sub> sequestration.**

**001531**

## **Proposed US Policy on Control of CO<sub>2</sub> Content of the Atmosphere**

### **Executive Summary**

The recent increase in the carbon dioxide (CO<sub>2</sub>) content of the atmosphere has given rise to concerns of possible adverse effects on climate and a call for early actions to address these concerns. Debate on these matters has centered on the Kyoto Protocol and the subsequent COP-6 meeting. The general tenor of these debates has been that the US, as the producer of 24% of the CO<sub>2</sub> released into the atmosphere from burning fossil fuels, is mainly responsible for the problem and must bear the largest cost of solving it. Such "solution" does not include the major use of sinks to remove the CO<sub>2</sub> from the atmosphere but only the emissions.

This view completely ignores the fact that the US, Canada and Eurasia do not add CO<sub>2</sub> to the atmosphere but, rather, remove it due to the large terrestrial sinks produced by their forestation and agriculture<sup>1</sup>. The most recent study indicates that the wind, blowing from the East Coast of North America out over the Atlantic, has a lower concentration of CO<sub>2</sub> than the wind blowing in over the West Coast, making North America a large terrestrial sink<sup>2,3</sup>. This sink has been modeled but its extent and permanence is controversial.<sup>4,5</sup> Therefore, the US needs to develop and prove, scientifically, technologies that can add to this sink and are low cost, environmentally benign, high capacity and long-lived. Development of sinks, such as sequestration by fertilization of the open ocean surface is an approach that meets these criteria. With new technologies the US can address the concerns of people regarding the CO<sub>2</sub> content of the atmosphere and can welcome other nations to join in this endeavor looking to reduce the net CO<sub>2</sub> production of the world, perhaps to zero, should this prove to be necessary in the future.

### **Introduction**

The CO<sub>2</sub> content of the atmosphere has risen from about 285 ppm to 367 ppm over the past 50 years. This has produced concerns in many people that adverse effects will follow, including global warming, sea level rise, destructive weather patterns, increase in tropical disease and reduced food production worldwide. While there are some positive effects that have been measured, such as increased plant growth and increased nighttime temperature in the Arctic, peoples' concerns remain and must be addressed. This has been done on small scales by increasing the efficiency of energy production and energy use, getting more value from each pound of carbon burned as well as small tree planting and saline aquifer injection projects to produce sinks. Wind and solar energy production has received large incentives. There has also been a large shift from coal to natural gas, which decreases the CO<sub>2</sub> produced per unit of heat or electricity generated but with the increases in natural gas prices, at a considerable cost. In the US there has been an emphasis on increasing the fuel efficiency of cars and several states have mandated that electric utilities decrease the net CO<sub>2</sub> emitted per kilowatt-hour produced. All of this is not

sufficient to take care of peoples' concerns, so an international agreement has been sought to move the process forward.

### **The Kyoto Protocol**

An international meeting was held in December 1997 to seek agreed-upon CO<sub>2</sub> emissions reductions from the developed countries, embodied in the Kyoto Protocol. The agreement sets out goals for developed countries averaging 5.2% below 1990 emissions by 2008 to 2012. This would mean a reduction of about 30% for the US due to our growing economy and population. The agreement mandated reductions that must be verifiable, deliberate (rather than a result of standard practice), permanent and avoid saturation and leakage. They must not include things that would happen anyway and they must "hurt". Trading of CO<sub>2</sub> credits were discouraged, leaving increased efficiency and reduced GNP the methods of choice. Developing countries were excused on the basis that countries like the US were the ones that caused the problem and should feel the pain of the solution. Emerging nations like China and India also had no responsibility and can continue to increase their CO<sub>2</sub> emissions without limit. The European nations expected to reach their goals by increased efficiency and conversion from coal to natural gas and nuclear energy. The basic reasoning was that the US, with 24% of the CO<sub>2</sub> production, is the major cause of the problem and therefore should suffer the major loss in GNP, shifting energy-intensive industries to developing nations.

### **COP-6**

After the Kyoto Protocol was signed a series of meetings were held to iron out problems and set up workable guidelines to reach the intended goals. These culminated in COP-6 in The Hague during November 2000. The meeting was contentious, with the Europeans demanding no CO<sub>2</sub> trading across country boundaries and restrictions of CO<sub>2</sub> credits for sequestration, including soil and trees, with no ocean sequestration included. The US demanded CO<sub>2</sub> credit trading and broad sequestering credits as a part of relief for a growing economy and population. In spite of major concessions by the US the meeting broke up with no agreement, leaving the Kyoto Protocol in limbo. This essentially clears the slate and gives the US an opportunity for a fresh approach to meeting peoples' concerns.

### **Background for Suggested Approach**

A new US policy approach is suggested based on two facts:

1. The US and Canada take out more CO<sub>2</sub> from the atmosphere than they emit, providing a net CO<sub>2</sub> sink, not a source.
2. The harnessing of ingenuity and creativeness can solve the problem previously thought to be intractable by such means as enhanced sinks for CO<sub>2</sub>.

Published studies have shown that North America and Eurasia are not net emitters of CO<sub>2</sub> to the atmosphere, but take more CO<sub>2</sub> out of the atmosphere by

agriculture and growing new forest trees than they put in by burning fossil fuels.<sup>1</sup> The US and Canada are also net sinks for CO<sub>2</sub>, as reported in the most recent study.<sup>2,3</sup> This is due to the planting of trees in the great plains and increases in agriculture from irrigation and enhanced farming methods. When a new forest is planted it sequesters CO<sub>2</sub> until it matures to the point where the rotting of dead trees emits as much CO<sub>2</sub> as the live trees absorb, a climax forest. While the overall trend for the North American net CO<sub>2</sub> sink appears secure at this time, the variation in the values around this trend are large.<sup>4,5</sup> Significant effort will be needed to continue the net sink for the area, including increasing the efficiency of fossil fuel use and increasing the use of non-carbon energy sources such as nuclear, hydropower and solar-driven devices. The stabilization of the North American net sink can be enhanced by the increase in land productivity in the US from new farming technology which is releasing land to provide for new forest areas, further delaying the return to a balance of emission and sequestration of CO<sub>2</sub> in the US and Canadian land area.<sup>6</sup> The amount of net sink of CO<sub>2</sub>, including emissions from fossil fuel burning, is expected to fall slowly in the years ahead. The key is that North America is a part of the solution to peoples' concerns, not the problem. While these studies have been available for several years, they remain controversial. More measurements of CO<sub>2</sub> content of the atmosphere need to be made to characterize the overall CO<sub>2</sub> flux and more modeling must be carried out to decrease the margin of error in the predictions. The most important point is that sinks count. The enhancement of sinks should be a cornerstone of the new US policy going forward.

### The Impact of New Technology

The inventiveness of mankind will continue to solve problems, including this one. The key is to continue the present trend of diminishing CO<sub>2</sub> emissions per person and per dollar of GNP. While we can expect this trend to continue, and perhaps accelerate, the greatest gains are expected to be in CO<sub>2</sub> sequestration. Several technologies are under investigation but one, sequestration of CO<sub>2</sub> in the deep ocean by fertilization of the ocean surface, appears to have the greatest potential. Here a chelated iron fertilizer of the type that is currently sold in local garden shops is spread on the ocean surface. This produces a bloom of plant life, mostly diatoms, which double or triple every day, using up the fertilizing elements, after which they die and sink through the thermocline at about 75 feet per day and are trapped in the deep ocean. This technology has been tested in five separate iron fertilization voyages, all of which produced a bloom. They were all too small (about 9 to 30 square miles) to allow for measurement of the amount of biomass sequestered. This can be done in a proposed technology demonstration voyage in the equatorial Pacific with a 5,000 square mile fertilized area<sup>7</sup>.

The technology to be demonstrated is:

- Low cost, about \$2.00 per ton of CO<sub>2</sub> sequestered.
- Environmentally benign since it does just what the ocean does naturally in upwellings, only in a different place.

- Long lasting since the deep ocean waters only come back to the surface through upwellings after an average of about 1600 years.
- High capacity since just the waters of the Pacific Ocean west of the Galapagos Islands could, if necessary, sequester about 400 million tons of CO<sub>2</sub> per year with the continuous fertilization of about 3 million square miles of deep open ocean. This amount of CO<sub>2</sub> sequestered is 20% of the 2000 million tons of CO<sub>2</sub> that the US puts into the atmosphere from burning fossil fuels and making cement.
- Of low ocean impact since 400 million tons is miniscule in comparison to the total CO<sub>2</sub> equivalent content of the ocean, which is 145,000,000 million tons.
- Without problems of additionality since this process does not reduce other sequestration or loss of CO<sub>2</sub> from the atmosphere due to other human interventions.

The US needs to have available a technology of this kind in order to keep its net CO<sub>2</sub> production negative in the future and to have the ability to help to assuage the concerns of people about the impacts of other countries such as India and China as we go forward. To do this the US should carry out continuing demonstrations of the technology including measurement of local atmospheric CO<sub>2</sub> fluxes.

### Recommended Policy

The US should take the view that we will continue to help the world to cope with the possible adverse effects of the increase in the CO<sub>2</sub> content of the atmosphere, should they arise. This can be done completely unilaterally and outside the Kyoto Protocol. The US can continue to be a net sink of CO<sub>2</sub> as we have in the past and can take steps to develop technologies that will assure that this will continue after the forest and agriculture sinks balance the fossil fuel CO<sub>2</sub> production in the future.

The US should use these technologies to address the concerns of other nations resulting from the increase in CO<sub>2</sub> content of the atmosphere to reduce the rate of increase, or even to reverse it, if this should become necessary. We should invite other nations to join with us in this endeavor.

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<sup>1</sup> Ciais, et al, "A large northern hemisphere terrestrial CO<sub>2</sub> sink indicated by the <sup>13</sup>C/<sup>12</sup>C ratio of atmospheric CO<sub>2</sub>", *Science* 269, pp 1098-1102.

<sup>2</sup> Tans and White, "In balance, with a little help from the plants", *Science* 281, pp 183-184.

<sup>3</sup> Fan, et al, "A large terrestrial carbon sink in North America implied by atmospheric and oceanic carbon dioxide data and models", *Science* 282, 16 Oct 1998, pp 442-446.

<sup>4</sup> Fung, I., "Variable carbon sinks", *Science* 290, pp1313.

<sup>5</sup> Bousquet, et al, "Regional changes in carbon dioxide fluxes of land and oceans since 1980", *Science* 290, 17 Nov 2000 pp 1342-1346.

<sup>6</sup> Ausubel, J.H., "The great reversal: nature's chance to restore land and sea", *Technology in Society*, 22 (2000) pp 289-301.

<sup>7</sup> Markels, et al, "The sequestration of carbon dioxide in the deep ocean by fertilization", paper 400847, ACS National Meeting Aug 20-24, 2000.





July 5, 2001

Total pages in fax: Four

TO: Mr. Phillip Cooney  
Chief of Staff  
Council on Environmental Quality

By fax: 202-456-2710

From: Russell Jones

Subject: UNEP Press Release on Voluntary Industry Actions on Climate

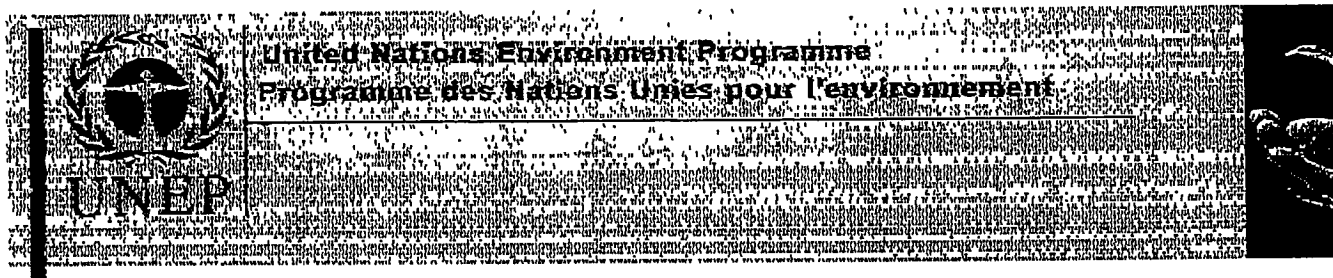
Attached is a three page 6/29 press release from the UNEP stating that voluntary industry actions could lead to "up to two billion tonnes of carbon dioxide saved by cleaner energy schemes by 2005."

According to the release, "The findings challenge the widely-held belief that the stalling of the Climate Change talks in the Hague last year and political disagreements over the science and the need for legally binding reduction targets have paralyzed the world-wide effort to fight global warming."

I have not yet seen a full UNEP or the apparently related World Energy Council material, but we could pass it along if/when we receive a copy.

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CEQ 000026



Thursday, July 05, 2001

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**Up To Two Billion Tonnes Of Carbon Dioxide Saved By Cleaner Energy Schemes By 2005**

Industry Acting To Fight Global Warming Despite Political Disagreements Over Kyoto

Nairobi/London, 29 June 2001 - Voluntary actions by industry, governments and organizations are leading to small but significant reductions in emissions of global warming gases world-wide, the United Nations Environment Programme (UNEP) and the World Energy Council (WEC) said.

The findings challenge the widely-held belief that the stalling of the Climate Change talks in the Hague last year and political disagreements over the science and the need for legally binding reduction targets have paralyzed the world-wide effort to fight global warming.

Studies by the WEC indicate that the number of new clean energy schemes, government initiatives and renewable energy projects will, by 2005, save equivalent of one billion tonnes of carbon dioxide (CO2) annually. This equates to a saving of over three per cent in terms of global greenhouse gas emissions emitted in the year 2000.

The figure of one billion tonnes may be a dramatic understatement. A survey of 91 countries indicates the actual level of additional projects planned or in the pipeline could raise the global CO2 savings as high as two billion tonnes (two gigatonnes) by 2005 or six per cent of current global greenhouse gas emissions.

Klaus Toepfer, Executive Director, of UNEP said that the pessimism and gloom hanging over the Climate Change talks, which are set to resume in Bonn on July 19, had masked small but real progress towards reducing emissions.

He highlighted the progress with the achievements made in China, which accounts for 14 per cent of world CO2 emissions.

"China has, despite economic growth estimated at 36 per cent, managed to reduce its carbon dioxide emissions by 17 per cent since 1996/97. The figure of 17 per cent may prove premature, with the real reduction likely to be in the range of 10 or 12 per cent, but this is still remarkable and encouraging progress. It has been achieved by an active effort to promote energy conservation, end coal subsidies and support more efficient coal-fire power generation," said Mr Toepfer.

A study by scientists at the Lawrence Berkley National Laboratory in California concludes that China's CO2 emissions are already 400 to 900 million tonnes below what was expected in 2000 which is approximately equivalent to all CO2 emissions from Canada, at the low end of the range, or Germany, at the high end of the estimate.

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► Message Of UNEP  
Executive Director, Klaus  
Toepfer On The Occasion  
Of World Environment Day  
5 June 2001

In the United States, which at 23 per cent has the highest share of global CO<sub>2</sub> emissions, levels of the greenhouse gas have grown from 4.8 billion tonnes in 1990 to over 5.4 tonnes in 1998, the International Energy Agency and the OECD estimate.

But even in the United States improvements are being made their official statistics show. From 1990 to 1998 the amount of carbon dioxide emitted per unit of GDP or economic growth declined by 11 per cent.

"The fact that two of the most important countries at the centre of the global warming debate are acting, and are managing to break the link between growth and a parallel rise in emissions, offers an important glimmer of hope which must be built on. We must do more, we have to do more. But the march to a less polluting world has begun and must be helped to continue even if there are disagreements between governments about the science and the need for legally binding emission reduction targets," said Mr Toepfer.

His comments come as informal climate change talks among 115 countries closed in The Hague this week. The talks are aimed at trying to secure a successful outcome when countries meet in Bonn in mid-July to resume the stalled 6th Conference of the Parties to the United Nations Framework Convention on Climate Change.

They also come in advance of a report, also to be launched in July, by the G8 Renewable Energy Task Force, which has been studying the global prospects for green energy schemes.

Elena Virkkala Nekhaev, manager of programmes at the WEC, said: "There is a generally perception that little is happening globally to tackle climate change and that little will occur unless nations reach agreement at the upcoming talks in Bonn, Germany. But this is far from the case as our Pilot Programme on GHG Emissions Reduction demonstrates. Indeed the sheer number of cleaner energy schemes planned and in the pipeline make us confident that two gigatonnes, or six per cent of global emissions of CO<sub>2</sub>, will be saved annually by such projects by 2005 whether or not the Kyoto Protocol is ratified".

"Some of these clean energy schemes and conservation programmes may have other goals such as improving local air pollution, road congestion and peoples' health. But the end result is an important saving of greenhouse gas emissions," she said.

Mark Radka, UNEP's Energy Programme Coordinator, said: "In many countries like China old and inefficient power generation equipment is being retired and new, more efficient, power stations are starting to come on line. It is estimated that, over the next 20 years, some \$15 trillion worth of investment is going to be made in energy infrastructure. This is a golden opportunity to make the world less dependent on fossil fuels and less vulnerable to the impacts of climate change. We must work hard to ensure that only the most energy efficient plant is built and, where appropriate, renewables are introduced. UNEP and WEC's assessment is that industry, many governments and organizations are rising to challenge despite uncertainties over the Kyoto process. There is cautious cause for optimism".

The CO<sub>2</sub> savings are coming from over 600 projects registered in the WEC's database. These projects are just completed, under construction or planned in the next few years. Some of the schemes involve the retiring of old and inefficient power plants in favour of modern, cleaner burning ones. Others involve fitting existing power plants with energy efficient equipment or choosing renewables over diesel, coal or oil generation. Projects also include some tree planting schemes designed to soak up CO<sub>2</sub>, energy conservation measures and ones, such as those in Belgium, to reduce car use and emissions by restricting motor vehicle access to city centres.

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Examples of the projects include a tidal power scheme in Australia designed to save 210 kilotonnes of CO<sub>2</sub> by substituting for diesel generators and a big wind power project Turkey that aims to save 940 kilotonnes. Others include a new, 1290MW combined-cycle power station in Rasht, Iran, saving 5,600 kilotonnes and a power station in Wisconsin, United States, that will save 1,107 kilotonnes by switching to gas.

Notes to Editors: The World Energy Council was founded in 1923 and is a UN-accredited, UK-registered charity, based in London. It has established a Greenhouse Gas Emissions Reduction Pilot Programme and has recorded emissions reduction projects around the world in a comprehensive database located at [www.worldenergy.org/ghg](http://www.worldenergy.org/ghg)

The report on China's emission reductions is authored by Jonathan Sinton and David Fridley of the Lawrence Berkeley National Laboratory and published in the journal *Sinosphere*.

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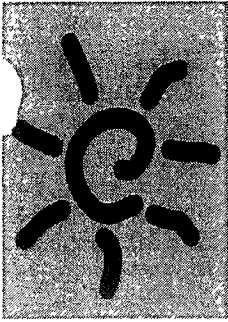
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**The Stella Group, Ltd.**

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Scott Sklar, President

*Climate  
policy  
proposal  
Jill*

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June 8, 2001

TO: Andrew Lundquist  
Office of Vice President

CS: John Bridgeland, Assistant to the President  
Gary Edson, Deputy Assistant - Economic  
*John Harwood ✓*

FR: Scott Sklar *[Signature]*

RE: Climate Change Options: Low Hanging Fruit

Since The Administration is attempting to look for ways to address the issue, I have some pragmatic suggestions that will utilize existing programs that will leverage some substantial results regarding renewable energy.

As you may know a majority of US manufactured renewable energy technologies are exported primarily to developing countries and to Germany and Japan. Growth rates for solar, wind, geothermal, fuel cells, modular biomass and advanced interconnection equipment and controls industries have exceeded 25 percent per year over the last five years and will surely exceed that growth rate over the next five years. In most cases the markets for renewable energy and distributed technologies, where the US holds a narrow global technological and market lead, are constrained on the delivery end. While the US has successfully ramped-up domestic automated or semi-automated manufacturing in virtually all distributed energy technologies, the market bottlenecks relate to increasing "flow through" to these large emerging markets. This situation is very natural for young emerging industries. To increase product and project "flow through", new resources need to be accessible.

By increasing "flow through" by providing new tools, the Bush Administration could increase the yearly growth rate of renewables from 25 percent to a growth rate of over 40 percent per year – comparable to the early growth rates of the oil industry in its emergence. Increasing "flow through" requires U.S. government facilitation and multilateral bank facilitation using existing authorizations and programs.

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Page two

## The Proposal

Increasing “flow through” requires tapping into both federal (including bilateral) programs and multilateral programs. The approach requires continued oversight, intervention and enforcement to insure the “new directions” are implemented – a major failure by the previous administration.

Establish deployment windows at Agency for International Development enhancing support of ongoing and “in place” deployment NGO’s (ie E&Co, SELF, etc.) not traditional “market conditioning” programs and their NGOs. Establish a parallel set-aside “window” at the AID Missions which are time driven and very transparent. Additionally, establish specialized windows for clean energy projects at the Export Import Bank, Overseas Private Investment Corporation and Trade Development Administration. These windows, which exist informally anyway, can be directed to create “fast track” access. No legislative intervention needs to be done except in regard to TDA, The White House would need to direct a lowering of the 10-to-1 investment ratio.

Currently at the multilateral lending institutions, several renewable energy programs have been established at The World Bank including the International Finance Corporation and the Global Environmental Facility, InterAmerican Development Bank including the Multilateral Investment Fund, and the European Bank for Reconstruction. However, these are marginal funds and a more pragmatic approach needs to be adopted. Energy lending at the multilateral banks are a very small percentage of overall lending. To this end, creating renewable energy lending targets for infrastructure loans, which are the largest percentage of lending at the multilateral development banks, is a high value option. Renewable and distributed energy inclusion as a small part of traditional infrastructure investments could ramp up demand in existing cost effective applications. This type of lending targets which are facilitated, monitored and publicly reported could increase global markets tenfold for these technologies in one decade.

## The Results

Eedirecting and making more “flow through” resources available in the global market will have appreciable market impacts by 2005 – a fifty percent growth rate for renewable and distributed energy. In the 2010-2020 timeframe the results are dramatic. In 2002 about 9,000 megawatts primarily from US-based renewable energy providers will be sold and deployed. Under current market growth scenarios, these industries will grow to appreciably over 50,000 megawatts per year in sales and deployment in the 2010 – 2020 timeframe. By creating this new opportunity, the US-based renewable energy and distributed generation industry could grow in annual sales and deployment ranging from 108,000 megawatts to 325,000 megawatts in the global markets – a very significant enhanced market scenario. Under the most conservative scenario, the current \$7.5 billion US renewable energy industry which includes goods and services would grow to \$110 billion rather than \$56 billion industry over the next 10 to 15 years.



Page three

Megawatt Per Year Business-As-Usual and New Approach Using Aforementioned Tools

	2002		2005		2010		2020	
	BAU	NA	BAU	NA	BAU	NA	BAU	NA
Fuel cells	200	280	450	695	1350	3750	15,850	
Concentrated solar power and solar thermal building technologies	200	280	450	695	1350	3750	15,850	
Photovoltaics	250	350	490	950	1420	5900	17,250	
BioPower	350	490	960	1430	2898	7700	28,000	
Geothermal	1800	2530	6500	7000	19,000	37,000	231,750	
Wind Energy	6000	8400	16,500	18,800	49,000	108,800	325,000K	

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Kyoto also failed to address two major pollutants that have an impact on warming: black soot and tropospheric ozone. Both are proven health hazards. Reducing both would not only address climate change, but also dramatically improve people's health.

Kyoto is, in many ways, unrealistic. Many countries cannot meet their Kyoto targets. The targets themselves were arbitrary and not based upon science. For America, complying with those mandates would have a negative economic impact, with layoffs of workers and price increases for consumers. And when you evaluate all these flaws, most reasonable people will understand that it's not sound public policy.

That's why 95 members of the United States Senate expressed a reluctance to endorse such an approach. Yet, America's unwillingness to embrace a flawed treaty should not be read by our friends and allies as any abdication of responsibility. To the contrary, my administration is committed to a leadership role on the issue of climate change.

We recognize our responsibility and will meet it -- at home, in our hemisphere, and in the world. My Cabinet-level working group on climate change is recommending a number of initial steps, and will continue to work on additional ideas. The working group proposes the United States help lead the way by advancing the science on climate change, advancing the technology to monitor and reduce greenhouse gases, and creating partnerships within our hemisphere and beyond to monitor and measure and mitigate emissions.

I also call on Congress to work with my administration to achieve the significant emission reductions made possible by implementing the clean energy technologies proposed in our energy plan. Our working group study has made it clear that we need to know a lot more.

The U.N. Framework Convention on Climate Change commences to stabilizing concentrations at a level that will prevent dangerous human interference with the climate; but no one knows what that level is. The United States has spent \$18 billion on climate research since 1990 -- three times as much as any other country, and more than Japan and all 15 nations of the EU combined.

Today, I make our investment in science even greater. My administration will establish the U.S. Climate Change Research Initiative to study areas of uncertainty and identify priority areas where investments can make a difference.

I'm directing my Secretary of Commerce, working with other agencies, to set priorities for additional investments in climate change research, review such investments, and to improve coordination amongst federal agencies. We will fully fund high-priority areas for climate change science over the next five years. We'll also provide resources to build climate observation systems in developing countries and encourage other developed nations to match our American commitment.

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And we propose a joint venture with the EU, Japan and others to develop state-of-the-art climate modeling that will help us better understand the causes and impacts of climate change. America's the leader in technology and innovation. We all believe technology offers great promise to significantly reduce emissions -- especially carbon capture, storage and sequestration technologies.

So we're creating the National Climate Change Technology Initiative to strengthen research at universities and national labs, to enhance partnerships in applied research, to develop improved technology for measuring and monitoring gross and net greenhouse gas emissions, and to fund demonstration projects for cutting-edge technologies, such as bioreactors and fuel cells.

Even with the best science, even with the best technology, we all know the United States cannot solve this global problem alone. We're building partnerships within the Western Hemisphere and with other like-minded countries. Last week, Secretary Powell signed a new CONCAUSA Declaration with the countries of Central America, calling for cooperative efforts on science research, monitoring and measuring of emissions, technology development, and investment in forest conservation.

We will work with the Inter-American Institute for Global Change Research and other institutions to better understand regional impacts of climate change. We will establish a partnership to monitor and mitigate emissions. And at home, I call on Congress to work with my administration on the initiatives to enhance conservation and energy efficiency outlined in my energy plan, to implement the increased use of renewables, natural gas and hydropower that are outlined in the plan, and to increase the generation of safe and clean nuclear power.

By increasing conservation and energy efficiency and aggressively using these clean energy technologies, we can reduce our greenhouse gas emissions by significant amounts in the coming years. We can make great progress in reducing emissions, and we will. Yet, even that isn't enough.

I've asked my advisors to consider approaches to reduce greenhouse gas emissions, including those that tap the power of markets, help realize the promise of technology and ensure the widest-possible global participation. As we analyze the possibilities, we will be guided by several basic principles. Our approach must be consistent with the long-term goal of stabilizing greenhouse gas concentrations in the atmosphere. Our actions should be measured as we learn more from science and build on it.

Our approach must be flexible to adjust to new information and take advantage of new technology. We must always act to ensure continued economic growth and prosperity for our citizens and for citizens throughout the world. We should pursue market-based incentives and spur technological innovation.

And, finally, our approach must be based on global participation, including that of

## ADVANCING THE SCIENCE OF CLIMATE CHANGE

"MY CABINET-LEVEL WORKING GROUP HAS MET REGULARLY FOR THE LAST TEN WEEKS TO REVIEW THE MOST RECENT, MOST ACCURATE, AND MOST COMPREHENSIVE SCIENCE. THEY HAVE HEARD FROM SCIENTISTS OFFERING A WIDE SPECTRUM OF VIEWS; THEY HAVE REVIEWED THE FACTS, AND THEY HAVE LISTENED TO MANY THEORIES AND SUPPOSITIONS. THE WORKING GROUP ASKED THE HIGHLY RESPECTED NATIONAL ACADEMY OF SCIENCES TO PROVIDE US THE MOST UP-TO-DATE INFORMATION ABOUT WHAT IS KNOWN -- AND WHAT IS NOT KNOWN -- ON THE SCIENCE OF CLIMATE CHANGE...THE UNITED STATES [WILL] HELP LEAD THE WAY BY ADVANCING THE SCIENCE ON CLIMATE CHANGE."

-- PRESIDENT

GEORGE W. BUSH

### **Executive Summary**

**The United States leads the world in climate change research, spending more than the 15 nations of the European Union and Japan combined.** Over the past decade, the United States has invested nearly \$18 billion in such research and has increased our understanding of changes in climate, human links to these changes, and possible consequences.

To have the most up-to-date information of what is known and unknown about the science of climate change, the Cabinet-level climate change working group requested a report from the National Academy of Sciences (NAS). **The NAS report identified substantial uncertainty in critical areas, such as:**

- The feedbacks in the climate system that determine the magnitude and rate of temperature increases;
- The future usage of fossil fuels and the future emissions of methane;
- How much carbon is sequestered by oceans and other sinks and how much remains in the atmosphere;
- The details of regional climate change resulting from global climate change;
- The nature and causes of the natural variability of climate, its interactions with forced changes, and the direct and indirect effects of aerosols.

**The National Academy of Sciences concluded, "[m]aking progress in reducing the large uncertainties in projections of future climate will require addressing a number of fundamental scientific questions relating to the buildup of greenhouse gases in the atmosphere and the behavior of the climate system."**

To ensure that policies are shaped, and continue to be shaped, by the best science, President Bush will work aggressively to advance the science of climate change. **Today, the President is announcing the U.S. Climate Change Research Initiative, which:**

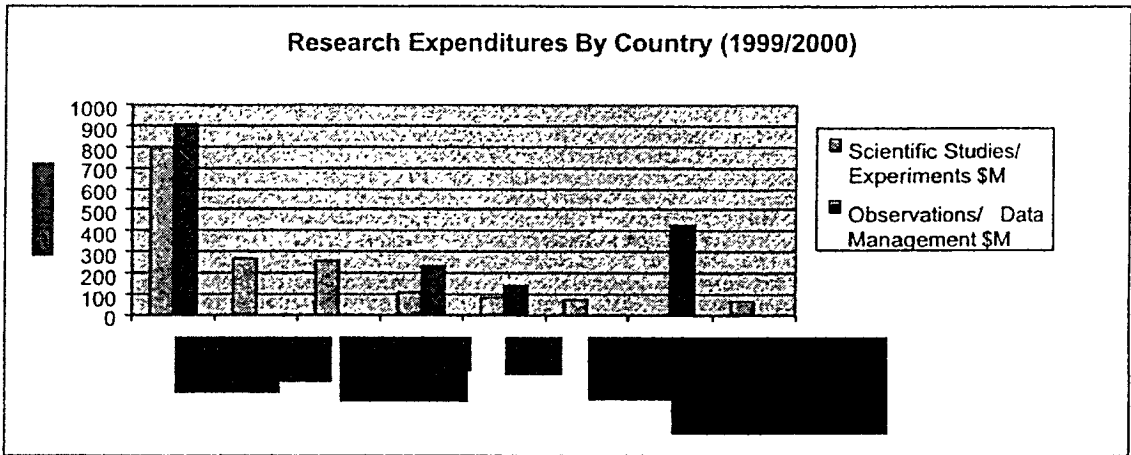
- **Directs the Secretary of Commerce, working with other agencies, to set priorities for additional investments in climate change research, to review such investments, and to maximize coordination among federal agencies;**
- **Fully funds all priority research areas that the Secretary of Commerce's**

- review finds are underfunded or need to be accelerated relative to other research;
- Challenges the major greenhouse gas emitting countries to increase significantly their investments in high priority areas of climate change research;
  - Provides up to \$25 million, and calls on other developed countries to provide matching funds, to help build climate observation systems in developing countries; and
  - Proposes a joint venture with the EU, Japan and others to develop state-of-the-art climate modeling to help us better predict the causes and consequences of climate change.

**U.S. Climate Research to Date**

**U.S. Global Change Research Program**

The United States leads the world in climate change research, spending approximately \$1.6 billion annually. The United States is responsible for half of the world's annual climate change research expenditures, three times more than the next largest contributor and larger than the contributions of Japan and all 15 nations of the European Union combined.



Source: IGFA National Updates" (IGFA, 2000), NASA, European Space Agency, National Space Development Agency of Japan, Centre National d'Etudes Spatiales

The U.S. Global Change Research Program (USGCRP) is a national research program that coordinates most of the federal government's research on climate change. Definition of the program began under the Reagan Administration; the program became a presidential initiative under President George Bush, and was codified by Congress in the Global Change Research Act of 1990.

Since its establishment in 1990, USGCRP has spent approximately \$18 billion. The President's fiscal year 2002 budget requests \$1.6 billion for USGCRP. One half of this investment is devoted to climate change science and the other half to associated satellite systems. During its first decade, USGCRP research activities have identified a series of global scale changes, including ozone depletion, climate change, and land cover change. USGCRP has also explored and categorized likely human links to these changes, improved forecasts of the El Nino-Southern

Oscillation, and increased understanding of other climate changes. The USGCRP has also developed and deployed a series of remote sensing satellites that could form the basis of a global environmental observing system, and has developed models to analyze the climate process and produce scenarios of potential future climate change and possible consequences.

The USGCRP currently conducts research and observations in the following areas: Understanding the Earth's Climate System; Composition and Chemistry of the Atmosphere; Global Water Cycle; Carbon Cycle Science; Biology and Biochemistry of Ecosystems; Human Dimensions of Global Change; and Paleoenvironment/Paleoclimate (analysis of prehistoric changes in climate). Ten federal agencies participate in the USGCRP and their respective roles are described in Annex I.

### **Key Gaps in Science of Climate Change**

Despite the United States' intensive investment in climate change science over the past decade, numerous gaps remain in our understanding of climate change. The National Academy of Sciences identified in its report, *Climate Change Science: An Analysis of Some Key Questions (June 2001)*, critical uncertainties about the science of climate change. At the most fundamental level, the report indicated the need to better understand the causes of warming. The National Academy of Sciences stated, "Greenhouse gases are accumulating in Earth's atmosphere as a result of human activities, causing surface air temperatures and subsurface ocean temperatures to rise. Temperatures are, in fact, rising. The changes observed over the last several decades are likely mostly due to human activities, but we cannot rule out that some significant part of these changes are also a reflection of natural variability."

The National Academy of Sciences report goes on to identify a range of specific areas of scientific uncertainty that require additional study and research. These gaps include:

- **How much carbon is sequestered by oceans and terrestrial sinks and how much remains in the atmosphere is uncertain:**
  - ✓ "How land contributes, by location and processes, to exchanges of carbon with the atmosphere is still highly uncertain. . . ." (p. 11)
  - ✓ "These estimates [of future carbon dioxide climate forcings] . . . are only approximate because of uncertainty about how efficiently the ocean and terrestrial biosphere will sequester atmospheric CO<sub>2</sub>." (p. 13)
  - ✓ "How much of the carbon from future use of fossil fuels will be seen as increases in carbon dioxide in the atmosphere will depend on what fractions are taken up by land and by the oceans. The exchanges with land occur on various time scales, out to centuries for soil decomposition in high latitudes, and they are sensitive to climate change. Their projection into the future is highly problematic." (p. 18)
  
- **The feedbacks in the climate system that determine the magnitude and rate of temperature increases are uncertain:**

- ✓ “Because there is considerable uncertainty in current understanding of how the climate system varies naturally and reacts to emissions of greenhouse gases and aerosols, current estimates of the magnitude of future warming should be regarded as tentative and subject to future adjustments (either upward or downward).” (p. 1)
- ✓ “Much of the difference in predictions of global warming by various climate models is attributable to the fact that each model represents these [feedback] processes in its own particular way. These uncertainties will remain until a more fundamental understanding of the processes that control atmospheric relative humidity and clouds is achieved.” (p. 4)
- **The direct and indirect effects of aerosols are uncertain:**
  - ✓ “The greatest uncertainty about the aerosol climate forcing—indeed, the largest of all the uncertainties about global climate forcings—is probably the indirect effect of aerosols on clouds.” (p. 14)
  - ✓ “The great uncertainty about this indirect aerosol climate forcing presents a severe handicap both for the interpretation of past climate change and for future assessments of climate changes.” (p. 14)
  - ✓ “Climate forcing by anthropogenic aerosols is a large source of uncertainty about future climate change.” (p. 13)
  - ✓ “Because of the scientific uncertainties associated with the sources and composition of carbonaceous aerosols, projections of future impacts on climate are difficult.” (p. 12)
- **The details and impacts of regional climate change resulting from global climate change are uncertain:**
  - ✓ “On the regional scale and in the longer term, there is much more uncertainty” with respect to effects on agriculture and forestry. (p. 19)
  - ✓ “The Northern Hemisphere as a whole experienced a slight cooling from 1946-75, and the cooling during that period was quite marked over the eastern United States. The cause of this hiatus in the warming is still under debate.” (p. 16)
  - ✓ “Health outcomes in response to climate change are the subject of intense debate. . . . The understanding of the relationships between weather/climate and human health is in its infancy and therefore the health consequences of climate change are poorly understood. The costs, benefits, and availability of resources for adaptation are also uncertain.” (p. 20)
  - ✓ “Changes in storm frequency and intensity are one of the more uncertain elements of future climate change prediction.” (p. 20)
- **The nature and causes of the natural variability of climate and its interactions with forced changes are uncertain:**
  - ✓ “Because of the large and still uncertain level of natural variability inherent in the climate record and the uncertainties in the time histories of the various forcing agents (and particularly aerosols), a causal linkage between the buildup of greenhouse gases in



- the atmosphere and the observed climate changes during the 20<sup>th</sup> century cannot be unequivocally established.” (p. 17)
- ✓ The value of indirect effect of ozone changes induced by solar ultraviolet irradiance variations “remains highly uncertain.” (p. 14)

➤ **The future usage of fossil fuels and the future emissions of methane are uncertain:**

- ✓ “With a better understanding of the sources and sinks of methane, it may be possible to encourage practices . . . that lead to a decrease in atmospheric methane and significantly reduce future climate change.” (p. 13 )
- ✓ “There is no definitive scientific basis for choosing among several possible explanations for these variations in the rates of change of global methane contributions, making it very difficult to predict its future atmospheric concentrations.” (p. 11)

In response to these gaps in our knowledge, **the National Academy of Sciences study also recommends, “research that couples physical, chemical biological and human systems; an improved capability of integrating scientific knowledge, including its uncertainty, into effective decision support systems, and an ability to conduct research at the regional or sectoral level that promotes analysis of the response of human and natural systems to multiple stresses.”**

The NAS report also indicates that to advance the understanding of climate change, it will be necessary to have “a global observing system in support of long term climate monitoring and prediction [and] concentration on large-scale modeling through increased, dedicated supercomputing and human resources.” In addition to the recent National Academy of Sciences report, the USGCRP has updated its ten-year plan and submitted it to the National Research Council (NRC) for review. High priority areas for further research are identified in numerous recent reports and documents, such as: “*Global Environmental Change: Research Pathways for the Next Decade*” (NRC 1998), “*Capacity of US Climate Modeling to Support Climate Change Assessment Activities*” (NRC, 1998), “*Adequacy of Climate Observing Systems*” (NRC, 1999), and others.

## **Advancing the Science**

The National Academy of Sciences report states that an “effective strategy for advancing the understanding of climate change will also require...efforts to ensure that climate research is supported and managed to assure innovation, effectiveness and efficiency.” Over the decade of the USGCRP, interagency management of the program has weakened. The National Research Council in its report, “*Global Environmental Change: Research Pathways for the Next Decade*” (NRC 1998), identified the problem, and the USGCRP draft ten-year plan has proposed changes to the management structure. Such issues merit careful and high-level review, in consultation with the Congress.

Therefore, to advance the science of climate change and focus efforts on the many key areas of uncertainty, President Bush will:

- **Direct the Secretary of Commerce, working with other agencies, to set priorities for additional investments in climate change research, to review such investments, and to maximize coordination among federal agencies.**
- **Fully fund all priority research areas that the review finds are underfunded or need to be accelerated relative to other research. Such areas could include the carbon cycle, climate modeling, and global water cycle.**

The United States is making significant investments in the science of climate change and is pledging to accelerate its own research. Climate change is a global problem, however, and other nations must continue to advance the state of scientific knowledge.

The National Research Council, the US Global Change Research Program, and the World Meteorological Organization have all identified the building of a global observing system to monitor climate as being crucial to improving our understanding of the science of climate change. This system must include developing countries that have limited resources to make the necessary measurements.

**The United States, Europe, and Japan each have significant climate modeling capabilities. The United States leads the world in the basic science of climate modeling, and Europe and Japan have built dedicated centers for climate modeling with a clearly defined mission.**

Therefore, to enhance research, build a global climate observation system, and improve climate modeling, President Bush will:

- **Challenge the major greenhouse gas emitting countries to increase significantly their investments in high priority areas of climate change research.**
- **Provide up to \$25 million to help build climate observation systems in developing countries throughout the world, and call upon other developed countries to provide matching funds for such an investment.**
- **Propose a joint venture with the European Union, Japan and others to develop state-of-the-art climate modeling to help us better predict the causes and consequences of climate change.**



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William D. Witter, Inc.

July 26, 2001

Mr. Philip Cooney  
Chief of Staff  
Council on Environmental Quality  
Room 360 Eisenhower Executive Office Building  
17<sup>th</sup> & Pennsylvania Avenue, N.W.  
Washington, D. C. 20502

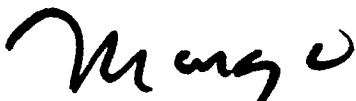
Dear Phil:

I just wanted to let you know how happy we are for you as you take up your new role in the Administration. API's loss is certainly the Administration's gain! We really appreciated the chance to work with you throughout the years and hope that we can be helpful in your new role.

I thought you might like to see the testimony I delivered at the Senate Governmental Affairs Committee hearing last week. On page 10 of the testimony, we have outlined a set of policy options we think are helpful to a proactive, positive approach to climate change policy.

When things slow down a bit, we would appreciate the chance to catch up with you and learn more about your new responsibilities.

Best regards,



Margo Thorning, Ph.D.  
Senior Vice President and  
Chief Economist

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Enclosure

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## CONGRESSIONAL TESTIMONY

July 18, 2001

# Tax Policy and Technological Innovation: Key Partners in Productive Climate Change Policy

Margo Thorning, Ph.D.  
ACCF Senior Vice President and Chief Economist  
Before the Governmental Affairs Committee  
of the United States Senate

### EXECUTIVE SUMMARY

- **Macroeconomic Effects of Caps on CO<sub>2</sub> Emissions Are Significant.** A wide range of economic models predict that capping U.S. carbon dioxide (CO<sub>2</sub>) emissions at the Kyoto target (7 percent below 1990 levels) would reduce U.S. GDP and slow wage growth significantly, worsen the distribution of income, and reduce growth in living standards. Proposed future reductions of 60 percent below 1990 levels by 2050 have not been modeled, but would have extremely serious consequences for all economies dependent on fossil fuels.
- **U.S. Budget Surplus Is Reduced Sharply.** Slower economic growth means that federal tax receipts would be reduced. If implementation of the Kyoto Protocol reduces annual GDP by 3 percent per year, for example, the projected budget surplus in 2010 falls from \$471 billion to only \$315 billion.
- **International Emissions Trading Issues Are Major.** Major obstacles to trading include securing developing country participation, allocating CO<sub>2</sub> emission rights, and distributing the resulting revenue.
- **European Union Unable to Meet Targets.** Even though several EU members continue to support ratification of the Kyoto Protocol, a number of recent studies document that the EU will not be able to achieve its targets; in fact by 2010 the EU countries will be 10 to 25 percent above their targets.
- **Science of Climate Change Needs to Be Better Understood Before Costly Policies Are Implemented.** Despite the United States' intensive investment in climate change science, numerous gaps remain in our knowledge, including conflict between global atmospheric and "surface" temperature measurement, and uncertainty about the amount of carbon sequestered in the oceans and soil and about the feedbacks in the climate system that determine the magnitude and rate of temperature increase.
- **Conclusion.** A U.S. strategy for a productive climate policy providing energy security should include: fixing the U.S. tax code; expanding nuclear energy; expanding bilateral cooperation with developing countries; expanding incentives for use of landfill methane and biomass including ethanol from cellulose; implementing a multi-year plan for improvement of coal technology; removing regulatory barriers; avoiding caps on CO<sub>2</sub> emissions by U.S. industry; and avoiding setting targets for global CO<sub>2</sub> concentrations in the range of 550 ppm in the next 75–100 years. ♦

## ACCF STATEMENT

### INTRODUCTION

My name is Margo Thorning and I am pleased to present this testimony to the Senate Governmental Affairs Committee.

The American Council for Capital Formation represents a broad cross-section of the American business community, including the manufacturing and financial sectors, Fortune 500 companies and smaller firms, investors, and associations from all sectors of the economy. Our distinguished board of directors includes cabinet members of prior Republican and Democratic administrations, former members of Congress, prominent business leaders, and public finance and environmental policy experts.

The ACCF is now celebrating its 28th year of leadership in advocating tax, regulatory, environmental, and trade policies to increase U.S. economic growth and environmental quality.

We commend Chairman Lieberman, Senators Byrd and Stevens and the Senate Governmental Affairs Committee for their focus on the role of technology in addressing climate mitigation. In our view, tax incentives should be a key component in the push to develop new technology. Given the ACCF's extensive studies on the impact of tax policy on investment, my testimony will develop an aspect of what should become the foundation for an integrated approach to climate change policy. We believe that progress on technology proposals such as those in S. 1008, the Climate Change Strategy and Technology Act of 2001, is vitally important.

My testimony begins with a review of the macroeconomic consequences of near-term CO<sub>2</sub> emission caps. It includes information from a number of analyses sponsored by the ACCF Center for Policy Research, the public policy research affiliate of the American Council for Capital Formation. These studies describe the economic costs of near-term caps on U.S. carbon emissions and the impact of emissions limits on the growth of the capital stock, as well as suggest tax incentives to encourage voluntary efforts such as the purchase of energy-efficient equipment and sequestration initiatives to reduce CO<sub>2</sub> emissions both in the United States and abroad. (Summaries of the Center's climate policy studies are available on our Web site, [www.accf.org](http://www.accf.org).) I also discuss issues related to long-term options for reducing CO<sub>2</sub> concentrations. Finally, strategies for a cost-effective, long-term approach to CO<sub>2</sub> stabilization are presented.

### MACROECONOMICS EFFECTS OF CAPPING CO<sub>2</sub> EMISSIONS

The Kyoto Protocol to the United Nations Framework Convention on Climate Change, which was negotiated in December 1997, calls for industrial economies such as the United States, Canada, Europe, and Japan (termed Annex B countries) to reduce their collective emissions of six greenhouse gases by an average of 5.2 percent from 1990 levels by 2008–2012. The U.S. target under the Protocol, which was rejected by the Bush Administration in March, is a 7 percent reduction from 1990 levels (or 1,251 million metric tons); this amounts to a projected 536 million metric ton cutback in carbon emissions relative to the projected amount in 2010, growing to a 728 million metric ton cutback by 2020 (see Figure 1). In 1999, U.S. emissions were 1,527 million metric tons, or 22 percent above the Kyoto target. By 2010, the U.S. Department of Energy's Energy Information Administration (EIA) projects that emissions will be 43 percent above the target, and the gap will grow to 58 percent by 2020. (In 2010, carbon emissions from the transportation and utility sectors *alone* are projected to be 1,300 million metric tons (see Figure 1). It is also worth noting that Mr. Tim Wirth, the former Clinton Administration climate policy negotiator, testified in 1997 that carbon emissions would need to be cut by up to 10 times the Kyoto targets (a 70 percent reduction). The United Kingdom has assumed it must reduce its emissions by 60 percent by 2050.

The emissions cap would, in effect, ration the use of energy in the United States and require very large taxes, either directly or indirectly through the purchase of "permits," to restrain the demand for energy. The "multi-pollutant" approach would have the same effect. Research conducted over the past decade for the ACCF Center for Policy Research by top climate policy scholars concludes that the cost of reducing carbon emissions in the near term would impose a heavy burden on U.S. households, industry, and agriculture by reducing economic growth.

### IMPACT ON GDP

Many climate policy experts believe that the emission reductions called for in the Kyoto agreement have potentially serious consequences for all Americans. Predicting the economic impact of reducing carbon

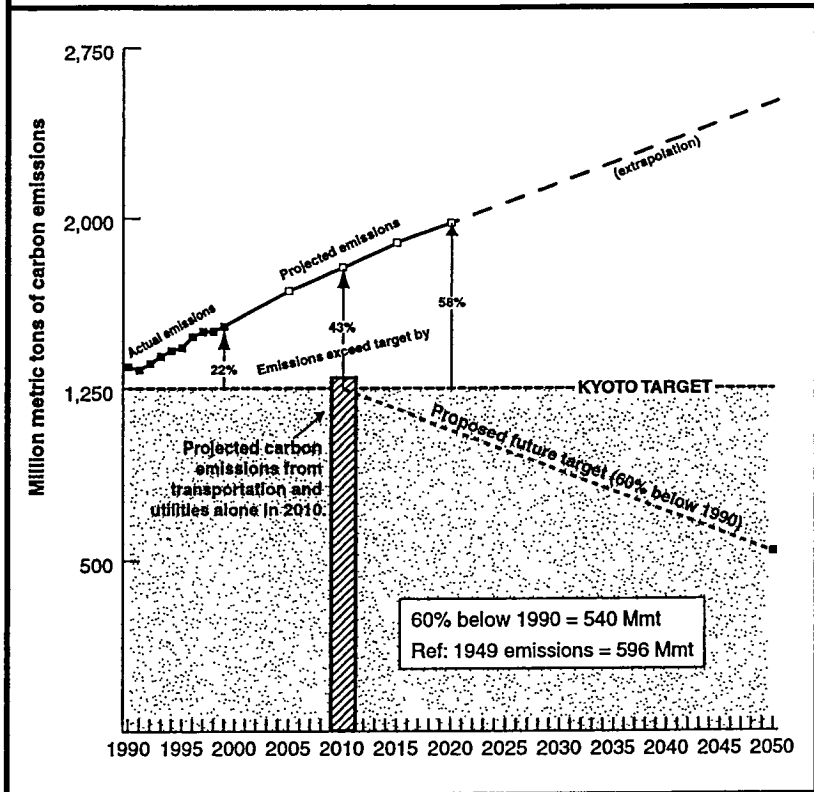
emissions depends upon how an economic forecasting model handles several factors, including how rapidly industry and consumers respond to higher energy prices by substituting less carbon-intensive production methods and reducing the consumption of carbon-intensive goods and services. Other factors that can affect a model's results are the rate of technological change, the projected baseline greenhouse gas emissions, the amount of emissions trading, and use of carbon sinks and sequestration.

The rate of technological improvement for energy production and consumption assumed by most models under their baseline forecasts is fairly rapid. For example, the EIA's reference case assumes continued improvements in new and existing buildings, transportation, coal production, exploration for oil and gas, and electricity generation technologies. In fact, total energy intensity (defined as the ratio of primary energy consumption per dollar of GDP) declines at an average rate of 1.1 percent annually between 1998 and 2020. The faster the rate of economic growth, the faster energy intensity declines in the EIA reference cases due to the more rapid turnover of the capital stock.

Recent model results show that as carbon emissions are capped or constrained, economic growth slows due to lost output as new energy taxes are imposed and prices rise for carbon-intensive goods—goods that must be produced using less carbon and/or more expensive processes. In addition, the capital stock accumulates more slowly, reflecting the premature obsolescence of capital equipment due to the sharp energy price increases required to meet the carbon emission reductions mandated under the Protocol. It takes from 20 to 30 years to “turn over” or replace the entire U.S. capital stock. Thus, meeting the Protocol's 2008–2012 timetable for emission reductions would mean either continuing to utilize plant and equipment designed to use much lower-cost (pre-Kyoto) fuels, or replacing the capital stock much more rapidly than its owners had planned.

The wide range of model results by climate policy experts such as Senior Vice President Mary H. Novak of WEFA, Inc., Professor Alan S. Manne of Stanford University, Dr. Richard Richels of EPRI, Dr. W. David

**Figure 1 U.S. Carbon Emissions: Projected, Kyoto Target, and Beyond**  
Millions of metric tons



Montgomery of Charles River Associates (CRA), Dr. Joyce Brinner of Standard & Poor's DRI (DRI), Dr. Brian S. Fisher of the Australian Bureau of Agricultural and Resource Economics (ABARE), and others, show that complying with the Kyoto Protocol would reduce U.S. GDP by a range of 1 percent to 4 percent annually (see Figure 2). This translates into annual losses of \$100 billion to almost \$400 billion (in inflation-adjusted dollars) in U.S. GDP each year compared to the baseline forecast for energy use. These studies, as well as the EIA report released in October 1998, stand in sharp contrast to the optimistic projections contained in the Clinton Administration's economic analysis prepared by the Council of Economic Advisers and released in July 1998.

Starting earlier to reduce carbon emissions (in 2000 rather than 2005) only worsens the overall impact, according to an EIA report released in July 1999. The EIA results show that the discounted present value of U.S. GDP falls by \$1,430 billion 1992 dollars over the 2000–2020 period compared to \$1,285 billion under the 2005 start date.

## ECONOMIC IMPACT OF ADDITIONAL REDUCTIONS BEYOND THE KYOTO TARGET

The economic costs of the Kyoto Protocol described above do not reflect the additional economic impact of emission reductions beyond the Kyoto target. Kyoto supporters contemplate substantial future carbon emission reductions well below 1990 levels. At least one model has analyzed this scenario. A study using the Charles River Associates model (MS-MRT) shows that the cost of going beyond the carbon emission reductions required by the Kyoto Protocol is high. For example, a target of 21 percent below 1990 emission levels (or three times the Kyoto target) would reduce U.S. GDP by 2.4 percent annually in 2020 with Annex B emission trading and by 3.0 percent with domestic abatement alone.

## IMPACT ON THE FEDERAL BUDGET SURPLUS

One way of assessing the impact of the Kyoto Protocol is to examine how slower economic growth would affect projected U.S. federal tax receipts and federal budget surpluses. Policymakers need to consider the potentially large negative impact of the Protocol on GDP growth and federal budget receipts, particularly since both the Administration and Congress are already chipping away at the federal budget surpluses to finance spending initiatives and tax cuts for fiscal year 2001 and beyond. Using a simple calculation based on the relationship of increases in GDP to federal tax receipts, if GDP is 3 percent lower annually, the on-budget surplus in 2010 would decline by \$156 billion dollars, from \$471 billion to \$315 billion (see Figure 3). If, as the EIA model predicts, the Kyoto Protocol reduces GDP by 4 percent in 2010, the budget surplus drops to only \$261 billion dollars.

## IMPORTANCE OF INTERNATIONAL EMISSIONS TRADING

Numerous studies show that a major determinant of the cost of curbing emissions is whether the United States can purchase permits from abroad where emissions can be reduced at a lower cost than in the United

**Figure 2 Annual Impact of Reducing Carbon Emissions to the Kyoto Target on U.S. GDP, 2008–2012**  
Percent of GDP

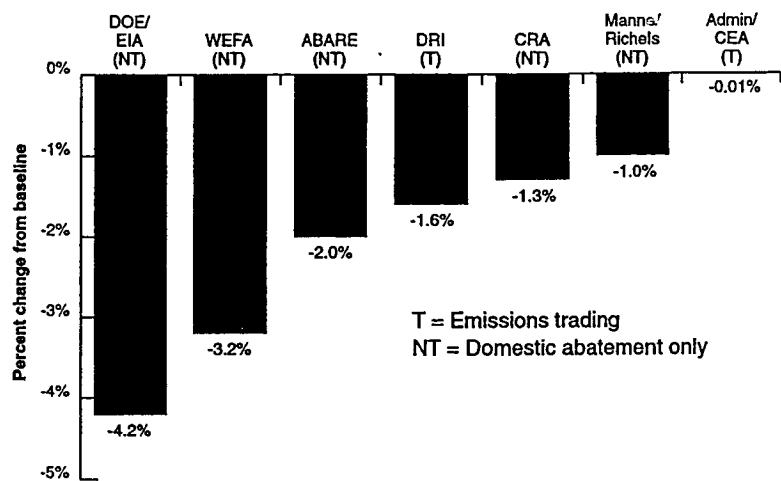


Figure compiled by Margo Thorning, Ph.D., ACCF Center for Policy Research, Washington, D.C., [www.accf.org](http://www.accf.org). Data source references can be found at the end of this report.

States. In the absence of an unfettered international trading system, the United States would be forced to curb its own carbon emissions by about 30 percent within 10 years. Due to population growth and increases in output, the gap between projected emissions and the Kyoto target will continue to grow (see Figure 1). Neither this growing gap nor the impact of additional reductions beyond the Kyoto targets have been addressed by Kyoto advocates.

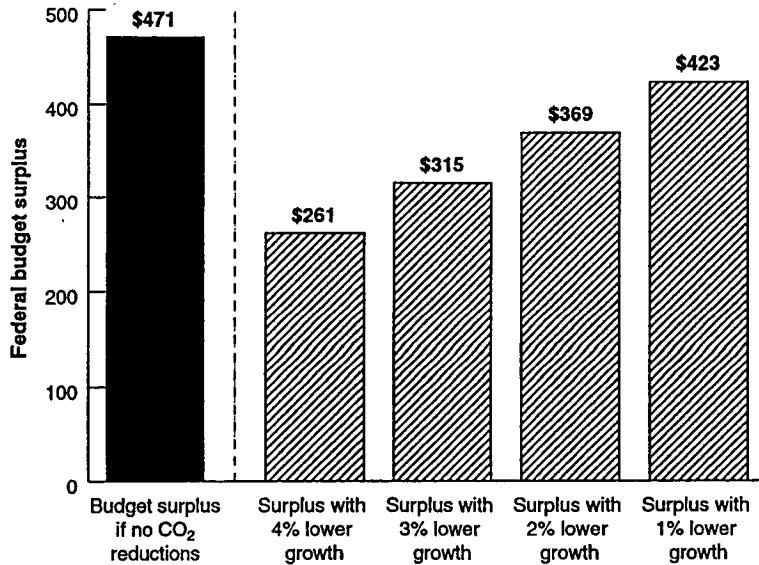
## IMPACT ON WAGE GROWTH AND CONSUMERS

U.S. consumers suffer declines in wage growth and the distribution of income worsens under carbon stabilization policies. Wesleyan University Professor Gary Yohe estimates that reducing emissions to 1990 levels (the Clinton Administration's pre-Kyoto target) would reduce wage growth by 5 percent to 10 percent per year, and the lowest quintile of the population would see its share of the economic "pie" shrink by about 10 percent. Texas A&M University Professor John Moroney estimates that U.S. living standards would fall by 15 percent under the Kyoto Protocol compared to the base case energy forecast.

U.S. households also face much higher prices for energy under near-term reductions. A range of esti-



**Figure 3 Reduction in Federal On-Budget Surplus in 2010 Due to Lower GDP Caused by Carbon Emission Reductions to the Kyoto Target**  
Dollars in billions



Note: "On-budget" surplus excludes Social Security and postal service contributions.

Calculations based on data from "An Analysis of the President's Budgetary Proposals for Fiscal Year 2002," Congressional Budget Office, May, 2001.

**Figure 4 U.S. Household Energy Costs: Impact of Reducing Carbon Emissions to Kyoto Targets, 2008–2012**  
Percent change from base case

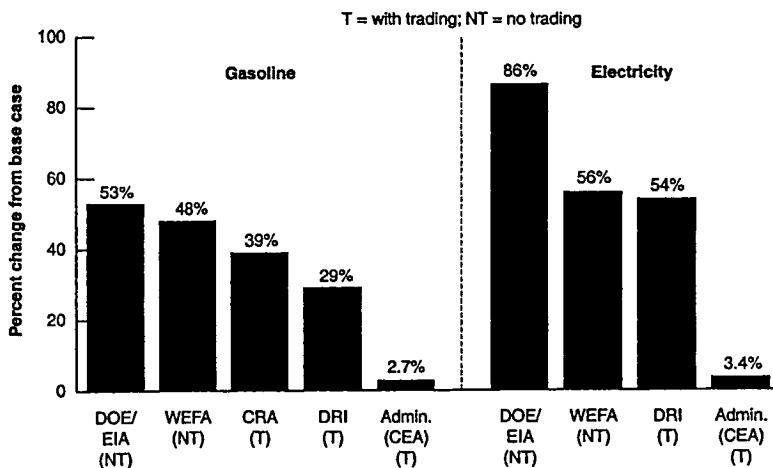


Figure compiled by Margo Thorning, Ph.D., ACCF Center for Policy Research, Washington, D.C., [www.accf.org](http://www.accf.org). Data source references can be found at the end of this report.

mates by various experts concludes that gasoline prices would rise from almost 30 percent to over 50 percent and that electricity prices would go up by anywhere from 50 percent over 80 percent (see Figure 4). Predictions by the Clinton Administration Council of Economic Advisers (a 2.7 percent increase in gasoline prices and 3.4 percent rise in prices for electricity) are far below those of widely respected climate policy modelers.

### U.S. COMPETITIVENESS IN ENERGY-INTENSIVE SECTORS AND AGRICULTURE

Several studies, including those by Dr. Brian Fisher and his colleagues at ABARE, University of Colorado's Professor Thomas Rutherford, DRI's Dr. Brinner, and WEFA's Ms. Novak, have concluded that near-term emission reductions would result in the migration of energy-intensive industry from the United States to non-Annex B countries (sometimes called "carbon leakage").

The 1999 study by Professor Manne of Stanford University and Dr. Richels of EPRI also analyzed this question. The Manne-Richels model results suggest that the Kyoto Protocol could lead to serious competitive problems for energy-intensive sector (EIS) producers in the United States, Japan, and OECD Europe. Meeting the emission targets in the Protocol would lead to significant reductions in output and employment among EIS producers, and there would be offsetting increases in countries with low energy costs. U.S. output of energy-intensive products such as autos, steel, paper, and chemicals could be 15 percent less than under the reference case by 2020. In contrast, countries such as China, India, and Mexico would increase their output of energy-intensive products. In its present form, the Protocol could lead to acrimonious conflicts between those who advocate free international trade and those who advocate a low-carbon environment, Professor Manne and Dr. Richels conclude.

U.S. agriculture would also lose competitiveness if the United States complied with the Kyoto Protocol. A study based on the DRI model by Terry Francl of the American Farm Bureau Federation, Richard Nadler of *K.C. Jones Monthly*, and Joseph Bast of the Heartland Institute (FNB) predicts that implementation of the Protocol would cause higher fuel oil, motor oil, fertilizer, and other farm operating costs. This would mean higher consumer food prices and greater demand for public assistance with higher costs. In addition, by increasing the energy costs of farm production in America while leaving them unchanged in developing countries, the Kyoto Protocol would cause U.S. food exports to decline and imports to rise. Reduced efficiency of the world food system could add to a political backlash against free trade policies at home and abroad.

The FNB analysis, which concludes that U.S. agriculture would be adversely affected by the Kyoto Protocol, stands in sharp contrast with the May 1999 report by the U.S. Department of Agriculture (USDA), which finds that the Kyoto Protocol would have "relatively modest" impacts on U.S. agriculture. The USDA report is seriously flawed for two reasons, according to a recent analysis by Mr. Francl. First, the USDA report relies on the unrealistic assumptions about the impact of the Kyoto Protocol on energy prices contained in the Administration's 1998 CEA analysis. Second, the USDA report makes the heroic assumption that U.S. farmers will have unrestricted access to carbon credit trading.

#### FLAWS IN THE CLINTON ADMINISTRATION CEA ANALYSIS

The Clinton Administration Council of Economic Advisers' July 1998 economic analysis of the impact of reducing carbon emissions to 7 percent below 1990 levels, mentioned earlier, is seriously flawed for three reasons.

First, CEA cost estimates assume full global trading in tradable emission permits (including trading with China and India). Most top climate policy experts conclude that this assumption is extremely unrealistic, because the Protocol does not require developing nations—who will be responsible for most of the growth in future carbon emissions—to reduce their emissions, and many have stated that they will not do so.

Second, the CEA's cost estimates assume that an international carbon emissions trading system can be developed and operating by 2008–2012. This assumption is unrealistic, according to analysis by

Massachusetts Institute of Technology's Professor A. Denny Ellerman.

Third, the cost estimates are based on the Second Generation Model (SGM) developed by Battelle Memorial Institute. The SGM appears to assume costless, instantaneous adjustments in all markets; the model is not appropriate for analyzing the Protocol's near-term economic impacts, according to CRA's Dr. Montgomery. As Massachusetts Institute of Technology Professor Henry Jacoby observes, there are no short-term technical changes that would significantly lower U.S. carbon emissions.

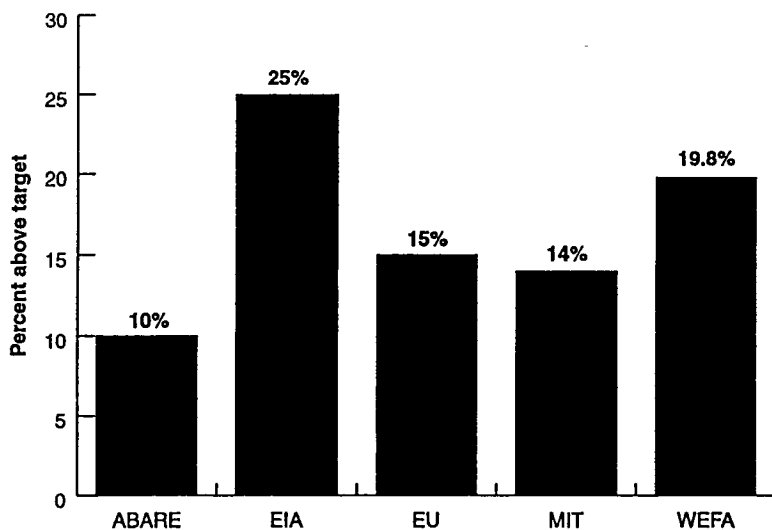
Finally, a former Clinton Administration official acknowledged that the CEA estimates understated the cost of the Kyoto Protocol by a factor of ten in a *USA Today* article (June 12, 2001).

#### EUROPEAN UNION UNABLE TO MEET TARGETS

Even though several EU members continue to support ratification of the Kyoto Protocol, a number of recent studies document that the EU will not be able to achieve its Kyoto CO<sub>2</sub> emission reduction targets by 2008–2012 (see Figure 5). These studies include:

- European Commission, "Towards a European Strategy for the Security of Energy Supply" (November 28, 2000). The EU's own report shows that their CO<sub>2</sub> emissions will be 15 percent above their Kyoto target by 2010, rising to almost 20 percent above by 2020. While stressing the need to reduce CO<sub>2</sub> emissions, the EU report cautions that climate change policy should not be allowed to "endanger economic development."
- The Pew Center on Global Climate Change, "The European Union & Global Climate Change" (June 2000). In an analysis of five major EU member states (Germany, United Kingdom, Netherlands, Austria, and Spain) responsible for 60 percent of CO<sub>2</sub> emissions in 1990, Pew concludes that only the United Kingdom has a good chance of meeting its targets and Germany will find it "difficult." The other three countries are "not on track"; emissions in the Netherlands currently exceed 1990 levels by 17 percent; Austria has no plans in place to meet its target; and Spain is already close to reaching its allowed growth in CO<sub>2</sub> emissions (a concession to its relative poverty), meaning that Spain is likely to be well above its emission target by 2010.

**Figure 5 European Union CO<sub>2</sub> Emissions in 2010 Compared to the Kyoto Target, According to Recent Studies**



Source: Figure compiled by Margo Thorning, Ph.D., ACCF Center for Policy Research, Washington, D.C., [www.accf.org](http://www.accf.org). Data source references can be found at the end of this report.

- MIT Joint Program on the Science and Policy of Global Change, "Carbon Emissions and the Kyoto Commitment in the European Union" (February 2001). According to the results of the MIT Emissions Prediction and Policy Analysis model, CO<sub>2</sub> emissions in the EU will rise by 14 percent above the 1990 levels in 2010 instead of decreasing by 8 percent as required by the Kyoto Protocol.
- The Australian Bureau of Agricultural and Resource Economics, "Climate Change Policy and the European Union" (September 2000). ABARE's report concludes CO<sub>2</sub> emissions in the EU will increase by an average of 0.3 percent per year from 1990 to 2010 unless stringent new measures are undertaken. (In other words, emissions will rise by about 10 percent rather than fall to 8 percent below 1990 levels).
- U.S. Department of Energy, Energy Information Administration, *International Energy Outlook* (March 2001). The EIA analysis predicts that by 2010, emissions in Western Europe will be almost 25 percent higher than they were in 1990, falling far short of their Kyoto targets.
- WEFA, "The Kyoto Protocol: Can Annex B Countries Meet Their Commitments?" (October 1999). WEFA surveys five other government reports, including an EU study (as well as its own analysis), and concludes that Western Europe is unlikely to

meet its targets. Emissions would need to fall by 15 percent to 30 percent, which would constrain economic growth in politically unacceptable terms.

While a new European Commission report from the European Climate Change Programme (June 2001) analyzed measures affecting all sectors of their economy and concluded that "the potential of cost-effective options is twice the size of the EU's required emission reductions," the EU's new report is flawed for several reasons, including:

- "Cost-effective" is defined as policies that cost no more than 20 euros per metric ton of avoided CO<sub>2</sub> emissions, or \$62 per metric ton of carbon in U.S. dollars. Most experts consider \$62 per metric ton of carbon "expensive." (Some of the suggested policies cost up to \$312 per metric ton of carbon to put in place.)

- The policy yielding the largest impact affects buildings. The costs of these policies was calculated with a very low discount rate (4 percent), a rate of return that no private investor would accept.

Thus, the new EU study is actually a "wish list" of policies the environmental ministry "wishes" that businesses and households would adopt, but that are not likely to be undertaken voluntarily because of their high costs.

### SCIENCE OF CLIMATE CHANGE NEEDS TO BE BETTER UNDERSTOOD

Despite the United States' intensive investment in climate change science over the past decade, numerous gaps remain in our understanding of climate change. The National Academy of Sciences' National Research Council identified critical uncertainties about the science of climate change in its white paper, *Climate Change Science: An Analysis of Some Key Questions*:

- Conflict between global atmospheric and "surface" temperature measurements (see Figure 6);
- Uncertainty about how much carbon is sequestered by oceans and terrestrial sinks and how much remains in the atmosphere;

- Uncertainty about feedbacks in the climate system that determine the magnitude and rate of temperature increases;
- Uncertainty about the direct and indirect effects of aerosols;
- Uncertainty about the details and impacts of regional climate change resulting from global climate change;
- Uncertainty about the nature and causes of the natural variability of climate, including the sun, and its interactions with forced changes;
- Uncertainty about the emissions and usage of fossil fuels and future emissions of methane.

These science questions must be addressed before the United States and its allies embark on a path as nonproductive as that of the Kyoto Protocol. (For more detail, please see the Appendix to this testimony.)

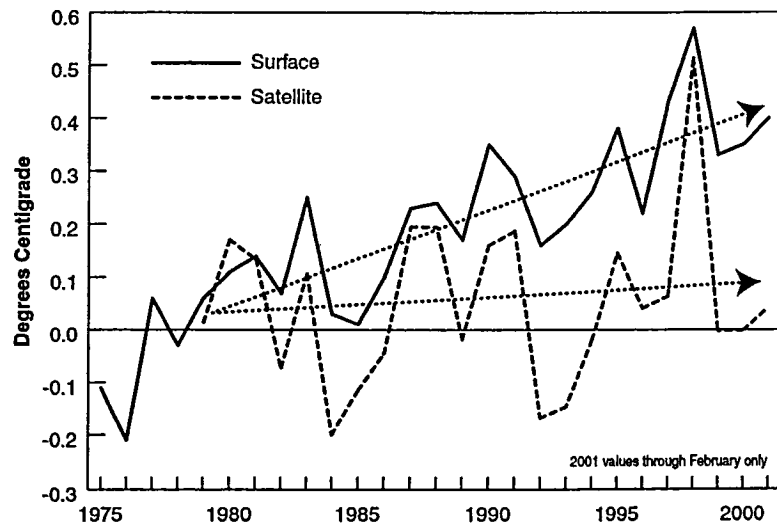
### GREENHOUSE GAS EMISSION TARGETS PREMATURE AND UNJUSTIFIED

According to scholars such as Brookings Institution economist Dr. Robert Crandall, setting targets and timetables for U.S. greenhouse gas emissions is premature. He bases this conclusion on:

- The uncertainty about whether or the extent to which global warming is occurring (see Figure 6); new data from climatologist and U.N. Intergovernmental Panel on Climate Change author Professor John Christy of the University of Alabama demonstrates that while surface-based measures show warming, satellite data shows little warming; and
- The high cost of foregone investment if the United States sacrifices badly needed economic growth to reduce emissions.

In a 1999 report, Dr. Crandall observes that the economic estimates of the costs and benefits of reducing emissions to 1990 levels that are in the literature are not particularly supportive of going ahead immediately with any policy of abatement. For example, as an analysis by Brookings Institution fellows Drs. Warwick McKibben and Peter Wilcoxon points out, the estimates of the costs of capping emissions at 1990 levels generally range from 1 to 2 percent of GDP per year,

**Figure 6 Surface vs. Satellite Global Temperatures**



Source: John R. Christy, University of Alabama in Huntsville.

while the benefits, estimated at most to be 1.3 percent of GDP, will not arise for at least 30 to 50 years. Dr. Crandall notes that "Every dollar dedicated to greenhouse gas abatement *today* could be invested to grow into \$150 in the next 50 years at a 10 percent social rate of return, even at a puny 5 percent annual return, each dollar would grow into \$12 in 50 years. Therefore, we need to be sure that the prospective benefits, when realized, are at least 12 to 150 times the current cost of securing them. Otherwise, we should simply not act, but use our scarce resources in other ways." Moreover, the climate models generally forecast that it would require far greater reductions than a return to 1990 emissions to stabilize the climate. Dr. Crandall concludes, "We cannot justify a return to 1990 emissions based on the average estimates in the literature, no matter how efficiently it is done."

It is clear that the marginal costs of abatement in low-income societies such as China and India are substantially below those in developing countries, Dr. Crandall notes. Economists envision a marketable permits program as being global in scope. The United States, France, Japan, and Germany, for example, would buy permits from China, India, or Bangladesh. The latter would, in turn, reduce their CO<sub>2</sub> or other greenhouse gas emissions by this amount over the levels that would have occurred without the permits policy in all future years. The difficulties involved in such a future program would be immense: measuring emissions from millions of sources from motor scooters to

bovine animals; forecasting emission levels for the uncontrolled scenario; and, finally, enforcing the reductions from these myriad sources. If enforcing nuclear nonproliferation treaties is difficult, enforcing a global greenhouse gases trading program would be incomparably more complicated.

Yale University Professor William D. Nordhaus has also analyzed the costs and benefits of CO<sub>2</sub> emission limits. Dr. Nordhaus' research shows that the costs of even an efficiently designed emission reduction program exceed the value of environmental benefits by a ratio of 7 to 1 and that the United States would bear almost two-thirds of the global cost.

Targets and timetables for emission reductions would also tend to discourage businesses and households from investing now in new equipment and processes that would reduce greenhouse gas emissions. This unfortunate result stems from the fact that tax depreciation schedules for many types of investments that could reduce CO<sub>2</sub> emissions are very slow. Slow capital cost recovery means that investments that are deemed "risky" because of possible future emission caps face a much higher hurdle rate to gain acceptance than would an investment whose cost could be recouped immediately through expensing (first-year write-off). The prospect of emission constraints in the future will tend to retard the very type of capital expenditures that many believe would facilitate emission reductions without curtailing economic growth.

## TAX POLICY FOR VOLUNTARY ACTION

Current U.S. tax policy treats capital formation—including investments that increase energy efficiency and reduce pollution—harshly compared with other industrialized countries and with our own recent past. For example, before the 1986 Tax Reform Act (TRA '86), the United States had one of the best capital cost-recovery systems in the world.

Under the strongly pro-investment tax regime in effect during 1981–85, the present value of cost-recovery allowances for wastewater treatment facilities used in pulp and paper production was about 100 percent (meaning that the deductions were the equivalent of an immediate write-off of the entire cost of the equipment), according to an analysis by Arthur Andersen LLP (see Table 1).

Under TRA '86, the present value for wastewater treatment facilities fell to 81 percent for pulp and

**Table 1 International Comparison of the Present Value of Pollution Control Equipment**  
As a percent of cost

	Wastewater Treatment for Chemical Production	Wastewater Treatment for Pulp and Paper Equipment	Scrubbers Used in Electricity Plants
<b>United States</b>			
1985 Law	100.1	100.1	89.7
MACRS <sup>1</sup>	85.2	80.8	54.5
AMT <sup>2</sup>	83.0	78.0	54.5
<b>Brazil</b>	74.7	74.7	79.4
<b>Canada</b>	85.3	85.3	85.3
<b>Germany</b>	71.8	69.7	68.9
<b>Japan</b>	84.6	83.7	82.4
<b>Korea</b> (w/3% ITC)	95.2	93.9	92.2
<b>Singapore</b>	91.7	91.7	91.7
<b>Taiwan</b>	147.0	147.0	147.0

Notes: 1. MACRS = Modified Accelerated Cost Recovery System (current law) for regular taxpayers included in TRA '86.  
2. AMT = Alternative minimum tax (current law, Taxpayer Relief Act of 1997).

Source: Stephen R. Corrick and Gerald M. Godshaw, "AMT Depreciation: How Bad Is Bad?" in *Economic Effects of the Corporate Alternative Minimum Tax* (Washington, D.C.: American Council for Capital Formation Center for Policy Research, September 1991); and unpublished data incorporating the AMT provisions of OBRA 1993. Updated by Arthur Andersen LLP, Office of Federal Tax Services, Washington, D.C., January, 1998.

paper, dropping the U.S. capital cost recovery system to near the bottom ranking of an eight-country international survey. Allowances for scrubbers used in the production of electricity were 90 percent before TRA '86; the present value fell to 55 percent after TRA '86, ranking the United States at the bottom of the survey. As is true in the case of productive equipment, both the loss of the investment tax credit and the lengthening of depreciable lives enacted in TRA '86 raised effective tax rates on new investment in pollution-control and energy-efficient equipment. Slower capital cost recovery means that equipment embodying new technology and energy efficiency will not be put in place as rapidly as it would be under a more-favorable tax code. A variety of tax incentives such as expensing, accelerated depreciation, tax-exempt bond financing,

or more-generous loss carrybacks that reduce the cost of capital for voluntary efforts to reduce greenhouse gas emissions, such as those included in S. 1777, the Climate Change Tax Amendment introduced in the 106th Congress by Senator Larry Craig (R-ID), would be more effective than the "credit for early action" regulatory framework proposal or the multi-pollutant approach proposed by some in Congress.

## CONCLUSIONS: A PARTNERSHIP BETWEEN TAX POLICY AND TECHNOLOGICAL INNOVATION

If, as knowledge of the climate system increases, policy changes to reduce carbon emissions become necessary, these changes should be implemented in a way that minimizes damage to the U.S. economy. Above all, experts agree that voluntary measures clearly and cost-effectively reduce the growth in greenhouse gas emissions, as the U.S. Second National Communication to the Framework Convention on Climate Change noted in 1997.

A U.S. strategy for reducing CO<sub>2</sub> emissions and providing energy security should include:

- **Fix the U.S. Tax Code:** Providing expensing (first-year write-off) or faster depreciation for new investments that reduce CO<sub>2</sub> can reduce the cost of capital by 20–30 percent.
- **Expand Nuclear Energy:** Nuclear power expansion has a vital role to play in managing CO<sub>2</sub> emissions while strengthening U.S. energy security.
- **Expand Bilateral Cooperation With Developing Countries:** Promoting the use of existing and emerging technology in developing countries for clean coal, natural gas, and hydro electricity production could substantially slow the growth of global CO<sub>2</sub> emissions.
- **Expand Incentives for use of landfill methane and biomass including ethanol from cellulose.** The EIA's April 2000 Climate Change Technology Initiative report shows that these programs are the most efficient use of tax incentives to reduce CO<sub>2</sub> emissions.
- **Implement Multi-Year Plan for Improvement of Coal Technology:** In the short term, focus on new clean coal technology, co-firing with biomass, and coal to gas; in the long term, institute a capture target of 50 percent (converts coal emissions to the equivalent of natural gas).
- **Remove Regulatory Barriers:** New Source Review is impeding the retrofitting and expansion of U.S.

electricity generating, refining, and manufacturing capacity and making it more difficult to put in place the kinds of changes that would reduce CO<sub>2</sub> for each unit produced.

- **Avoid Caps on CO<sub>2</sub> Emissions by U.S. industry.** Such a policy will have a negative impact on the willingness of industry to invest here in the United States in the new technologies because of the concern that "voluntary" emission cuts will become mandatory. Allowing industry to recover its costs faster will spur the kind of investments that reduce CO<sub>2</sub> and expand output of energy as well as other products and services.
- **Avoid Setting Targets for Global CO<sub>2</sub> Concentrations in the range of 550 ppm in the next 75–100 years.** Such targets would require the developed countries' CO<sub>2</sub> emissions to fall to zero by about 2050 and would likely severely constrain U.S. economic growth. Models which show that their targets can be achieved at low cost, such as the Second Generation Model used by Jae Edmonds at Battelle Memorial Institute, are seriously flawed. The SGM model assumes costless, instantaneous adjustments in all markets and does not specify how the new technology required to move off carbon-based fuels is to be developed.

The consensus of the noted climate policy scholars whose work is discussed in this report is clear. Given the need to maintain strong U.S. economic growth to address such challenges as a growing population, the retirement of the baby boom generation, and a persistent trade deficit, policymakers need to weigh carefully the Kyoto Protocol's negative economic impacts and its failure to engage developing nations in full participation. Adopting a thoughtfully timed climate change policy—based on accurate science, improved climate models, global participation, tax incentives to accelerate investment in energy efficiency and sequestration, and new technology—is essential, both to U.S. and global economic growth and to eventual stabilization of the carbon concentration in the atmosphere, if growing scientific understanding indicates such a policy is needed. ❖

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## APPENDIX: KEY GAPS IN THE SCIENCE OF CLIMATE CHANGE

Despite the United States' intensive investment in climate change science over the past decade, numerous gaps remain in our understanding of climate change. The National Academy of Sciences' National Research Council identified in its June 2001 white paper, *Climate Change Science: An Analysis of Some Key*, critical uncertainties about the science of climate change.

The National Research Council paper goes on to identify a range of specific areas of scientific uncertainty that require additional study and research. These gaps include (page references are from the source document):

### ■ Conflict exists between global atmospheric and "surface" temperature measurements:

"Although warming at the Earth's surface has been quite pronounced during the past few decades, satellite measurements beginning in 1979 indicate relatively little warming of air temperature in the troposphere [see Figure 6 in this testimony]. ... The finding that surface and troposphere temperature trends have been as different as observed over intervals as long as a decade or two is difficult to reconcile with our current understanding of the processes that control the vertical distribution of temperature in the atmosphere." (p. 17)

### ■ How much carbon is sequestered by oceans and terrestrial sinks and how much remains in the atmosphere are uncertain:

"How land contributes, by location and processes, to exchanges of carbon with the atmosphere is still highly uncertain..." (p. 11)

"These estimates [of future carbon dioxide climate forcings] ... are only approximate because of uncertainty about how efficiently the ocean and terrestrial biosphere will sequester atmospheric CO<sub>2</sub>." (p. 13)

"How much of the carbon from future use of fossil fuels will be seen as increases in carbon dioxide in the atmosphere will depend on what fractions are taken up by land and by the oceans. The exchanges with land occur on various time scales, out to centuries for soil decomposition in high latitudes, and they are sensitive to climate change. Their projection into the future is highly problematic." (p. 18)

### ■ The feedbacks in the climate system that determine the magnitude and rate of temperature increases are uncertain:

"Because there is considerable uncertainty in current understanding of how the climate system varies naturally and reacts to emissions of greenhouse gases and aerosols, current estimates of the magnitude of future warming should be regarded as tentative and subject to future adjustments (either upward or downward)." (p. 1)

"Much of the difference in predictions of global warming by various climate models is attributable to the fact that each model represents these [feedback] processes in its own particular way. These uncertainties will remain until a more fundamental understanding of the processes that control atmospheric relative humidity and clouds is achieved." (p. 4)

"The warming that has been estimated to have occurred in response to the buildup of greenhouse gases in the atmosphere is somewhat greater than the observed warming." (p. 17)

### ■ The direct and indirect effects of aerosols are uncertain:

"The greatest uncertainty about the aerosol climate forcing—indeed, the largest of all the uncertainties about global climate forcings—is probably the indirect effect of aerosols on clouds." (p. 14)

"The great uncertainty about this indirect aerosol climate forcing presents a severe handicap both for the interpretation of past climate change and for future assessments of climate changes." (p. 14)

"Climate forcing by anthropogenic aerosols is a large source of uncertainty about future climate change." (p. 13)

"Because of the scientific uncertainties associated with the sources and composition of carbonaceous aerosols, projections of future impacts on climate are difficult." (p. 12)

"The conclusion is that the black carbon aerosol forcing is uncertain but may be substantial. Thus there is the possibility that decreasing black carbon emissions in the future could have a cooling effect that would at least partially compensate for the warming that might be caused by a decrease in sulfates." (p. 13)

■ The details and impacts of regional climate change resulting from global climate change are uncertain:

"On the regional scale and in the longer term, there is much more uncertainty" with respect to effects on agriculture and forestry. (p. 19)

"The Northern Hemisphere as a whole experienced a slight cooling from 1946-75, and the cooling during that period was quite marked over the eastern United States. The cause of this hiatus in the warming is still under debate." (p. 16)

"Health outcomes in response to climate change are the subject of intense debate. ... The understanding of the relationships between weather/climate and human health is in its infancy and therefore the health consequences of climate change are poorly understood. The costs, benefits, and availability of resources for adaptation are also uncertain." (p. 20)

"Changes in storm frequency and intensity are one of the more uncertain elements of future climate change prediction." (p. 20)

■ The nature and causes of the natural variability of climate, including the sun, and its interactions with forced changes are uncertain:

"Because of the large and still uncertain level of natural variability inherent in the climate record and the uncertainties in the time histories of the various forcing agents (and particularly aerosols), a causal linkage between the buildup of greenhouse gases in the atmosphere and the observed climate changes during the 20th century cannot be unequivocally established." (p. 17)

The value of indirect effect of ozone changes induced by solar ultraviolet irradiance variations "remains highly uncertain." (p. 14)

■ The emissions and usage of fossil fuels and the future emissions of methane are uncertain:

"The increase of global fossil fuel CO<sub>2</sub> emissions in the past decade, averaging 0.6 percent per year, has fallen below the IPCC scenarios. The growth of atmospheric CH<sub>4</sub> has fallen well below the IPCC scenarios." (p. 19)

"With a better understanding of the sources and sinks of methane, it may be possible to encourage practices ... that lead to a decrease in atmospheric methane and significantly reduce future climate change." (p. 13)

"There is no definitive scientific basis for choosing among several possible explanations for these variations in the rates of change of global methane contributions, making it very difficult to predict its future atmospheric concentrations." (p. 11)

In response to these gaps in our knowledge, the NRC paper also recommends "research that couples physical, chemical biological and human systems; an improved capability of integrating scientific knowledge, including its uncertainty, into effective decision support systems, and an ability to conduct research at the regional or sectoral level that promotes analysis of the response of human and natural systems to multiple stresses."

The NRC study also indicates that to advance the understanding of climate change, it will be necessary to have "a global observing system in support of long term climate monitoring and prediction [and] concentration on large-scale modeling through increased, dedicated supercomputing and human resources." In addition to the recent NRC paper, the U.S. Global Change Research Program has updated its 10-year plan and submitted it to the National Research Council (NRC) for review. High priority areas for further research are identified in numerous recent reports and documents, such as:

- "Global Environmental Change: Research Pathways for the Next Decade" (NRC, 1998);
- "Capacity of U.S. Climate Modeling to Support Climate Change Assessment Activities" (NRC, 1998); and
- "Adequacy of Climate Observing Systems" (NRC, 1999).





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July 10, 2001

By Fax: (202) 456-2710

The Honorable James Connaughton  
Chair, Council on Environmental Quality  
The White House  
1600 Pennsylvania Ave, NW  
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Dear Jim,

Attached is an essay that will shortly be posted on the AEI-Brookings website. Jonathan and I are doing a much longer version that should be done in a few weeks. I had a good talk yesterday with David Victor on hybrid flexibility caps. I'd be pleased to discuss any of this with you.

Hope all is going well. I know it's exciting!

Best regards,

001490

## **Reconstructing Climate Policy: What the US Should Do Now**

Richard B. Stewart (New York University) and Jonathan B. Wiener (Duke University)

After the impasse over the climate change treaty negotiations at The Hague in late 2000, and the Bush Administration's recent repudiation of the Kyoto Protocol, where now? What should the US government, and the world, do next?

When the Bush-Cheney Administration announced that it would not pursue Kyoto, it was loudly killing a treaty that was already in terminal condition. By late 2000 it was evident that the US could not achieve its Kyoto Protocol limitations on greenhouse gas (GHG) emissions domestically without unacceptable cost, nor could most other industrialized countries. Bush took the heat for the Clinton-Gore Administration's signing of Kyoto in 1997 without getting agreement on the means of compliance, especially emissions trading and sinks, or on developing country participation. The Senate had voted 95-0 to reject that approach.

Now that the bubble has been burst, the challenge is to start constructing a new, more successful international climate regime. US policy should be guided by a fundamental point: getting the institutional design right for the long run is far more important than either rushing ahead with hasty symbolic commitments or stonewalling to seem strong. Once adopted, the institutional design may be very difficult to revise; there will be high costs of undoing early mistakes.

### **The US Cannot Afford Climate Isolationism**

As the Bush Administration has acknowledged, the US cannot afford to ignore climate issues, do nothing about GHG emissions, and sit on the sidelines while other countries design a global regime that the US will later wish it had helped shape.

In addition to the environmental risks of climate change, climate policy is a global economic issue in which the US has major strategic interests. Many US firms have the technology and know-how to achieve GHG limitations and help run emissions trading markets. Flexible global institutional design will be of tremendous cost-saving importance to the US in implementing, sooner or later, domestic GHG limitations. These opportunities are likely to be sharply restricted if the US fails to remain a credible international player and thereby cannot counter efforts by the EU and others to restrict or kill flexibility. And if the US fails to address seriously the climate policy interests of other important nations, it is likely to engender widespread resentment and suspicion that will make it more difficult to engage their cooperation on trade, security, and other US priority issues.

### **Prudent Investment in Climate Insurance is Warranted**

Investment in initial steps to limit GHG emissions growth is prudent insurance against the risks of climate change. A National Academy of Sciences panel, convened this spring at the request of the White House, confirmed that rising GHG emissions due to human activities are already causing the earth's atmosphere to warm and that the rate and extent of warming will increase significantly over this century. Recent studies indicate that some initial warming and CO<sub>2</sub> fertilization may help agriculture in some areas (including the OECD, Russia and China), but will have adverse impacts in poorer areas; and that the impacts of greater warming will become adverse worldwide over time, including losses of 1 to 2% in OECD countries and 4 to 9% in Russia and most developing countries (except China). There is also the possibility of catastrophic changes in ocean currents or other critical natural systems.

While uncertainties remain, the risks of climate change are sufficiently serious to justify a reasonable investment in insurance, at least against very rapid or large changes. Effective climate insurance will require R&D on low-GHG technologies and steps to correct market and policy failures that blunt firms' incentives to conserve energy and reduce GHG emissions, but also some regulatory limits on GHG emissions. The essential problem is that the global atmosphere is being treated as an open-access resource. With no constraints on its use as a disposal site for GHG emissions, the atmosphere is being overused in a classic "tragedy of the commons."

### Sound Regulatory Design Can Make the Costs of Climate Insurance Reasonable

Taking the first steps toward a low-GHG economy will not be a free lunch. But as we reconstruct climate policy, these costs can be reduced dramatically by intelligent regulatory design.

First, regulatory limitations on GHG emissions should be phased in, quite modest at first and then building over time if new evidence indicates that continued investment in insurance against climate risks is justified. This strategy accords with the GHG stock/flow relationship, the fact that it will be less costly to achieve limitations in the future with the benefit of new technologies and turnover of the capital stock, and the gains from incurring costs later rather than sooner.

Second, emissions limitations should be achieved by use of market-based regulatory instruments that foster cost-saving and innovation-enhancing flexibility. Such flexibility can best be achieved through (i) the comprehensive approach, including all major GHGs, sources, and sinks; (ii) emissions trading; and (iii) setting targets for cumulative emissions over several years.

Because there is so much variety in GHG limitation opportunities across gases and sectors, the comprehensive approach would reduce costs by about 60% compared to regulating CO<sub>2</sub> alone. The comprehensive approach is also environmentally necessary to prevent perverse shifts in emissions from regulated gases (such as CO<sub>2</sub>) and sectors to unregulated ones (such as CH<sub>4</sub>). Criticisms of the comprehensive approach as too complex and difficult to implement are misplaced. Simplified, conservative default rules can be adopted to deal with cross-gas comparison indices and difficult-to-measure GHGs such as agricultural CH<sub>4</sub> and CO<sub>2</sub> sinks; these rules can be revised as measurements improve.

And because of varied abatement opportunities across countries, studies indicate that international emissions trading would reduce costs by about 75% compared to wholly domestic CO2 emissions limitations.

While internationally coordinated GHG taxes could in theory provide similar efficiencies, countries are unlikely to surrender control of taxing powers. And compliance would be hard to police because countries could find many ways to cushion the domestic impact of taxes. Moreover, taxes cannot provide the necessary side payments (transfers of capital and technology) to attract participation by major emitting countries (such as Russia and China) who otherwise perceive no net national benefit to climate protection. Direct side payments to engage participation would undercut the incentive effect of emissions taxes. Emissions trading can solve this problem by maintaining a cap on total emissions while assigning extra allowances -- "headroom," not "hot air" -- to attract participation.

### Kyoto's Successes and Failures

Kyoto's basic regulatory design -- a comprehensive approach, a cap and trade system, and multi-year commitment periods -- was sound; it promotes flexibility and cost-effectiveness. (These ideas have been US policy across administrations since at least 1989.) The cost of meeting the Kyoto targets through wholly domestic measures to reduce CO2 emissions has been estimated at 1 to 4% of GDP in the US and other industrialized countries. With the 60% savings from the comprehensive approach and the 75% savings from international emissions trading, the combined cost savings could be 90% compared to a CO2-only policy with national caps and no trading. A phased-in emissions limitations pathway would make the costs even more reasonable.

But Kyoto's negotiators made two major design mistakes that a reconstructed climate policy must overcome. First, they adopted quantitative emissions limitations without agreement on the ground rules for measuring reductions of GHG sources, enhancement of GHG sinks, and emissions trading. The treaty accordingly failed to assure the most cost-effective means for achieving targets, and gave running room to those who oppose the comprehensive approach and emissions trading out of ideology or economic self-interest, who have sought to restrict flexibility and castigate its advocates.

The second basic design flaw in Kyoto was its failure to face squarely the issue of developing country participation. The complete omission of any developing country obligations, now or in the future, is contrary to the approach taken in prior global environmental treaties and to the principle of "common but differentiated" responsibility in the FCCC. A sound global climate regime must involve limitations obligations by all nations with significant sources and sinks, in order to ensure that the climate is actually protected; that the lowest-cost abatement opportunities can be tapped worldwide; that free-riding on limitations efforts by others is deterred; and that cross-border "leakage" of emissions is constrained. Thus the regime must attract developing country participation, through side payments and demonstration that industrialized countries are undertaking the major burden of emissions limitations.

## Reconstructing Climate Policy

The Bush administration should lead a reconstruction effort in order to build a better institutional design for climate policy. These efforts should proceed simultaneously at the international and national levels, in two linked stages.

### *An International Climate Regime.*

The First Stage -- which could be adopted within a year -- would be an agreement among all industrialized countries and any interested developing countries to make pledges to limit cumulative net GHG emissions over ten years (say, 2005-2015), with a five year interim goal, progress reporting, and review provisions. There would be full scope for use of the comprehensive approach and international emissions trading and credit projects to meet pledges. Groups of countries could choose to make such goals legally binding through bilateral or multilateral agreements.

The Second Stage agreement would contain binding cumulative net emissions limitations for an initial commitment period (say, 8-10 years), based on agreed ground rules on comprehensiveness and flexibility mechanisms (including sinks and emissions trading) and on compliance assurance measures. The circumstance that no limitations commitments could be made until implementation and compliance matters were resolved would provide a strong impetus for prompt resolution of those matters. Aggregate emissions limits would be set at levels for which the costs (given flexibility mechanisms) would be reasonable in light of the expected benefits. The agreement could accord credit against these new targets for reductions achieved in accordance with First Stage pledges

This Second Stage would provide several "windows" for inclusion of developing countries, including:

- Clarifying and streamlining the CDM on market-based lines and structuring it to encourage sector-wide approaches. The CDM could also include bilateral sector-based technology transfer and assistance/credit arrangements between industrialized and developing countries.
- Inviting voluntary national participation in emissions trading, including on a sector-based approach that would permit participation at scale without overall national caps.
- Providing principles for the voluntary accession of developing countries to a global cap and trade system, with assignment of "headroom" allowances.
- Agreeing on principles of eventual automatic participation ("graduation") by developing countries in the global cap and trade system, once each country reaches



pre-agreed levels of per capita income, with appropriate allocations of headroom allowances.

### *A Domestic Climate Policy.*

A two-stage process for domestic US measures would proceed in tandem with the two stages at the international level. The Second Stage would include domestic limitations adopted in conjunction with the international limitations outlined above; an eventual commitment to domestic limitations is essential for the credibility of the US and its ability to promote a sound global climate regime.

The US domestic First Stage would jump start voluntary domestic emissions limitations and domestic and international emissions trading, using the power of information and the prospect of second-stage regulation to provide incentives for early limitations efforts. A White House Climate Policy Office would develop a National Climate Protection Plan for limiting net US GHG emissions, with quantitative goals and timetables; a national Climate Protection Scorecard would monitor and report progress. The plan would form the basis for the US pledge under the international First Stage, above. The government would establish comprehensive GHG emissions monitoring, record keeping, and reporting protocols and procedures for domestic sources and sinks and for projects abroad financed by US sources. It would phase in mandatory monitoring and reporting by domestic sources to create a GHG Release Inventory.

The President would be authorized to contract with business and other private entities to achieve reductions in net GHG emissions relative to specified baselines, in return for certified reduction credits that could be applied against future emissions limitation regulations. Appropriate flexibility in existing US environmental regulations would be provided to participating sources. Credits would be accorded to actions taken outside as well as within the US. Credits could be traded domestically and internationally. Credits or allowances issued by other countries could be recognized in the US under mutual recognition arrangements.

The US domestic Second Stage program, building on the experience gained in the First Stage, would adopt domestic regulatory net emissions limitations, with primary reliance on cap and trade using a comprehensive approach to all GHGs. Caps would be set as cumulative limits for a substantial period (e.g., 8-10 years). Regulation could be phased in by sector, with opportunities for other sources to opt in (as in the US SO<sub>2</sub> trading program), and purchase of external credits by covered sources, both from domestic and international sellers. The system might include a hybrid trading/fee system under which sources with excess emissions would be required to purchase extra allowances from the government at a pre-set price, with revenues dedicated to abatement.

### Conclusion

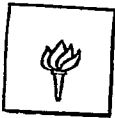
The phased approach proposed herein may seem too aggressive for some and too timid for others. To those who find our program too aggressive, especially US skeptics of Kyoto, we make

two basic points. First, the climate change risks are serious enough to warrant prudent initial investment in climate insurance; our program provides such insurance at costs that are reasonable and justified. Second, important US economic and strategic as well as environmental interests require that it be a credible, effective player in the development of international climate policy; our program would assure protection of these interests.

To those, both at home and abroad, who view our proposal as unduly timid, we emphasize the need for prudence and realism. It would disserve the integrity of the international regime for the US (or the EU, Japan, or others) to sign on to commitments in a global pact that it is unable to deliver. A climate treaty that makes grand promises but does little to slow global warming at high cost will not only be a climate policy failure but will also undermine the case for other needed international environmental protection regimes in the future.

The fundamental lesson of Kyoto should not be stalemated over symbolic politics. It should be to invest in getting the institutional design right – comprehensiveness, emissions trading, phased-in limitation pathways, and global participation -- before pressing ahead with specific targets.





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July 25, 2001

The Honorable James Combaughton  
 Chair, Council on Environmental Quality  
 The White House  
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 Washington, DC 20500

Dear Jim,

I enclose materials on the Chicago Climate Exchange (CXX), a major voluntary GHG emissions trading scheme in the Midwest which has attracted an impressive array of participants, including major U.S. manufacturing, industrial, energy, and other companies. It has also recruited a distinguished advisory board. In my work over the years in international GHG emissions trading, I have come to know the principals in CXX --- Richard Sandor (architect of financial derivatives on the Chicago Board of Trade), Alice LeBlanc, and Mike Wash. They are very able policy/institutional entrepreneurs.

CXX is the leading model of voluntary GHG trading in the US. I strongly recommend that you and your staff learn more about it and meet with the principals about possible administration support for their effort and the prospects for more general application of their approach. I recently saw Alice LeBlanc, and encouraged her to meet with you and/or your staff. By coincidence, she had already made contact with Phil Cooney (astute recruiting!). She will be calling Phil about a meeting with him next week, which would be valuable for all concerned.

On a related note, Jonathan and I are revising our earlier "Whither Kyoto" paper, which had not yet been published by AEI/Brookings, take into account the post-Bonn situation and prospects for US. I would love to have a few minutes of your time to discuss possible avenues for constructive engagement with emissions trading which the administration might wish to consider.

Att:

001493

All best wishes,

*Di/c*

# **The Joyce Foundation**

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May 30, 2001

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## **U.S. VOLUNTARY CARBON TRADING MARKET EMERGING 25 Leaders from Energy, Industrial, Farm and Forest Sectors to Design New Chicago Climate Exchange<sup>sm</sup>**

Voluntary trading of greenhouse gas credits could help address climate change, according to the results of a study announced today by Chicago-based Environmental Financial Products. A diverse group of major firms has indicated their intent to participate in the design phase of a voluntary pilot trading market, the Chicago Climate Exchange<sup>sm</sup>. The project is spearheaded by Dr. Richard L. Sandor, who has developed innovative commodity and environmental markets, and was honored by the Chicago Board of Trade and the City of Chicago for his universal recognition as the “father of financial futures.”

The study suggests a goal of reducing participants’ greenhouse gas emissions, including carbon dioxide, by 5% below 1999 levels over 5 years. Such emissions are widely agreed to cause climate change and possibly global warming. The announcement comes as the U.S. enters a major debate on energy use and endeavors to develop a policy to reduce carbon dioxide emissions.

The feasibility study for the Chicago Climate Exchange<sup>sm</sup> was funded by the Chicago-based Joyce Foundation through a special \$347,000 Millennium Initiative grant to the Kellogg Graduate School of Management at Northwestern University. “Our findings suggest that a voluntary pilot market, starting in the U.S. Midwest, is feasible and can be

expanded over time," said study author Sandor, who is a visiting scholar at the Kellogg School and CEO of Environmental Financial Products. "The widespread corporate interest in preparing rules and regulations for this voluntary market affirms the private sector's demand for flexible, market-based mechanisms to address climate change."

Trading would help cost-effectively reduce greenhouse emissions and offers new opportunities for environment-based income for farmers, foresters and renewable energy firms. Twenty-five companies and non-profits have agreed to participate in the market design phase, including Ford, DuPont, Suncor Energy, STMicroelectronics, Temple-Inland, International Paper, Alliant Energy, Calpine, Cinergy, NiSource, PG&E National Energy Group, Wisconsin Energy, ZAPCO, Agriliance and GROWMARK. (Complete list is attached).

A high-level Advisory Board consisting of academic, business, environmental and public sector leaders was formed with the objective of gathering strategic input. Its members include former U.S. Senators and Governors, the Deans of two leading U.S. business schools, a world-renowned conservation biologist, heads of major financial exchanges and the former Under-Secretary General of the United Nations. (Short biographies are provided).

The notion of trading carbon emissions has long been debated, but the proposed Chicago Climate Exchange<sup>™</sup> offers the first test of the concept on a scale that has global potential. The Midwest is a promising location for starting the market because of its 20% share of the U.S. economy and greenhouse gas emissions, its mix of manufacturing, transport, energy, agriculture and forestry sectors, and its extensive international linkages. A representative carbon trading market can yield lessons that may be relevant for economies worldwide for the next century.

"The Chicago Climate Exchange would represent a major step forward while an appropriate regulatory framework for greenhouse gases evolves," said Joyce Foundation President Paula DiPerna. "A regional success on a global challenge like climate change

could be transformational. Because of its variety of economic activities, including its strong agricultural sector, the Midwest is the perfect place to begin demonstrating the regional-global interface.”

As proposed, the Exchange could:

- demonstrate that greenhouse gas trading can achieve real reductions in emissions across different business sectors;
- help discover the price of reducing greenhouse gases;
- develop the standard frameworks for monitoring emissions, determining offsets and conducting trades needed for a successful market.

### **How the Market Would Work**

The study proposes starting the market in seven Midwest states (Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio and Wisconsin), including emission offset projects in Brazil, and expanding over time. Participating companies would be issued tradable emission allowances. Emitting firms would commit to a phased schedule for reducing their emissions 5% by 2005. They could then either directly cut their emissions, or buy allowances from companies that have achieved surplus reductions, or buy credits from agricultural or other offset projects. Potential offset projects include renewable energy systems, such as wind and solar power, and capture and use of agricultural and landfill methane. Offsets can also be generated by carbon sequestration projects such as forest expansion and conservation soil management, which effectively remove carbon dioxide from the atmosphere.

### **Benefits for Farmers**

The potential benefits that a carbon market can offer farmers was the subject of a March hearing on Biomass and Environmental Trading before the U.S. Senate Agriculture Committee, at which Sandor was invited to testify by Committee Chairman Richard G. Lugar (R-Indiana). Three agricultural cooperative groups, as well as IGF Insurance and the Iowa Farm Bureau Federation have agreed to participate in the design

phase of the Chicago Climate Exchange<sup>sm</sup>. "Environmental Trading can be a successful way of reducing the cost of environmental compliance." Senator Lugar stated.

"Most of the actions needed to begin reducing the risk of climate change will have to be undertaken by the private sector, so a market developed by a private association can be an important part of the overall solution," said Sandor.

With assets of roughly \$900 million, the Joyce Foundation is known for its strategic public policy grantmaking intended to enhance the quality of life in the Midwest. The Foundation has been a longtime funder of efforts to protect and enhance the natural environment of the Great Lakes region. The Foundation's other programs are focused in Education, Employment, Gun Violence Prevention, Money and Politics, and Culture.

The feasibility study for the Chicago Climate Exchange<sup>sm</sup> was funded through a grant to the Kellogg School to support Dr. Sandor's work. The grant was one of a series of Joyce Millennium Initiatives begun in 2000. Ranging between \$250,000 and \$1 million, the Millennium Initiatives are "intergenerational" — intended to reinforce and carry forward landmark achievements of the twentieth century, as well as promote bold, change-oriented initiatives for the century to come.

"The generation that most benefited from the industrialization that is likely the cause of climate change has an intergenerational responsibility to address the problem rather than just passing it on," said DiPerna.

Senator Joe Lieberman (D-Connecticut), added, "Global warming is a real and present danger. Our Earth is slowly overheating, with potentially dire consequences if we do not act. Carbon trading is a creative and efficient way of moving toward meaningful reductions in greenhouse gas emissions. I commend the companies for their willingness to participate in this cutting edge endeavor."



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**Entities participating in the design phase of the Chicago Climate Exchange<sup>SM</sup>**

**Agriliance:** Agriliance is a partnership of agricultural producer-owners, local cooperatives and regional cooperatives. Agriliance offers crop nutrients, crop protection products, seeds, information management, and crop technical services to producers and ranchers in all 50 states as well as Canada and Mexico. It has sales and marketing offices in St. Paul, Minn., and Kansas City, Mo. Agriliance, LLC was formed on February 3, 2000, as an agronomy marketing joint venture between Cenex Harvest States Cooperatives, Farmland Industries, Inc. and Land O'Lakes, Inc.

**Alliant Energy:** Alliant Energy Corporation is a growing energy-service provider with both domestic and international operations. Headquartered in Madison, Wis., Alliant Energy provides electric, natural gas, water and steam services to more than two million customers worldwide. Alliant Energy Resources Inc., the home of the company's non-regulated businesses, has operations and investments throughout the United States, as well as Australia, Brazil, China, Mexico and New Zealand.

**BP p.l.c.** is the holding company of one of the world's largest petroleum and petrochemicals groups. BP's main activities are exploration and production of crude oil and natural gas; refining, marketing, supply and transportation; and manufacturing and marketing of petrochemicals. BP has a growing activity in gas and power and in solar power generation. BP has well-established operations in Europe, North and South America, Australasia and Africa.

**Calpine:** Headquartered in San Jose, CA, Calpine has an energy portfolio comprised of 50 energy centers, with net ownership capacity of 5,900 megawatts. Located in key power markets throughout the United States, these centers produce enough energy to meet the electrical needs of close to six million households. Calpine was ranked 25<sup>th</sup> among FORTUNE magazine's 100 fastest growing companies and it was recently ranked by Business Week as the 3<sup>rd</sup> best performing stock in the S&P 500.

**Carr Futures/Crédit Agricole Indosuez:** Carr Futures, a subsidiary of Crédit Agricole Indosuez, is a global institutional brokerage firm headquartered in Chicago. Carr holds memberships on all major futures and equity markets worldwide, and consistently ranks among the largest futures brokerage firms in the world.

**Cinergy Corp.:** Based in Cincinnati, Ohio, Cinergy Corp. is one of the leading diversified energy companies in the U.S. Its largest operating companies, The Cincinnati Gas & Electric Company (Ohio), Union Light, Heat & Power (Kentucky), Lawrenceburg Gas (Indiana), and PSI Energy, Inc. (Indiana), serve more than 1.5 million electric customers and 500,000 gas customers located in a 25,000-square-mile service territory encompassing portions of Indiana, Ohio and Kentucky. The interconnections of Cinergy's Midwestern transmission assets give it access to 37 percent of the total U.S. energy consumption.

**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. Founded in 1802, the company operates in 70 countries and has 93,000 employees.

**Exelon Corporation** one of the nation's leading providers of energy services, is the new company formed from the merger of Unicom and PECO Energy. Exelon has an electric and natural gas distribution customer base of approximately 5 million and is the largest nuclear operator in the United States with more than 16,500 megawatts of nuclear capacity. Exelon is a trend setter in the power marketing, deregulated energy, telecommunications and infrastructure services marketplace.

**Ford Motor Company:** is the world's second largest automotive company. Its Automotive operations include: Ford, Mercury and THINK brands; wholly owned subsidiaries Volvo, Jaguar, Aston Martin and Land Rover; Mazda (33 percent ownership); and Quality Care and Kwik-Fit. Ford Financial Services, providing automotive financing and other services, and The Hertz Corporation, providing car rental services, are the other major components of Ford Motor Company. Ford's vision is to become the world's leading consumer company for automotive products and services. Ford Motor Company cares about preserving the environment for future generations, and is dedicated to providing ingenious environmental solutions that will position them as a leader in the automotive industry of the 21<sup>st</sup> century and contribute to a sustainable planet.

**GROWMARK, Inc.:** GROWMARK, headquartered in Bloomington, Illinois, is a federated regional cooperative that provides agriculture-related products and services primarily in Illinois, Iowa, Wisconsin and Ontario, Canada. FS-brand farm supplies and related services are marketed to farmers in these areas by nearly 100 GROWMARK member cooperatives. Visit the GROWMARK Web site at [www.fssystem.com](http://www.fssystem.com).

**IGF Insurance Company:** IGF Insurance Company is the fifth-largest crop insurance company. IGF serves farmers in 46 states and maintains eight service offices nationwide. IGF prides itself in developing niche products for farmers' risk management needs.

**Interface, Inc.** Interface is a global company, producing in 33 manufacturing sites located in the United States, Canada, the United Kingdom, the Netherlands, N. Ireland, Australia, and Thailand. Interface produces commercial broadloom carpet, textiles, chemicals, architectural products, access flooring systems, and manufactures and sells more than 40 percent of all the carpet tile used in commercial buildings today.

**International Paper:** With over 12 million acres of land managed in the United States alone, International Paper is one of the world's largest private landowners. International IP has significant global businesses in paper and paper distribution, packaging and forest products, including building materials.

**Iowa Farm Bureau Federation:** The Iowa Farm Bureau is a Federation of 100 county Farm Bureaus in Iowa. The organization was founded in 1918 and is currently comprised of more than 154,000 member families throughout the state. Numerous legislative,

educational and service-to-member programs are provided for the members' benefit. The Iowa Farm Bureau's mission is to help farm families prosper and improve their quality of life. It is an independent, non-governmental, voluntary organization. It is local, statewide, national and international in its scope and influence and is nonpartisan, nonsectarian and nonsecret in character.

**IT Group, Inc.** is a provider of diversified, value-added services in the areas of consulting, engineering and construction, remediation and facilities management. Through the Company's diverse group of highly specialized companies, clients can take advantage of a single, fully integrated delivery system and expertise to meet their global environmental needs. Its broad range of services includes the identification of contaminants in soil, air and water and the subsequent design and execution of remedial solutions.

**Manitoba Hydro** is a major energy utility headquartered in Winnipeg, Manitoba serving 403,000 electric customers throughout Manitoba and 248 000 gas customers in various communities throughout southern Manitoba. Virtually all electricity generated by the provincial Crown Corporation is from self-renewing water power. We are the major distributor of natural gas in the province. The Corporation's capital assets-in-service at original cost exceed \$8 billion, making it the fourth largest energy utility in Canada.

**Mead Corporation** a forest products company with \$4.4 billion in annual sales, is one of the leading North American producers of coated paper, coated paperboard and consumer and office products, a world leader in multiple packaging and specialty paper, and a producer of high-quality corrugating medium. In management of the company's more than two million acres of forests, Mead is committed to practicing principled forest stewardship and using resources in a responsible and sustainable manner. Headquartered in Dayton, Ohio, Mead has more than 15,100 employees and offices and operations in 32 countries.

**Midwest Generation:** Headquartered in Chicago, Midwest Generation, a subsidiary of Edison Mission Energy, owns 13 electricity generating units in Illinois and Pennsylvania. With a total generating capacity of over 11,400 megawatts, Midwest Generation can generate enough electricity to meet the needs of more than 13 million homes. Midwest Generation is exclusively in business to sell wholesale power in competitive electricity markets. The company is currently undertaking a major program to reduce emissions from its coal-fired plants.

**National Council of Farmer Cooperatives:** NCFC's mission is to protect the public policy environment in which farmer-owned cooperative businesses operate, promote their economic well-being, and provide leadership in cooperative education. NCFC remains the only organization serving exclusively as the national representative and advocate for America's farmer-owned cooperative businesses.

**NiSource Inc.,** is a holding company with headquarters in Merrillville, Ind., whose operating companies engage in all phases of the natural gas and electric business from

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exploration and production to transmission, storage and distribution of natural gas, as well as electric generation, transmission and distribution. Its operation companies provide service to 3.6 million customers located within the high-demand energy corridor that stretches from the Gulf of Mexico through the Midwest to New England.

Nuon is one of the largest multi-utility companies in the Netherlands, serving more than 2.5 million residential and business customers with electricity and, in many instances, with gas, water and heat as well. The company is in the forefront in the marketing of green energy and renewable energy generation in the Netherlands and is extending its knowledge and experience in the area of renewable energy internationally. Nuon's activities in the field of renewable energy include wind power, small hydropower, thermal and photovoltaic solar energy, landfill gas, biogas, biomass and ambient heat.

**ORMAT:** ORMAT is the world leader in distributed reliable remote microturbine power units (also known as Closed Cycle Vapor Turbo Generators). ORMAT's operations use locally available heat sources, including geothermal energy (steam and hot water), industrial waste heat, solar energy, biomass, and low grade fuels.

**Pinnacle West Capital Corp:** Based in Phoenix, Ariz., Pinnacle West is the parent company of APS and Pinnacle West Energy. APS is Arizona's largest and longest-serving electric utility, serving more than 857,000 customers, and Pinnacle West Energy is the company's unregulated wholesale generating subsidiary. Among the utilities listed in the S&P 500, Pinnacle West is ranked in the top 10 percent for environmental performance by an international investment advisory firm. The Company also is ranked in the top 10 percent by Fortune magazine for total shareholder return over the last five years.

**PG&E National Energy Group,** headquartered in Bethesda, Md., develops, owns and operates electric generating and gas pipeline facilities and provides energy trading, marketing and risk-management services in North America. The National Energy Group operates power production facilities with a capacity of about 7,000 megawatts, with another 10,000 megawatts under development, and more than 1,300 miles of natural gas transmission pipeline with a capacity of 2.7 billion cubic feet per day. (PG&E National Energy Group is not the same company as Pacific Gas and Electric Company, the California utility, and is not regulated by the California Public Utilities Commission. Customers of Pacific Gas and Electric Company do not have to buy products or services from PG&E National Energy Group in order to continue to receive quality regulated services from Pacific Gas and Electric Company.)

**STMicroelectronics:** STMicroelectronics is the world's third largest independent semiconductor company whose shares are traded on the New York Stock Exchange, on Euronext Paris and on the Milan Stock Exchange. The Company designs, develops, manufactures and markets a broad range of semiconductor integrated circuits (ICs) and discrete devices used in a wide variety of microelectronic applications, including telecommunications systems, computer systems, consumer products, automotive products and industrial automation and control systems. In 2000, the Company's net revenues were \$7.8 billion and net earnings were \$1.45 billion.

**Suncor Energy, Inc.** is a Canadian integrated energy company that explores for, acquires, produces, and markets crude oil and natural gas, refines crude oil, and markets petroleum and petrochemical products. Suncor has three principal business units: Oil Sands, Exploration and Production, and Sunoco. Oil Sands produces light sweet and light sour crude oil, diesel fuel and various custom blends from oil sands and markets these products in Canada and the United States. Exploration and Production explores for, acquires, develops, produces and markets crude oil in Canada and natural gas throughout North America. Sunoco refines and markets crude oil and a broad range of petroleum and petrochemical products in Ontario and the United States.

**Swiss Re:** Founded in 1863 in Zurich, Switzerland, Swiss Re is the world's second largest reinsurer, with roughly 9,000 employees and gross premiums in 2000 of CHF 26 billion (USD\$15.3 billion). Standard & Poor's gives the company its AAA rating; Moody's rates it Aaa. Swiss Re does business from over 70 offices in 30 countries. The world over, Swiss Re offers insurers and corporates: classic (re)insurance covers, alternative risk transfer (ART) instruments, and a broad range of supplementary services for comprehensive risk management.

**Temple-Inland Inc.** is a diversified forestry, forest products and financial services company. Its three main operating divisions include a Paper Group, which manufactures corrugated packaging products; a Building Products Group, which manufactures a wide range of building products and manages the Company's forest resources consisting of approximately 2.2 million acres of timberland in Texas, Louisiana, Georgia and Alabama; and the Financial Services Group, which consists of savings bank, mortgage banking, real estate, and insurance brokerage activities.

**The Nature Conservancy:** The Nature Conservancy, a nonprofit organization founded in 1951, is the world's largest private international conservation group. TNC has protected over 12,089,000 acres of land in the United States.

**Waste Management, Inc.** as a leading provider of comprehensive waste management services, Waste Management serves municipal, commercial, industrial and residential customers throughout North America. Headquartered in Houston, Texas, the Company's network of operations includes 284 active landfill disposal sites, 16 waste-to-energy plants, 73 landfill gas-to-energy facilities, 160 recycling plants, 293 transfer stations and more than 1,400 collection facilities. Combined, these resources allow Waste Management to offer a full range of environmental services to approximately 25 million residential and two million commercial customers nationwide.

**Wisconsin Energy Corporation**, headquartered in Milwaukee, Wis., is an \$8.4 billion holding company with a diversified portfolio of subsidiaries engaged in electric generation; electric, gas, steam and water distribution; pump manufacturing and other non-utility businesses. The corporation's utilities subsidiaries serve more than one million electric and 950,000 natural gas customers in Wisconsin and Michigan's Upper Peninsula.

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**ZAPCO:** Zahren Alternative Power Corporation (ZAPCO), recently acquired by U.S. Energy, is among the largest and most respected developers of Landfill Gas (LFG) projects in the United States. ZAPCO is engaged in the development, financing, and operation of a large and diverse group of LFG-based projects, including waste-to-energy electricity systems, and has executed international trades of greenhouse gas reductions involving over two million tons CO<sub>2</sub> equivalent. ZAPCO operates ten of its twenty-seven LFG projects in the Midwest U.S.

**Chicago Climate Exchange<sup>SM</sup> - Advisory Board**

**www.chicagoclimateX.com**

**Member Biographies**

**David L. Boren** is the President of the University of Oklahoma. Mr. Boren has had a distinguished career in public service as a member of the Oklahoma House of Representatives (1967-1975), Governor of Oklahoma (1975-1977) and as a U.S. Senator (1979-1994). As a U.S. Senator, Mr. Boren was the longest-serving Chairman of the Senate's Select Committee on Intelligence. Mr. Boren was educated at Yale and attended Oxford University as a Rhodes Scholar. He also earned a law degree from the University of Oklahoma College of Law.

**Lucien Y. Bronicki** is the Chairman of Ormat International, an Israeli company leader in the field of innovative technology solutions to geothermal power plants, power-generation from industrial waste heat and solar energy projects. Mr. Bronicki has been Chairman of Ormat since he founded the company in 1965. Mr. Bronicki holds various professional affiliations and memberships, including Chairman World Energy Council's Israeli National Committee, Member of the Executive Committee of the Weizmann Institute of Science and member of the Board of Ben Gurion University. He is also the recipient of several business and science related awards.

**Ernst Brugger** is Founding Partner and Chairman of Brugger Hanser & Partner Ltd. in Switzerland, a business consulting firm with international experience and range. He is also a professor at the University of Zurich, chairman and member of the board of various companies and a member of the International Committee of the Red Cross (ICRC). Dr. Brugger serves as Chairman of the Board of Directors of Sustainable Performance Group, an investment and risk management company which invests in pioneering and leading companies which have taken up the cause of sustainable business

**Jeffrey E. Garten** is dean of the Yale School of Management. Formerly undersecretary of commerce for international trade in the first Clinton Administration, he also held senior economic posts in the Ford and Carter administrations. From 1979 - 1992, he was a managing director first at Lehman Brothers, where he oversaw the firm's Asian investment banking activities from Tokyo, and then at the Blackstone Group. Currently a monthly columnist for Business Week, his latest book is "The Mind of the CEO" (2001)."

**Donald P. Jacobs** is Dean of the Kellogg Graduate School of Management and its Gaylord Freeman Distinguished Professor of Banking. Under his leadership, the Kellogg School has become a leader in the field of business and finance and is consistently ranked as one of the top five business schools in the United States. Dean Jacobs is a former Chairman of the Board of Amtrak (1975-1979) and currently serves on several corporate boards. His work on banking, corporate governance and international finance has been

published in many scholarly journals and he holds several honorary degrees and professional awards.

**Dennis Jennings** is the Global Risk Management Solutions Leader for PricewaterhouseCoopers' (PwC) Global Energy and Mining Industry Practice. Mr. Jennings previously served as the Dallas/Fort Worth Energy Industry Market Leader; Co-Chairman of the U.S. Oil and Gas Industry Program; and on Steering Committee of the International Energy Practice. Mr. Jennings is experienced in all sectors of the petroleum industry (upstream, downstream, domestic and international) and the service industry. His responsibility have included leading PwC's global risk management practice for the energy and mining industry, providing financial advice and performing due diligence reviews on numerous merger, acquisitions and divestiture efforts by major international corporations.

**Joseph P. Kennedy II** is Chairman and President of Boston-based Citizens Energy Group. Before returning to Citizens Energy, Mr. Kennedy represented the 8th Congressional District of Massachusetts in the U.S. House of Representatives for 12 years. Mr. Kennedy founded the non-profit company in 1979 to provide low-cost heating oil to the poor and elderly. Under his leadership, Citizens grew to encompass seven separate companies, including the largest energy conservation firm in the U.S. Mr. Kennedy also advises and serves on the boards of several companies in the energy, telecommunications, and health care industries. Mr. Kennedy is the son of the late U.S. Sen. Robert F. Kennedy.

**Israel Klabin** is the president of the Brazilian Foundation for Sustainable Development, a major Brazilian non-governmental organization devoted to issues of environmental and sustainable development policy. Mr. Klabin is the former chairman of Klabin SA, one of the largest forestry companies in Latin America. He is a former mayor of Rio de Janeiro and was one of the main Brazilian organizers of the United Nations Conference on the Environment (Rio 92). He is also actively involved in several philanthropical activities.

**Bill Kurtis** has had a distinguished career in broadcasting for over 30 years, as a news anchor in Chicago and later of the national *CBS Morning News*. He started his own company, Kurtis Productions, when he returned to Chicago in the mid 1980's and currently hosts shows on the Arts and Entertainment network. Mr. Kurtis is involved in The National Science Explorers Program, Electronic Field Trips and the Electronic Long Distance Learning Network, all aimed at teaching children about science. Mr. Kurtis and his shows have been the recipients of several awards. He serves on the board of directors of organizations devoted to natural history and the environment, including the National Park Foundation, the Nature Conservancy and the Kansas State Historical Society.

**Jonathan Lash** is President of the World Resources Institute (WRI), a Washington, DC-based non-governmental organization that provides solutions to global environment and development problems. From 1993 until 1999, Mr. Lash served as co-chair of the President's Council on Sustainable Development, a group of government, business, labor, civil rights, and environmental leaders that developed recommendations for national



strategies to promote sustainable development. For two years before joining WRI, Mr. Lash directed the environmental law and policy program of the Vermont Law School. From 1987 to 1991, Mr. Lash headed the Vermont Agency of Natural Resources, having served the previous two years as Vermont's Commissioner of Environmental Conservation. He is the author of several books on environmental topics.

**Thomas E. Lovejoy**, is a world-renowned tropical and conservation biologist. Dr. Lovejoy is generally credited with having brought the tropical forest problem to the fore as a public issue, and is one of the main protagonists in the science and conservation of biological diversity. In 1987, he was appointed Assistant Secretary for Environmental and External Affairs for the Smithsonian Institution and is Counselor to the Smithsonian's Secretary for Biodiversity and Environmental Affairs. Dr. Lovejoy is also Chief Biodiversity Advisor to the President of the World Bank and the Bank's Lead Specialist for the Environment in Latin America. From 1989 to 1992, he served on the President's Council of Advisors in Science and Technology (PCAST), and acted as scientific adviser to the Executive Director of the United Nations Environment Programme (1994-97). He was the World Wildlife Fund's Executive Vice President from 1985 to 1987. Dr. Lovejoy is the author of numerous articles and books.

**David Moran** is vice president of ventures for the Electronic Publishing group of Dow Jones & Company and president of Dow Jones Indexes. Mr. Moran joined Dow Jones as counsel in September 1985. He was named assistant corporate general counsel in 1988 and was promoted to deputy corporate general counsel in May 1990. He became vice president/law in July 1991 and retained the title, deputy general counsel. In January 1996, Mr. Moran took on the additional responsibilities of president of the Dow Jones World Stock Index, later renamed Dow Jones Indexes, reflecting the inclusion of all Dow Jones indexes for countries, regions, sectors and industry groups as well as the world index. Mr. Moran became president of Dow Jones Indexes on a full-time basis in June 1998. He was elected to a one-year term as chairman of STOXX, Ltd., an index creator that is a joint venture of the German, Paris and Swiss stock exchanges and Dow Jones, in April 1999. He is also chairman of Dow Jones Sustainability Group Index GmbH. Prior to joining Dow Jones, Mr. Moran was an associate with Patterson, Belknap, Webb & Tyler, a New York City law firm, from 1979 to 1985.

**Les Rosenthal** is a former Chairman of the Chicago Board of Trade (CBOT) and a principal of Rosenthal Collins, a leading Chicago-based commodities and futures trading firm. During his time as member of the Board and Chairman of the CBOT, Mr. Rosenthal was instrumental in advancing the cause of new and innovative exchange-traded products such as Treasury Bond futures and insurance derivatives.

**Mary L. Schapiro** is President of NASD Regulation, Inc. (NASDR) and a member of the Board of NASD, Inc. She assumed this position in February 1996. NASDR was created as an independent National Association Securities Dealers, Inc. (NASD)

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subsidiary responsible for regulating 5,500 member brokerage firms, 670,000 individual registered representatives and oversight of The Nasdaq Stock Market.

Before assuming her present duties, Ms. Schapiro was the Chairman of the Commodity Futures Trading Commission. She was appointed by President Clinton in 1994. Prior to assuming the Chairmanship, Ms. Schapiro served as a Commissioner of the Securities and Exchange Commission (SEC). She was appointed to that position by President Reagan in 1988 and reappointed by President Bush in 1989 for a five-year term. She was named Acting Chairman of the SEC in 1993 by President Clinton. Before being appointed to the SEC, Ms. Schapiro was General Counsel and Senior Vice President for the Futures Industry Association.

Ms. Schapiro was also an active member of the Technical Committee and the Developing Markets Committee of the International Organization of Securities Commissions (IOSCO) and has worked extensively with developing markets, particularly in Latin America and Asia, on capital markets regulatory structure.

Ms. Schapiro is a graduate of Franklin and Marshall College (Lancaster, Pennsylvania), and earned a Juris Doctor degree (with honors) from The National Law Center of George Washington University. Ms. Schapiro was named the Financial Women's Association Public Sector Woman of the Year in May 2000.

**Maurice Strong** is a former Secretary General of the 1992 United Nations Conference on Environment and Development (the Rio Earth Summit) and Under-Secretary General of the United Nations. He is currently the Chairman of the Earth Council, a non-governmental organization dedicated to the cause of sustainable development. In June of 1995, he was named Senior Advisor to the President of the World Bank. From December 1992 until December 1995, Mr. Strong was Chairman and Chief Executive Officer of Ontario Hydro, one of North America's largest utilities. Mr. Strong is an advisor to the United Nations, and has been a director and/or officer of a number of Canadian, U.S. and international corporations.

**James R. Thompson** is a former four-term Governor of Illinois and currently a managing partner of Winston and Strawn. During his last term as Governor, Mr. Thompson was involved in the implementation of the sulfur dioxide (SO<sub>2</sub>) market created by the 1990 Clean Air Act. During his last term as Governor he was the Head of the Global Climate Change Task Force at the National Governors' Association (1988-1989). Governor Thompson is also a director of the Chicago Board of Trade (CBOT).

**Sir Brian Williamson** is the Chairman of the London International Financial Futures and Options Exchange (LIFFE), one of the world's largest exchanges. Mr. Williamson has been involved in trading financial futures for almost three decades in London, New York and Chicago. He held senior executive positions for prominent trading firms and was a member of the International Advisory Board of the Nasdaq Stock Market, becoming Chairman in 1996. He was also Governor-at-Large of the National Association of Securities Dealers in Washington DC. (1995-1998).



**Reconstructing Climate Policy:  
What the US Should Do Now**

Richard B. Stewart (New York University) and Jonathan B. Wiener (Duke University)

The Current Situation

In the wake of the impasse over the climate change treaty negotiations at The Hague in late 2000, and the new Bush Administration's recent repudiation of the Kyoto Protocol, where now? What should the US government, and the world, do next?

President Bush has had the political misfortune to be the messenger of facts everyone knew. By late 2000 it was evident that the US could not achieve its Kyoto Protocol limitations on greenhouse gas (GHG) emissions domestically without unacceptable cost and disruption, nor could most other industrialized countries, including Japan and much of Europe. Bush took the heat for the Clinton-Gore Administration's signing of Kyoto in 1997 without getting firm agreement on the means of compliance, especially regarding emissions trading and sinks, or on developing country participation; for the US Senate's 95 to 0 vote not to ratify the Kyoto treaty without participation by developing countries; and for the failure of the U.S. government to take any serious initiative to begin limiting US GHG emissions growth. Meanwhile, the EU and most developing countries repeatedly opposed or sought to restrict the participation of developing countries and the flexibility mechanisms (including global emissions trading and broad inclusion of sinks) that would have enabled collective progress at reasonable cost. This opposition set the stage for Bush's protestation that Kyoto would be too costly.

When the Bush-Cheney Administration announced that it would not pursue Kyoto, it was loudly killing a quietly dying duck. Bush thereby succeeded in taking the blame for killing Kyoto, without actually doing very much to change reality. Ironically, Bush's position has now stirred up much more pressure for real action than would have arisen had the US merely plodded along with the interminable process of trying to negotiate the implementation and compliance issues that had bogged down at The Hague. Now that the bubble has been burst, the way is cleared to start on reconstructing the international climate regime into a form that is more realistic and more responsive to the nature of climate risks and the character of the efforts needed to manage those risks wisely.

Some basic elements in the Kyoto design -- its use of quantitative multi-year emissions targets with emissions trading, and a comprehensive approach that includes all major greenhouse gases and their sources and sinks -- are sound; they have been consistent US policy across administrations of both parties at least since 1989 (Stewart & Wiener 1990; DOJ 1991; Wiener 2001). There are, however, two basic flaws in Kyoto: the failure to nail down implementation and compliance mechanisms prior to fixing binding targets, and the failure to engage developing country participation. These gaps polarized the post-Kyoto talks on implementation and flexibility mechanisms, and in turn helped make the Kyoto targets both excessively costly and inadequately environmentally protective.

In order to reconstruct climate policy on a sound footing, we propose a two-stage strategy that the US should mount at the international level in order to correct Kyoto's flaws. In order to be a credible player in the international climate negotiations and to protect important national interests, the US should also follow a two stage domestic strategy in order to lay the groundwork for and then begin to implement GHG emissions reductions. These two sets of initiatives should be coordinated and mutually supportive.

Throughout, US policy should be guided by the fundamental point that getting the institutional design right for the long run is far more important than either rushing ahead with hasty symbolic commitments or stonewalling to seem strong. Once adopted, the institutional design may be very difficult to revise; there will be high costs of undoing early mistakes.

### The US Cannot Afford Climate Isolationism

As the Bush Administration has acknowledged, the US cannot afford to ignore climate issues, do nothing about GHG emissions, and sit on the sidelines while other countries design a global regime that the US will later wish it had helped shape. The US has strong national interests in fashioning a responsible, well-designed global regime for GHG limitations.

Climate policy is not solely an environmental issue; it is also a global economic and strategic issue. First, the US will suffer significant environmental harms as a result of unchecked rapid warming, especially over the longer run. Moreover, in an interconnected global economy, US businesses will be harmed if other countries' incomes falter due to climate change. Second, the US will suffer economically if it is excluded from the design and operation of international emissions trading. Many US firms have the technology and know-how to achieve GHG limitations and help run efficient emissions trading markets. Also, the availability of international trading and the comprehensive approach will be of tremendous cost-saving importance to the US in implementing, sooner or later, domestic GHG limitations. These opportunities are likely to be sharply restricted if the US fails to remain a credible international player and thereby cannot counter efforts by the EU and others to restrict or kill flexibility. Other countries are moving ahead with domestic emissions trading systems that may become models for global trading, but on terms that may hinder full flexibility unless the US actively participates in trading design. Third, the US has global strategic interests in a wide array of other issues. If the US fails to address seriously the climate policy positions and interests of others -- major OECD countries; Russia, the Ukraine, and other economies in transition who may be deprived of the opportunity (negotiated by the US at Kyoto) to sell emissions allowances; and major developing countries who be harmed by climate change -- it is likely to engender widespread resentment and suspicion that will make it more difficult to engage their cooperation on trade, security, and other US priority issues.

### Prudent Investment in Climate Insurance is Warranted

Investment in initial steps to limit GHG emissions growth is prudent insurance against the risks of climate change. Recent reports by the Intergovernmental Panel on Climate Change (IPCC) and a National Academy of Sciences panel convened at the request of the White House confirm that rising GHG emissions due to human activities are already causing the earth's atmosphere to warm and that the rate and extent of warming will increase significantly over this century -- in the range of 1.5 and 5 degrees C -- if steps are not taken to limit growth in net emissions (IPCC 2001, NAS 2001). The impacts of global warming at this pace are likely to be adverse on balance. The recent synthesis by Tol (2001a, 2001b) of climate change impacts on key endpoints -- agriculture, forestry, water resources, energy consumption, sea level rise, ecosystems, and human health -- indicates that some initial warming (1 degree C) and CO2 fertilization may help agriculture and human health in some areas (including the OECD, Russia and China), for an early gain of 1 to 3% of GDP; but that this climate change will have adverse impacts in poorer areas (especially Africa and Southeast Asia, which would lose 1 to 4% of GDP); and that the impacts of greater warming will become adverse worldwide over time, including losses of 1 to 2% in OECD countries and 4 to 9% in developing countries (except for China, which exhibits persistent gains from climate change of about 2% of GDP). And, Tol's synthesis does not account for other adverse impacts, such as fisheries losses, extreme weather events, and the possibility of catastrophic changes in ocean currents or other critical natural systems.

While many uncertainties remain regarding the future rate of warming and its impacts, based on what we know now the risks of climate change are sufficiently serious to justify a reasonable investment in insurance, at least against very rapid or large changes. Both as individuals and as societies we often invest in preventive measures against uncertain future risks (e.g. the Bush Administration's new plans for a missile defense). Waiting for definitive evidence of harm can mean waiting until it is too late to do anything about the problem. At the same time, insurance is not free, and policy should react responsibly to risk. Climate change will most likely occur gradually, although at an increasing pace, over a long time period. Further, global temperature is not a function of current emissions but of the total stock (concentration) of GHGs in the atmosphere. Current emissions, which cannot be changed very rapidly in any event, are but a small portion of the total stock. Cost-effective climate insurance should accordingly focus on an institutional design for GHG limitations that is sustainable and efficient over the long run rather than on crash short-run reductions.

Effective climate insurance will require some regulatory limits on GHG emissions. The essential problem today is that the global atmosphere is being treated as an open-access resource. With no constraints on its use as a disposal site for GHG emissions, the atmosphere is being overused in a classic "tragedy of the commons." Regulatory solutions include access fees (taxes) and parceling of property rights (tradable allowances). Of course, regulation is only one tool among several in a sound climate policy. Wise policy must strike a good balance between prevention measures and adaptation measures. Technology R&D, innovation and investment need to start now in both the public and private sectors. Market and institutional failures and subsidies that blunt the market incentives to conserve energy and otherwise reduce GHG emissions should be corrected. Public and private sector initiatives to reduce GHG-intensity should be encouraged. Such measures alone, however, can not deal adequately with the climate change externalities resulting from the atmosphere's current treatment as an open-access resource.

## Sound Regulatory Design Can Make the Costs of Climate Insurance Reasonable

Taking the first steps in a transition from a high- to a low-GHG economy will not be a free lunch. The costs of meeting the Kyoto targets through wholly domestic measures to reduce CO<sub>2</sub> emissions had been estimated at 1 to 4% of GDP in the US and other industrialized countries (Manne & Richels 2000; Shogren 2000). But as we reconstruct climate policy, these costs can be reduced substantially – perhaps up to 90% -- by intelligent regulatory design, using the most cost-effective means over appropriate time scales. Regulatory design for achieving GHG limitations should incorporate two basic principles:

First, regulatory limitations on GHG emissions should be phased in, quite modest at first and then building over time if new evidence indicates that continued investment in insurance against climate risks is justified. This strategy accords with the GHG stock/flow structure, the fact that it will be less costly to achieve limitations in the future with the benefit of new technologies and turnover of the capital stock, and the gains from incurring costs later rather than sooner. Attempting sharp cuts now will be quite costly and do little to contribute to reducing emissions growth in the long run. Substantial lead times are also required to construct the institutional and technological foundations of a sound emissions limitations program.

Second, emissions limitations should be achieved by the most cost-effective means. Because the long-term costs of limiting GHG emissions are potentially large, and because of the need for low-GHG technology development and investment in order to limit those costs, it is essential to use market-based regulatory instruments that foster cost-saving and innovation-enhancing flexibility. Such flexibility can best be achieved through (i) the comprehensive approach, including all major GHGs, sources, and sinks; (ii) international and domestic emissions trading; and (iii) expressing targets in terms of cumulative emissions over periods of time.

## Kyoto's Design Successes

Kyoto's basic regulatory design -- a comprehensive approach, a cap and trade system, and multi-year commitment periods -- is sound; it promotes flexibility and cost-effectiveness. These elements, which were advanced in the first Bush Administration by us and others (e.g. Stewart & Wiener 1990, 1992; DOJ 1991) and advocated in the Clinton-Gore administration as well (see Wiener 2001) are good, nonpartisan policy ideas. Although the comprehensive approach and emissions trading have been criticized from some quarters, they remain essential ingredients of climate policy.

*The Comprehensive Approach.* Because there is so much variety in GHG limitation opportunities across gases and sectors, the comprehensive approach would yield large cost savings -- 60% or more -- relative to an approach that fixes limits for CO<sub>2</sub> alone (Reilly et al. 1999). The comprehensive approach is also environmentally necessary to prevent perverse shifts in emissions from regulated gases (such as CO<sub>2</sub>) and sectors to unregulated ones (such as CH<sub>4</sub>), which could unintentionally exacerbate climate change (Wiener 1995). And it yields valuable

side benefits in reduction of other pollutants (Hansen 2000). Criticisms of the comprehensive approach as too complex and difficult to implement and are misplaced. Simplified, conservative default rules can be adopted to deal with cross-gas comparison indices and difficult-to-measure GHGs such as agricultural CH<sub>4</sub> and CO<sub>2</sub> sinks; these rules can be revised as monitoring and measurement techniques improve (Stewart & Wiener 1992).

*Emissions Trading.* Because there is so much variety in GHG limitation opportunities across countries, flexibility through emissions trading would yield large cost savings. Studies indicate that full international emissions trading would reduce the global costs of abatement by about 75% compared to wholly domestic CO<sub>2</sub> emissions limitations (e.g. Manne & Richels 2000).

(If the 60% savings from adopting the comprehensive approach is additive, which is plausible because the models of emissions trading assume CO<sub>2</sub>-only policies, then the combined cost savings from both comprehensiveness and trading could be 90% compared to a CO<sub>2</sub>-only policy with national caps and no trading. Thus reducing US emissions to 7% below 1990 levels -- the Kyoto target -- could cost not 1 to 4% of GDP but 0.1 to 0.4% of GDP. As discussed below, however, the models unrealistically assume perfectly efficient implementation.)

In principle, taxes and emissions trading can achieve similar results. But at the global level, GHG emissions trading has several important advantages over GHG taxes. An international system of compulsory taxation is without precedent and contrary to traditional notions of national sovereignty; cap and trade regulatory systems have more affinities with traditional international environmental regulatory regimes. The effectiveness of an international system of GHG taxes would be severely compromised by "fiscal cushioning" games; countries would attempt to soften the domestic impact by adjusting their other taxes and subsidies in ways that would be very hard to police (Wiener 1999). Further, developing countries would never agree to impose the same tax levels as industrialized countries; lack of uniformity would result in significant leakage to lower tax nations. Also, taxes cannot meet the need for significant side payments (transfers of capital and technology) to developing countries to attract their participation and meet their equity concerns. Direct side payments to engage participation would undercut the incentive effect of emissions taxes. Emissions trading can solve these problems by maintaining a cap on total emissions while assigning extra allowances in excess of a country's current emissions to induce participation by countries, including developing countries and nations such as Russia and the Ukraine, who otherwise perceive no net national benefit to participation. These extra allowances should be seen as "headroom," not "hot air" -- as the necessary price to engage participation (Wiener 1999).

Despite its overall superiority, international GHG emissions trading does face some potential implementation difficulties. These include the risk that quantity limits on emissions could result in unexpectedly high compliance costs, potential problems of market power and transaction costs, and the compatibility of international emissions trading with domestic regulatory systems that rely on other instruments. We agree that these issues need attention; reasonable means for addressing them have been or are being developed.



## Kyoto's Design Failures

Notwithstanding the Kyoto Protocol's good points, its negotiators made two major design mistakes that require correction in future international agreements. First, they adopted quantitative emissions limitations without agreement on the ground rules for measuring reductions of GHG sources, enhancement of GHG sinks, and emissions trading and JI/CDM projects. The treaty accordingly fails to assure the most cost-effective means for achieving targets, including full scope for the comprehensive approach and international emissions trading. The adoption of targets without clarifying the permitted means for achieving them also made it impossible to predict the costs of achieving the targets and undermined the development of national and international measures for implementation. Worse, this confusion gave running room to those countries and interest groups who oppose the comprehensive approach and emissions trading for ideological reasons or out of economic self-interest; they have pushed all manner of restrictions on comprehensiveness and trading, castigating flexibility as an attempt to weaken the targets. The result was the post-Kyoto negotiation stalemate, which helped delay abatement efforts to the point that the Kyoto targets have now become unattainable.

The second basic design flaw in Kyoto was its failure to face squarely the issue of developing country participation. The complete omission of any developing country obligations, now or in the future, is contrary to the approach taken in prior global environmental treaties and to the principle of "common but differentiated" responsibility in the FCCC. A sound global climate regime must involve limitations obligations by all nations with significant sources and sinks, including developing countries, in order to ensure that the climate is actually protected; that the lowest-cost abatement opportunities can be tapped worldwide; that free-riding on limitations efforts by others is deterred; and that cross-border "leakage" of emissions is constrained. In short, the omission of developing countries makes the treaty much less (if at all) environmentally effective, and much more costly.

The developing countries have strong equity arguments, reinforced by practical economic and political considerations, that the industrialized countries should take the lead and the major burden of emissions limitations. Under international law, no country can be bound by a treaty without its consent; thus participation must be attracted. As discussed above and developed further below, there are a number of ways of meeting developing countries' concerns while attracting their participation in cooperative emissions limitations.

## Reconstructing Climate Policy

In light of the successes and failures of the Kyoto Protocol, the US should lead a reconstruction effort in order to build a better institutional design for climate policy. These efforts should proceed simultaneously at the international and national levels; the steps at each level would be in two linked stages. The first stage would lay the groundwork for the second, which would involve new international limitations targets and domestic GHG limitations.

*Building A New International Climate Regime.* At the international level, our proposed arrangement would be adopted in two stages, through protocols or other subsidiary agreements under the 1992 Framework Convention on Climate Change (FCCC).

The First Stage -- which could be concluded promptly, within a year -- would be an agreement among all industrialized countries and any interested developing countries who wished to participate to make pledges to limit cumulative net GHG emissions over ten years (say, 2005-2015), with a five year interim goal, progress reporting, and review provisions. Emissions limitation pledges would be fully comprehensive, measured in terms of net emissions of all major GHGs. Abatement efforts could include any reduction in sources or enhancement of sinks that would help achieve the pledged goal, under default measurement rules to address uncertainty. The agreement would authorize cooperative cross-border abatement efforts through emissions trading or credit trading on the JI/CDM model, by national governments, private sector firms, and NGOs who wish to participate in such arrangements. It would provide for an international registry for such transactions. The OECD countries would provide substantial capacity-building assistance to developing countries wishing to participate in such arrangements. This international agreement would not itself include any penalties (beyond reputational costs) for exceeding the pledged goals, but individual countries or groups of countries through bilateral or multilateral agreements could, if they chose, make such goals legally binding. The First Stage would also include a commitment by all countries to negotiate a follow-on Second Stage agreement with binding targets, and to accord credit against these new targets for net GHG emissions reductions achieved in accordance with First Stage pledges.

The Second Stage agreement would contain binding cumulative net emissions limitations for an initial commitment period (such as 5, 8, or 10 years), based on agreed implementation and compliance ground rules on comprehensiveness and flexibility mechanisms (including sinks and emissions trading) and on compliance assurance measures. The circumstance that no limitations commitments could be made until implementation and compliance matters were resolved would provide a strong impetus for prompt resolution of those matters. Aggregate emissions limits would be set at levels for which the costs (given flexibility mechanisms) would be reasonable in light of the expected benefits (see e.g. Hammitt 1999). The agreement would authorize full global emissions trading among countries with national targets. Its compliance assurance provisions might include, inter alia, penalties for excess emissions at a set rate per ton of carbon-equivalent; penalty revenues might be invested in compensatory abatement.

The Second Stage at the international level would provide several "windows" for inclusion of developing countries, including:

1. Clarifying and streamlining the CDM on market-based lines, and structuring it to encourage sector-wide approaches that minimize cross-project leakage. The CDM could also provide for bilateral sector-based technology transfer and assistance/credit arrangements between industrialized and developing countries.
2. Inviting voluntary national participation in emissions trading, including on a sector-based approach that would permit participation at scale without overall national caps.

3. Providing principles for the voluntary accession of developing countries to a global cap and trade system, with assignment of "headroom" allowances that developing countries could use or sell at a profit.
4. Agreeing on principles of automatic, incremental participation ("graduation") by developing countries in the global cap and trade system, once each country reaches pre-agreed levels of per capita income, with appropriate allocations of headroom.

The first three mechanisms would be transitional to the fourth. The overall suite of mechanisms would be established with a view to ensuring significant and increasing participation by developing countries in the global emissions limitation effort, toward a full global comprehensive cap-and-trade system.

*Building a Domestic US Climate Policy.* We also propose a two-stage process for the adoption of domestic US measures in tandem with the two stages at the international level. The domestic First Stage would not impose binding GHG limitations but would lay the groundwork for such measures, encourage voluntary emissions limitations and trading, and launch some of the non-regulatory elements of a serious US climate policy. At the Second Stage, the US would adopt domestic GHG limitations utilizing the comprehensive approach and domestic and international trading to the maximum feasible extent. These limitations would only be adopted in conjunction with international adoption of a climate agreement with binding limitations, maximum scope for flexibility, developing country participation, and a sensible incremental path to reductions. A US commitment to adopt domestic limitations is essential for its international credibility and ability to promote a sound global climate regime. Emissions trading and the comprehensive approach require emissions caps at some level. The US cannot persuasively advocate these flexibility mechanisms unless it eventually adopts caps itself. Nor, for similar reasons, can it persuade developing countries to join the emissions limitation effort unless it does so itself.

The US domestic First Stage would jump start voluntary domestic emissions limitations and domestic and international emissions trading, using the power of information and the prospect of second-stage regulation to provide incentives for early limitations efforts. A White House Climate Policy Office would develop a National Climate Protection Plan for limiting net US GHG emissions with quantitative goals and timetables; a national Climate Protection Scorecard would monitor and report progress. The plan would form the basis for the US pledge under Stage One of the international initiative described above. The government would establish comprehensive GHG emissions monitoring, record keeping, and reporting protocols and procedures for domestic sources and sinks and for projects abroad financed by US sources. It would phase in mandatory monitoring and reporting by domestic sources to create a Climate Release Inventory.

The President would be authorized to contract with business and other private entities to achieve reductions in net GHG emissions relative to specified baselines, in return for certified reduction credits that could be applied against future emissions limitation regulations. Credits would be accorded to actions taken outside as well as within the US. Credits could be traded domestically and internationally. Credits or allowances issued by other countries could be recognized in the

US under mutual recognition arrangements. The U.S. would develop a domestic credit registry and actively support the development of an international registry.

In addition, the government would initiate a program of low-GHG technology R&D, with an emphasis on basic science; take steps to identify and correct market barriers and non-market barriers (including existing government programs and policies) to adoption of measures to reduce energy use and otherwise reduce GHG emissions; and develop programs to reduce net GHG emissions by the government sector.

The federal government would also undertake the design of a domestic US cap and trade system, including consideration of sectoral design (e.g. electricity, transportation); point of application (upstream, downstream, mixed designs); and other regulatory/incentive measures for sectors and activities where trading may not be feasible. It should study the design and feasibility a hybrid trading/fee system under which sources with excess emissions would be required to purchase extra allowances from the government at a pre-set price. (This “safety valve” arrangement could protect against unexpectedly high abatement costs, but might allow emissions to grow excessively if the price were set too low.) The revenues from such a scheme might be invested in domestic and international abatement efforts. The government would also study the design, equity and efficiency characteristics of programs to ease impacts on sectors and localities that will be hard hit by GHG regulation.

The US domestic Second Stage program, building on the work done and experience gained in the First Stage, would adopt domestic regulatory net emissions limitations, with primary reliance on cap and trade using a comprehensive approach to all GHGs, plus other supplemental regulatory measures where necessary. Caps would be set as cumulative limits for a substantial period (e.g., ten years). Regulation could be phased in by sector – for example, utilities, heavy industry and transportation might go first. But there should be opportunities for opt in by other sources (as in the US SO<sub>2</sub> trading program), and purchase of external credits by covered sources, both from domestic and international sellers. Maximum opportunities for international trading should be incorporated into the system. In the Second Stage, the US could adopt integrated multipollutant legislation now being considered to control several major pollutants in concert – such as SO<sub>x</sub>, NO<sub>x</sub>, Hg, CO<sub>2</sub>, and CH<sub>4</sub> – thereby improving environmental effectiveness and reducing costs compared to piecemeal legislation. The government might also adopt programs (beyond issuance of allowances) to ease the impact of GHG emissions limitations on the most adversely affected sectors and localities, such as possible recycling of revenues from sales of excess permits.

### The Path Forward

It would be premature to propose specific targets for either international or domestic GHG limitations. The costs and benefits of such targets depend on many interacting factors in addition to the target itself, including the length of the relevant commitment period, the amount of preceding lead time, the breadth of the comprehensive approach, the scope for emissions trading, and the extent of developing country participation. Moreover, even if these variables were specified, we do not have studies that would enable us to estimate the costs and benefits of

achieving such targets. Almost all of the cost studies that we now have deal with CO2 emissions only, ignoring the cost savings and environmental gains afforded by the comprehensive approach. On the other hand, the available studies generally make the unrealistic assumption of perfectly efficient implementation. Because better information about costs and benefits is essential to wise decisions on targets, it is imperative that the quantitative capabilities of the IPCC be invigorated and that it undertake the needed studies. The US should also sponsor a new generation of cost and benefit studies, looking both at the US and globally, as part of the new Climate Protection Plan.

The elements of climate policy set forth in this essay are sound. Whether they will be accepted by enough countries, both industrialized and developing, to establish an effective international climate regime within the near future is another matter. Under the international law principle of voluntary assent, nations will join such a regime only if they determine doing so is in their interest. For example, the developing countries, who may suffer the greatest harms from climate change, will ultimately have to decide for themselves whether they should continue their opposition to any participation in the global limitations effort once it becomes clear that such an effort will not go forward unless they join. One thing is clear, however. In order to maximize the chances of assent by a sufficient number of nations, the means for limiting GHG emissions should be as cost effective as possible. It is past time to stop moralizing about means and get on with the effort to build an effective, low-cost international climate protection program in order to obtain prudent climate insurance.

### Conclusions

The Kyoto Protocol was "deep, then broad": it set tight targets among a narrow group of countries now, and hoped to broaden later. Instead, we agree with others who have urged that climate policy be "broad, then deep" (Hahn 1998; Schmalensee 1998; Shogren 2000): it should design the institutions that will attract broad global participation by all key emitters, and that embody the comprehensive approach and emissions trading; only then should it take steps to adopt more stringent emissions limitations.

The phased approach proposed herein, at both the domestic and international levels, may seem too aggressive for some and too timid for others. To those who find our program too aggressive, especially US skeptics of Kyoto, we make three basic points. First, the climate change problem is serious enough to warrant an initial investment in climate insurance if it can be obtained at a reasonable cost. Second, the program that we propose represents sound environmental and economic policy and, through essential design elements, provides climate insurance at costs that are reasonable and justified. Third, important US economic and strategic as well as environmental interests require that it be a credible, effective player in the development of international climate policy; our program would assure protection of these interests. The US cannot let a new regime of international emissions trading be designed by others. The key to sensible climate policy is to get the institutional design right from the outset; the US must be a major participant in that effort.

To those, both at home and abroad, who view our proposal as unduly timid, we emphasize the need for prudence and realism. Our collective reach should exceed our current grasp; that is what

political leadership and international cooperation are all about. But it would disserve the integrity of the international regime for the US (or the EU, Japan, or others) to sign on to commitments in a global pact that it is unable to deliver. We have had enough experience with the pathologies of symbolic legislation and overinflated rhetorical commitments in our own domestic environmental legislation to know not to repeat such mistakes on a larger scale. We have seen unachievable targets and timetables consciously adopted, only to result in performance shortfalls and deferred timetables that weaken the credibility of regulatory standards and foster public cynicism about environmental law. A climate treaty that makes grand promises but does little to slow global warming at high cost will not only be a climate policy failure but will also undermine the case for other needed international environmental protection regimes in the future. These admonitions were appropriately heeded in the FCCC in 1992, but neglected in Kyoto in 1997. They need to be taken seriously in 2001 and beyond.

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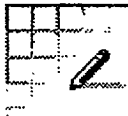
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James Connaughton  
08/21/2001 09:16:55 PM

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> —Original Message—  
> From: Van Bergen, Gail L.  
> Sent: Wednesday, July 18, 2001 10:14 AM  
> To: Environmental Lawyers - SA  
> Cc: 'Dick Stewart'  
> Subject: Climate Change Position Paper

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>  
>

> Attached is a position paper on what the US should do now on climate  
> change. A somewhat shorter version will be electronically published in the  
> near future by American Enterprise Institute/Brookings. Please feel free  
> to distribute it as you wish. I am in the process of preparing a  
> significantly longer version; comments would be welcome.

>

> Dick Stewart  
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**Reconstructing Climate Policy:  
What the US Should Do Now**

Richard B. Stewart (New York University) and Jonathan B. Wiener (Duke University)

The Current Situation

In the wake of the impasse over the climate change treaty negotiations at The Hague in late 2000, and the new Bush Administration's recent repudiation of the Kyoto Protocol, where now? What should the US government, and the world, do next?

President Bush has had the political misfortune to be the messenger of facts everyone knew. By late 2000 it was evident that the US could not achieve its Kyoto Protocol limitations on greenhouse gas (GHG) emissions domestically without unacceptable cost and disruption, nor could most other industrialized countries, including Japan and much of Europe. Bush took the heat for the Clinton-Gore Administration's signing of Kyoto in 1997 without getting firm agreement on the means of compliance, especially regarding emissions trading and sinks, or on developing country participation; for the US Senate's 95 to 0 vote not to ratify the Kyoto treaty without participation by developing countries; and for the failure of the U.S. government to take any serious initiative to begin limiting US GHG emissions growth. Meanwhile, the EU and most developing countries repeatedly opposed or sought to restrict the participation of developing countries and the flexibility mechanisms (including global emissions trading and broad inclusion of sinks) that would have enabled collective progress at reasonable cost. This opposition set the stage for Bush's protestation that Kyoto would be too costly.

When the Bush-Cheney Administration announced that it would not pursue Kyoto, it was loudly killing a quietly dying duck. Bush thereby succeeded in taking the blame for killing Kyoto, without actually doing very much to change reality. Ironically, Bush's position has now stirred up much more pressure for real action than would have arisen had the US merely plodded along with the interminable process of trying to negotiate the implementation and compliance issues that had bogged down at The Hague. Now that the bubble has been burst, the way is cleared to start on reconstructing the international climate regime into a form that is more realistic and more responsive to the nature of climate risks and the character of the efforts needed to manage those risks wisely.

Some basic elements in the Kyoto design -- its use of quantitative multi-year emissions targets with emissions trading, and a comprehensive approach that includes all major greenhouse gases and their sources and sinks -- are sound; they have been consistent US policy across administrations of both parties at least since 1989 (Stewart & Wiener 1990; DOJ 1991; Wiener 2001). There are, however, two basic flaws in Kyoto: the failure to nail down implementation and compliance mechanisms prior to fixing binding targets, and the failure to engage developing country participation. These gaps polarized the post-Kyoto talks on implementation and flexibility mechanisms, and in turn helped make the Kyoto targets both excessively costly and inadequately environmentally protective.

In order to reconstruct climate policy on a sound footing, we propose a two-stage strategy that the US should mount at the international level in order to correct Kyoto's flaws. In order to be a credible player in the international climate negotiations and to protect important national interests, the US should also follow a two stage domestic strategy in order to lay the groundwork for and then begin to implement GHG emissions reductions. These two sets of initiatives should be coordinated and mutually supportive.

Throughout, US policy should be guided by the fundamental point that getting the institutional design right for the long run is far more important than either rushing ahead with hasty symbolic commitments or stonewalling to seem strong. Once adopted, the institutional design may be very difficult to revise; there will be high costs of undoing early mistakes.

### The US Cannot Afford Climate Isolationism

As the Bush Administration has acknowledged, the US cannot afford to ignore climate issues, do nothing about GHG emissions, and sit on the sidelines while other countries design a global regime that the US will later wish it had helped shape. The US has strong national interests in fashioning a responsible, well-designed global regime for GHG limitations.

Climate policy is not solely an environmental issue; it is also a global economic and strategic issue. First, the US will suffer significant environmental harms as a result of unchecked rapid warming, especially over the longer run. Moreover, in an interconnected global economy, US businesses will be harmed if other countries' incomes falter due to climate change. Second, the US will suffer economically if it is excluded from the design and operation of international emissions trading. Many US firms have the technology and know-how to achieve GHG limitations and help run efficient emissions trading markets. Also, the availability of international trading and the comprehensive approach will be of tremendous cost-saving importance to the US in implementing, sooner or later, domestic GHG limitations. These opportunities are likely to be sharply restricted if the US fails to remain a credible international player and thereby cannot counter efforts by the EU and others to restrict or kill flexibility. Other countries are moving ahead with domestic emissions trading systems that may become models for global trading, but on terms that may hinder full flexibility unless the US actively participates in trading design. Third, the US has global strategic interests in a wide array of other issues. If the US fails to address seriously the climate policy positions and interests of others -- major OECD countries; Russia, the Ukraine, and other economies in transition who may be deprived of the opportunity (negotiated by the US at Kyoto) to sell emissions allowances; and major developing countries who be harmed by climate change -- it is likely to engender widespread resentment and suspicion that will make it more difficult to engage their cooperation on trade, security, and other US priority issues.

### Prudent Investment in Climate Insurance is Warranted

Investment in initial steps to limit GHG emissions growth is prudent insurance against the risks of climate change. Recent reports by the Intergovernmental Panel on Climate Change (IPCC) and a National Academy of Sciences panel convened at the request of the White House confirm that rising GHG emissions due to human activities are already causing the earth's atmosphere to warm and that the rate and extent of warming will increase significantly over this century -- in the range of 1.5 and 5 degrees C -- if steps are not taken to limit growth in net emissions (IPCC 2001, NAS 2001). The impacts of global warming at this pace are likely to be adverse on balance. The recent synthesis by Tol (2001a, 2001b) of climate change impacts on key endpoints -- agriculture, forestry, water resources, energy consumption, sea level rise, ecosystems, and human health -- indicates that some initial warming (1 degree C) and CO<sub>2</sub> fertilization may help agriculture and human health in some areas (including the OECD, Russia and China), for an early gain of 1 to 3% of GDP; but that this climate change will have adverse impacts in poorer areas (especially Africa and Southeast Asia, which would lose 1 to 4% of GDP); and that the impacts of greater warming will become adverse worldwide over time, including losses of 1 to 2% in OECD countries and 4 to 9% in developing countries (except for China, which exhibits persistent gains from climate change of about 2% of GDP). And, Tol's synthesis does not account for other adverse impacts, such as fisheries losses, extreme weather events, and the possibility of catastrophic changes in ocean currents or other critical natural systems.

While many uncertainties remain regarding the future rate of warming and its impacts, based on what we know now the risks of climate change are sufficiently serious to justify a reasonable investment in insurance, at least against very rapid or large changes. Both as individuals and as societies we often invest in preventive measures against uncertain future risks (e.g. the Bush Administration's new plans for a missile defense). Waiting for definitive evidence of harm can mean waiting until it is too late to do anything about the problem. At the same time, insurance is not free, and policy should react responsibly to risk. Climate change will most likely occur gradually, although at an increasing pace, over a long time period. Further, global temperature is not a function of current emissions but of the total stock (concentration) of GHGs in the atmosphere. Current emissions, which cannot be changed very rapidly in any event, are but a small portion of the total stock. Cost-effective climate insurance should accordingly focus on an institutional design for GHG limitations that is sustainable and efficient over the long run rather than on crash short-run reductions.

Effective climate insurance will require some regulatory limits on GHG emissions. The essential problem today is that the global atmosphere is being treated as an open-access resource. With no constraints on its use as a disposal site for GHG emissions, the atmosphere is being overused in a classic "tragedy of the commons." Regulatory solutions include access fees (taxes) and parceling of property rights (tradable allowances). Of course, regulation is only one tool among several in a sound climate policy. Wise policy must strike a good balance between prevention measures and adaptation measures. Technology R&D, innovation and investment need to start now in both the public and private sectors. Market and institutional failures and subsidies that blunt the market incentives to conserve energy and otherwise reduce GHG emissions should be corrected. Public and private sector initiatives to reduce GHG-intensity should be encouraged. Such measures alone, however, can not deal adequately with the climate change externalities resulting from the atmosphere's current treatment as an open-access resource.

## Sound Regulatory Design Can Make the Costs of Climate Insurance Reasonable

Taking the first steps in a transition from a high- to a low-GHG economy will not be a free lunch. The costs of meeting the Kyoto targets through wholly domestic measures to reduce CO<sub>2</sub> emissions had been estimated at 1 to 4% of GDP in the US and other industrialized countries (Manne & Richels 2000; Shogren 2000). But as we reconstruct climate policy, these costs can be reduced substantially – perhaps up to 90% -- by intelligent regulatory design, using the most cost-effective means over appropriate time scales. Regulatory design for achieving GHG limitations should incorporate two basic principles:

First, regulatory limitations on GHG emissions should be phased in, quite modest at first and then building over time if new evidence indicates that continued investment in insurance against climate risks is justified. This strategy accords with the GHG stock/flow structure, the fact that it will be less costly to achieve limitations in the future with the benefit of new technologies and turnover of the capital stock, and the gains from incurring costs later rather than sooner. Attempting sharp cuts now will be quite costly and do little to contribute to reducing emissions growth in the long run. Substantial lead times are also required to construct the institutional and technological foundations of a sound emissions limitations program.

Second, emissions limitations should be achieved by the most cost-effective means. Because the long-term costs of limiting GHG emissions are potentially large, and because of the need for low-GHG technology development and investment in order to limit those costs, it is essential to use market-based regulatory instruments that foster cost-saving and innovation-enhancing flexibility. Such flexibility can best be achieved through (i) the comprehensive approach, including all major GHGs, sources, and sinks; (ii) international and domestic emissions trading; and (iii) expressing targets in terms of cumulative emissions over periods of time.

## Kyoto's Design Successes

Kyoto's basic regulatory design -- a comprehensive approach, a cap and trade system, and multi-year commitment periods -- is sound; it promotes flexibility and cost-effectiveness. These elements, which were advanced in the first Bush Administration by us and others (e.g. Stewart & Wiener 1990, 1992; DOJ 1991) and advocated in the Clinton-Gore administration as well (see Wiener 2001) are good, nonpartisan policy ideas. Although the comprehensive approach and emissions trading have been criticized from some quarters, they remain essential ingredients of climate policy.

*The Comprehensive Approach.* Because there is so much variety in GHG limitation opportunities across gases and sectors, the comprehensive approach would yield large cost savings -- 60% or more -- relative to an approach that fixes limits for CO<sub>2</sub> alone (Reilly et al. 1999). The comprehensive approach is also environmentally necessary to prevent perverse shifts in emissions from regulated gases (such as CO<sub>2</sub>) and sectors to unregulated ones (such as CH<sub>4</sub>), which could unintentionally exacerbate climate change (Wiener 1995). And it yields valuable

side benefits in reduction of other pollutants (Hansen 2000). Criticisms of the comprehensive approach as too complex and difficult to implement and are misplaced. Simplified, conservative default rules can be adopted to deal with cross-gas comparison indices and difficult-to-measure GHGs such as agricultural CH<sub>4</sub> and CO<sub>2</sub> sinks; these rules can be revised as monitoring and measurement techniques improve (Stewart & Wiener 1992).

*Emissions Trading.* Because there is so much variety in GHG limitation opportunities across countries, flexibility through emissions trading would yield large cost savings. Studies indicate that full international emissions trading would reduce the global costs of abatement by about 75% compared to wholly domestic CO<sub>2</sub> emissions limitations (e.g. Manne & Richels 2000).

(If the 60% savings from adopting the comprehensive approach is additive, which is plausible because the models of emissions trading assume CO<sub>2</sub>-only policies, then the combined cost savings from both comprehensiveness and trading could be 90% compared to a CO<sub>2</sub>-only policy with national caps and no trading. Thus reducing US emissions to 7% below 1990 levels -- the Kyoto target -- could cost not 1 to 4% of GDP but 0.1 to 0.4% of GDP. As discussed below, however, the models unrealistically assume perfectly efficient implementation.)

In principle, taxes and emissions trading can achieve similar results. But at the global level, GHG emissions trading has several important advantages over GHG taxes. An international system of compulsory taxation is without precedent and contrary to traditional notions of national sovereignty; cap and trade regulatory systems have more affinities with traditional international environmental regulatory regimes. The effectiveness of an international system of GHG taxes would be severely compromised by "fiscal cushioning" games; countries would attempt to soften the domestic impact by adjusting their other taxes and subsidies in ways that would be very hard to police (Wiener 1999). Further, developing countries would never agree to impose the same tax levels as industrialized countries; lack of uniformity would result in significant leakage to lower tax nations. Also, taxes cannot meet the need for significant side payments (transfers of capital and technology) to developing countries to attract their participation and meet their equity concerns. Direct side payments to engage participation would undercut the incentive effect of emissions taxes. Emissions trading can solve these problems by maintaining a cap on total emissions while assigning extra allowances in excess of a country's current emissions to induce participation by countries, including developing countries and nations such as Russia and the Ukraine, who otherwise perceive no net national benefit to participation. These extra allowances should be seen as "headroom," not "hot air" -- as the necessary price to engage participation (Wiener 1999).

Despite its overall superiority, international GHG emissions trading does face some potential implementation difficulties. These include the risk that quantity limits on emissions could result in unexpectedly high compliance costs, potential problems of market power and transaction costs, and the compatibility of international emissions trading with domestic regulatory systems that rely on other instruments. We agree that these issues need attention; reasonable means for addressing them have been or are being developed.

## Kyoto's Design Failures

Notwithstanding the Kyoto Protocol's good points, its negotiators made two major design mistakes that require correction in future international agreements. First, they adopted quantitative emissions limitations without agreement on the ground rules for measuring reductions of GHG sources, enhancement of GHG sinks, and emissions trading and JI/CDM projects. The treaty accordingly fails to assure the most cost-effective means for achieving targets, including full scope for the comprehensive approach and international emissions trading. The adoption of targets without clarifying the permitted means for achieving them also made it impossible to predict the costs of achieving the targets and undermined the development of national and international measures for implementation. Worse, this confusion gave running room to those countries and interest groups who oppose the comprehensive approach and emissions trading for ideological reasons or out of economic self-interest; they have pushed all manner of restrictions on comprehensiveness and trading, castigating flexibility as an attempt to weaken the targets. The result was the post-Kyoto negotiation stalemate, which helped delay abatement efforts to the point that the Kyoto targets have now become unattainable.

The second basic design flaw in Kyoto was its failure to face squarely the issue of developing country participation. The complete omission of any developing country obligations, now or in the future, is contrary to the approach taken in prior global environmental treaties and to the principle of "common but differentiated" responsibility in the FCCC. A sound global climate regime must involve limitations obligations by all nations with significant sources and sinks, including developing countries, in order to ensure that the climate is actually protected; that the lowest-cost abatement opportunities can be tapped worldwide; that free-riding on limitations efforts by others is deterred; and that cross-border "leakage" of emissions is constrained. In short, the omission of developing countries makes the treaty much less (if at all) environmentally effective, and much more costly.

The developing countries have strong equity arguments, reinforced by practical economic and political considerations, that the industrialized countries should take the lead and the major burden of emissions limitations. Under international law, no country can be bound by a treaty without its consent; thus participation must be attracted. As discussed above and developed further below, there are a number of ways of meeting developing countries' concerns while attracting their participation in cooperative emissions limitations.

## Reconstructing Climate Policy

In light of the successes and failures of the Kyoto Protocol, the US should lead a reconstruction effort in order to build a better institutional design for climate policy. These efforts should proceed simultaneously at the international and national levels; the steps at each level would be in two linked stages. The first stage would lay the groundwork for the second, which would involve new international limitations targets and domestic GHG limitations.

*Building A New International Climate Regime.* At the international level, our proposed arrangement would be adopted in two stages, through protocols or other subsidiary agreements under the 1992 Framework Convention on Climate Change (FCCC).

The First Stage -- which could be concluded promptly, within a year -- would be an agreement among all industrialized countries and any interested developing countries who wished to participate to make pledges to limit cumulative net GHG emissions over ten years (say, 2005-2015), with a five year interim goal, progress reporting, and review provisions. Emissions limitation pledges would be fully comprehensive, measured in terms of net emissions of all major GHGs. Abatement efforts could include any reduction in sources or enhancement of sinks that would help achieve the pledged goal, under default measurement rules to address uncertainty. The agreement would authorize cooperative cross-border abatement efforts through emissions trading or credit trading on the JI/CDM model, by national governments, private sector firms, and NGOs who wish to participate in such arrangements. It would provide for an international registry for such transactions. The OECD countries would provide substantial capacity-building assistance to developing countries wishing to participate in such arrangements. This international agreement would not itself include any penalties (beyond reputational costs) for exceeding the pledged goals, but individual countries or groups of countries through bilateral or multilateral agreements could, if they chose, make such goals legally binding. The First Stage would also include a commitment by all countries to negotiate a follow-on Second Stage agreement with binding targets, and to accord credit against these new targets for net GHG emissions reductions achieved in accordance with First Stage pledges.

The Second Stage agreement would contain binding cumulative net emissions limitations for an initial commitment period (such as 5, 8, or 10 years), based on agreed implementation and compliance ground rules on comprehensiveness and flexibility mechanisms (including sinks and emissions trading) and on compliance assurance measures. The circumstance that no limitations commitments could be made until implementation and compliance matters were resolved would provide a strong impetus for prompt resolution of those matters. Aggregate emissions limits would be set at levels for which the costs (given flexibility mechanisms) would be reasonable in light of the expected benefits (see e.g. Hammitt 1999). The agreement would authorize full global emissions trading among countries with national targets. Its compliance assurance provisions might include, inter alia, penalties for excess emissions at a set rate per ton of carbon-equivalent; penalty revenues might be invested in compensatory abatement.

The Second Stage at the international level would provide several "windows" for inclusion of developing countries, including:

1. Clarifying and streamlining the CDM on market-based lines, and structuring it to encourage sector-wide approaches that minimize cross-project leakage. The CDM could also provide for bilateral sector-based technology transfer and assistance/credit arrangements between industrialized and developing countries.
2. Inviting voluntary national participation in emissions trading, including on a sector-based approach that would permit participation at scale without overall national caps.



3. Providing principles for the voluntary accession of developing countries to a global cap and trade system, with assignment of "headroom" allowances that developing countries could use or sell at a profit.
4. Agreeing on principles of automatic, incremental participation ("graduation") by developing countries in the global cap and trade system, once each country reaches pre-agreed levels of per capita income, with appropriate allocations of headroom.

The first three mechanisms would be transitional to the fourth. The overall suite of mechanisms would be established with a view to ensuring significant and increasing participation by developing countries in the global emissions limitation effort, toward a full global comprehensive cap-and-trade system.

*Building a Domestic US Climate Policy.* We also propose a two-stage process for the adoption of domestic US measures in tandem with the two stages at the international level. The domestic First Stage would not impose binding GHG limitations but would lay the groundwork for such measures, encourage voluntary emissions limitations and trading, and launch some of the non-regulatory elements of a serious US climate policy. At the Second Stage, the US would adopt domestic GHG limitations utilizing the comprehensive approach and domestic and international trading to the maximum feasible extent. These limitations would only be adopted in conjunction with international adoption of a climate agreement with binding limitations, maximum scope for flexibility, developing country participation, and a sensible incremental path to reductions. A US commitment to adopt domestic limitations is essential for its international credibility and ability to promote a sound global climate regime. Emissions trading and the comprehensive approach require emissions caps at some level. The US cannot persuasively advocate these flexibility mechanisms unless it eventually adopts caps itself. Nor, for similar reasons, can it persuade developing countries to join the emissions limitation effort unless it does so itself.

The US domestic First Stage would jump start voluntary domestic emissions limitations and domestic and international emissions trading, using the power of information and the prospect of second-stage regulation to provide incentives for early limitations efforts. A White House Climate Policy Office would develop a National Climate Protection Plan for limiting net US GHG emissions with quantitative goals and timetables; a national Climate Protection Scorecard would monitor and report progress. The plan would form the basis for the US pledge under Stage One of the international initiative described above. The government would establish comprehensive GHG emissions monitoring, record keeping, and reporting protocols and procedures for domestic sources and sinks and for projects abroad financed by US sources. It would phase in mandatory monitoring and reporting by domestic sources to create a Climate Release Inventory.

The President would be authorized to contract with business and other private entities to achieve reductions in net GHG emissions relative to specified baselines, in return for certified reduction credits that could be applied against future emissions limitation regulations. Credits would be accorded to actions taken outside as well as within the US. Credits could be traded domestically and internationally. Credits or allowances issued by other countries could be recognized in the

US under mutual recognition arrangements. The U.S. would develop a domestic credit registry and actively support the development of an international registry.

In addition, the government would initiate a program of low-GHG technology R&D, with an emphasis on basic science; take steps to identify and correct market barriers and non-market barriers (including existing government programs and policies) to adoption of measures to reduce energy use and otherwise reduce GHG emissions; and develop programs to reduce net GHG emissions by the government sector.

The federal government would also undertake the design of a domestic US cap and trade system, including consideration of sectoral design (e.g. electricity, transportation); point of application (upstream, downstream, mixed designs); and other regulatory/incentive measures for sectors and activities where trading may not be feasible. It should study the design and feasibility a hybrid trading/fee system under which sources with excess emissions would be required to purchase extra allowances from the government at a pre-set price. (This “safety valve” arrangement could protect against unexpectedly high abatement costs, but might allow emissions to grow excessively if the price were set too low.) The revenues from such a scheme might be invested in domestic and international abatement efforts. The government would also study the design, equity and efficiency characteristics of programs to ease impacts on sectors and localities that will be hard hit by GHG regulation.

The US domestic Second Stage program, building on the work done and experience gained in the First Stage, would adopt domestic regulatory net emissions limitations, with primary reliance on cap and trade using a comprehensive approach to all GHGs, plus other supplemental regulatory measures where necessary. Caps would be set as cumulative limits for a substantial period (e.g., ten years). Regulation could be phased in by sector – for example, utilities, heavy industry and transportation might go first. But there should be opportunities for opt in by other sources (as in the US SO<sub>2</sub> trading program), and purchase of external credits by covered sources, both from domestic and international sellers. Maximum opportunities for international trading should be incorporated into the system. In the Second Stage, the US could adopt integrated multipollutant legislation now being considered to control several major pollutants in concert – such as SO<sub>x</sub>, NO<sub>x</sub>, Hg, CO<sub>2</sub>, and CH<sub>4</sub> -- thereby improving environmental effectiveness and reducing costs compared to piecemeal legislation. The government might also adopt programs (beyond issuance of allowances) to ease the impact of GHG emissions limitations on the most adversely affected sectors and localities, such as possible recycling of revenues from sales of excess permits.

### The Path Forward

It would be premature to propose specific targets for either international or domestic GHG limitations. The costs and benefits of such targets depend on many interacting factors in addition to the target itself, including the length of the relevant commitment period, the amount of preceding lead time, the breadth of the comprehensive approach, the scope for emissions trading, and the extent of developing country participation. Moreover, even if these variables were specified, we do not have studies that would enable us to estimate the costs and benefits of

achieving such targets. Almost all of the cost studies that we now have deal with CO2 emissions only, ignoring the cost savings and environmental gains afforded by the comprehensive approach. On the other hand, the available studies generally make the unrealistic assumption of perfectly efficient implementation. Because better information about costs and benefits is essential to wise decisions on targets, it is imperative that the quantitative capabilities of the IPCC be invigorated and that it undertake the needed studies. The US should also sponsor a new generation of cost and benefit studies, looking both at the US and globally, as part of the new Climate Protection Plan.

The elements of climate policy set forth in this essay are sound. Whether they will be accepted by enough countries, both industrialized and developing, to establish an effective international climate regime within the near future is another matter. Under the international law principle of voluntary assent, nations will join such a regime only if they determine doing so is in their interest. For example, the developing countries, who may suffer the greatest harms from climate change, will ultimately have to decide for themselves whether they should continue their opposition to any participation in the global limitations effort once it becomes clear that such an effort will not go forward unless they join. One thing is clear, however. In order to maximize the chances of assent by a sufficient number of nations, the means for limiting GHG emissions should be as cost effective as possible. It is past time to stop moralizing about means and get on with the effort to build an effective, low-cost international climate protection program in order to obtain prudent climate insurance.

### Conclusions

The Kyoto Protocol was "deep, then broad": it set tight targets among a narrow group of countries now, and hoped to broaden later. Instead, we agree with others who have urged that climate policy be "broad, then deep" (Hahn 1998; Schmalensee 1998; Shogren 2000): it should design the institutions that will attract broad global participation by all key emitters, and that embody the comprehensive approach and emissions trading; only then should it take steps to adopt more stringent emissions limitations.

The phased approach proposed herein, at both the domestic and international levels, may seem too aggressive for some and too timid for others. To those who find our program too aggressive, especially US skeptics of Kyoto, we make three basic points. First, the climate change problem is serious enough to warrant an initial investment in climate insurance if it can be obtained at a reasonable cost. Second, the program that we propose represents sound environmental and economic policy and, through essential design elements, provides climate insurance at costs that are reasonable and justified. Third, important US economic and strategic as well as environmental interests require that it be a credible, effective player in the development of international climate policy; our program would assure protection of these interests. The US cannot let a new regime of international emissions trading be designed by others. The key to sensible climate policy is to get the institutional design right from the outset; the US must be a major participant in that effort.

To those, both at home and abroad, who view our proposal as unduly timid, we emphasize the need for prudence and realism. Our collective reach should exceed our current grasp; that is what

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political leadership and international cooperation are all about. But it would disserve the integrity of the international regime for the US (or the EU, Japan, or others) to sign on to commitments in a global pact that it is unable to deliver. We have had enough experience with the pathologies of symbolic legislation and overinflated rhetorical commitments in our own domestic environmental legislation to know not to repeat such mistakes on a larger scale. We have seen unachievable targets and timetables consciously adopted, only to result in performance shortfalls and deferred timetables that weaken the credibility of regulatory standards and foster public cynicism about environmental law. A climate treaty that makes grand promises but does little to slow global warming at high cost will not only be a climate policy failure but will also undermine the case for other needed international environmental protection regimes in the future. These admonitions were appropriately heeded in the FCCC in 1992, but neglected in Kyoto in 1997. They need to be taken seriously in 2001 and beyond.

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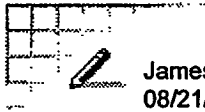
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- The potential for human-induced climate change is a serious issue, posing a long-term risk.
- The level and timing of the risk are not well defined, as climate science has many remaining uncertainties
- Responsible, voluntary economic actions to reduce risk are appropriate.
- Renewables likely to play only a niche role for many years.
- Better path forward than Kyoto is needed and feasible.
  - Focus needs to be on deployment of existing technology and creation of advanced concepts.







James Connaughton  
08/21/2001 09:16:55 PM

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To: Phil Cooney/CEQ/EOP@EOP, Kameran L. Bailey/CEQ/EOP@EOP  
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Subject: FW: Climate Change Position Paper

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"Bell, Christopher L." <cbell@Sidley.com>  
08/09/2001 01:16:21 PM

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> -----Original Message-----  
> From: Van Bergen, Gail L.  
> Sent: Wednesday, July 18, 2001 10:14 AM  
> To: Environmental Lawyers - SA  
> Cc: 'Dick Stewart'  
> Subject: Climate Change Position Paper

>  
>  
>  
> Attached is a position paper on what the US should do now on climate  
> change. A somewhat shorter version will be electronically published in the  
> near future by American Enterprise Institute/Brookings. Please feel free  
> to distribute it as you wish. I am in the process of preparing a  
> significantly longer version; comments would be welcome.

>  
> Dick Stewart  
> <<AEI GHG Medium 07-09-01.doc>>



- AEI GHG Medium 07-09-01.doc

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**Reconstructing Climate Policy:  
What the US Should Do Now**

Richard B. Stewart (New York University) and Jonathan B. Wiener (Duke University)

The Current Situation

In the wake of the impasse over the climate change treaty negotiations at The Hague in late 2000, and the new Bush Administration's recent repudiation of the Kyoto Protocol, where now? What should the US government, and the world, do next?

President Bush has had the political misfortune to be the messenger of facts everyone knew. By late 2000 it was evident that the US could not achieve its Kyoto Protocol limitations on greenhouse gas (GHG) emissions domestically without unacceptable cost and disruption, nor could most other industrialized countries, including Japan and much of Europe. Bush took the heat for the Clinton-Gore Administration's signing of Kyoto in 1997 without getting firm agreement on the means of compliance, especially regarding emissions trading and sinks, or on developing country participation; for the US Senate's 95 to 0 vote not to ratify the Kyoto treaty without participation by developing countries; and for the failure of the U.S. government to take any serious initiative to begin limiting US GHG emissions growth. Meanwhile, the EU and most developing countries repeatedly opposed or sought to restrict the participation of developing countries and the flexibility mechanisms (including global emissions trading and broad inclusion of sinks) that would have enabled collective progress at reasonable cost. This opposition set the stage for Bush's protestation that Kyoto would be too costly.

When the Bush-Cheney Administration announced that it would not pursue Kyoto, it was loudly killing a quietly dying duck. Bush thereby succeeded in taking the blame for killing Kyoto, without actually doing very much to change reality. Ironically, Bush's position has now stirred up much more pressure for real action than would have arisen had the US merely plodded along with the interminable process of trying to negotiate the implementation and compliance issues that had bogged down at The Hague. Now that the bubble has been burst, the way is cleared to start on reconstructing the international climate regime into a form that is more realistic and more responsive to the nature of climate risks and the character of the efforts needed to manage those risks wisely.

Some basic elements in the Kyoto design -- its use of quantitative multi-year emissions targets with emissions trading, and a comprehensive approach that includes all major greenhouse gases and their sources and sinks -- are sound; they have been consistent US policy across administrations of both parties at least since 1989 (Stewart & Wiener 1990; DOJ 1991; Wiener 2001). There are, however, two basic flaws in Kyoto: the failure to nail down implementation and compliance mechanisms prior to fixing binding targets, and the failure to engage developing country participation. These gaps polarized the post-Kyoto talks on implementation and flexibility mechanisms, and in turn helped make the Kyoto targets both excessively costly and inadequately environmentally protective.

In order to reconstruct climate policy on a sound footing, we propose a two-stage strategy that the US should mount at the international level in order to correct Kyoto's flaws. In order to be a credible player in the international climate negotiations and to protect important national interests, the US should also follow a two stage domestic strategy in order to lay the groundwork for and then begin to implement GHG emissions reductions. These two sets of initiatives should be coordinated and mutually supportive.

Throughout, US policy should be guided by the fundamental point that getting the institutional design right for the long run is far more important than either rushing ahead with hasty symbolic commitments or stonewalling to seem strong. Once adopted, the institutional design may be very difficult to revise; there will be high costs of undoing early mistakes.

### The US Cannot Afford Climate Isolationism

As the Bush Administration has acknowledged, the US cannot afford to ignore climate issues, do nothing about GHG emissions, and sit on the sidelines while other countries design a global regime that the US will later wish it had helped shape. The US has strong national interests in fashioning a responsible, well-designed global regime for GHG limitations.

Climate policy is not solely an environmental issue; it is also a global economic and strategic issue. First, the US will suffer significant environmental harms as a result of unchecked rapid warming, especially over the longer run. Moreover, in an interconnected global economy, US businesses will be harmed if other countries' incomes falter due to climate change. Second, the US will suffer economically if it is excluded from the design and operation of international emissions trading. Many US firms have the technology and know-how to achieve GHG limitations and help run efficient emissions trading markets. Also, the availability of international trading and the comprehensive approach will be of tremendous cost-saving importance to the US in implementing, sooner or later, domestic GHG limitations. These opportunities are likely to be sharply restricted if the US fails to remain a credible international player and thereby cannot counter efforts by the EU and others to restrict or kill flexibility. Other countries are moving ahead with domestic emissions trading systems that may become models for global trading, but on terms that may hinder full flexibility unless the US actively participates in trading design. Third, the US has global strategic interests in a wide array of other issues. If the US fails to address seriously the climate policy positions and interests of others -- major OECD countries; Russia, the Ukraine, and other economies in transition who may be deprived of the opportunity (negotiated by the US at Kyoto) to sell emissions allowances; and major developing countries who be harmed by climate change -- it is likely to engender widespread resentment and suspicion that will make it more difficult to engage their cooperation on trade, security, and other US priority issues.

### Prudent Investment in Climate Insurance is Warranted

Investment in initial steps to limit GHG emissions growth is prudent insurance against the risks of climate change. Recent reports by the Intergovernmental Panel on Climate Change (IPCC) and a National Academy of Sciences panel convened at the request of the White House confirm that rising GHG emissions due to human activities are already causing the earth's atmosphere to warm and that the rate and extent of warming will increase significantly over this century -- in the range of 1.5 and 5 degrees C -- if steps are not taken to limit growth in net emissions (IPCC 2001, NAS 2001). The impacts of global warming at this pace are likely to be adverse on balance. The recent synthesis by Tol (2001a, 2001b) of climate change impacts on key endpoints -- agriculture, forestry, water resources, energy consumption, sea level rise, ecosystems, and human health -- indicates that some initial warming (1 degree C) and CO<sub>2</sub> fertilization may help agriculture and human health in some areas (including the OECD, Russia and China), for an early gain of 1 to 3% of GDP; but that this climate change will have adverse impacts in poorer areas (especially Africa and Southeast Asia, which would lose 1 to 4% of GDP); and that the impacts of greater warming will become adverse worldwide over time, including losses of 1 to 2% in OECD countries and 4 to 9% in developing countries (except for China, which exhibits persistent gains from climate change of about 2% of GDP). And, Tol's synthesis does not account for other adverse impacts, such as fisheries losses, extreme weather events, and the possibility of catastrophic changes in ocean currents or other critical natural systems.

While many uncertainties remain regarding the future rate of warming and its impacts, based on what we know now the risks of climate change are sufficiently serious to justify a reasonable investment in insurance, at least against very rapid or large changes. Both as individuals and as societies we often invest in preventive measures against uncertain future risks (e.g. the Bush Administration's new plans for a missile defense). Waiting for definitive evidence of harm can mean waiting until it is too late to do anything about the problem. At the same time, insurance is not free, and policy should react responsibly to risk. Climate change will most likely occur gradually, although at an increasing pace, over a long time period. Further, global temperature is not a function of current emissions but of the total stock (concentration) of GHGs in the atmosphere. Current emissions, which cannot be changed very rapidly in any event, are but a small portion of the total stock. Cost-effective climate insurance should accordingly focus on an institutional design for GHG limitations that is sustainable and efficient over the long run rather than on crash short-run reductions.

Effective climate insurance will require some regulatory limits on GHG emissions. The essential problem today is that the global atmosphere is being treated as an open-access resource. With no constraints on its use as a disposal site for GHG emissions, the atmosphere is being overused in a classic "tragedy of the commons." Regulatory solutions include access fees (taxes) and parceling of property rights (tradable allowances). Of course, regulation is only one tool among several in a sound climate policy. Wise policy must strike a good balance between prevention measures and adaptation measures. Technology R&D, innovation and investment need to start now in both the public and private sectors. Market and institutional failures and subsidies that blunt the market incentives to conserve energy and otherwise reduce GHG emissions should be corrected. Public and private sector initiatives to reduce GHG-intensity should be encouraged. Such measures alone, however, can not deal adequately with the climate change externalities resulting from the atmosphere's current treatment as an open-access resource.

## Sound Regulatory Design Can Make the Costs of Climate Insurance Reasonable

Taking the first steps in a transition from a high- to a low-GHG economy will not be a free lunch. The costs of meeting the Kyoto targets through wholly domestic measures to reduce CO<sub>2</sub> emissions had been estimated at 1 to 4% of GDP in the US and other industrialized countries (Manne & Richels 2000; Shogren 2000). But as we reconstruct climate policy, these costs can be reduced substantially – perhaps up to 90% -- by intelligent regulatory design, using the most cost-effective means over appropriate time scales. Regulatory design for achieving GHG limitations should incorporate two basic principles:

First, regulatory limitations on GHG emissions should be phased in, quite modest at first and then building over time if new evidence indicates that continued investment in insurance against climate risks is justified. This strategy accords with the GHG stock/flow structure, the fact that it will be less costly to achieve limitations in the future with the benefit of new technologies and turnover of the capital stock, and the gains from incurring costs later rather than sooner. Attempting sharp cuts now will be quite costly and do little to contribute to reducing emissions growth in the long run. Substantial lead times are also required to construct the institutional and technological foundations of a sound emissions limitations program.

Second, emissions limitations should be achieved by the most cost-effective means. Because the long-term costs of limiting GHG emissions are potentially large, and because of the need for low-GHG technology development and investment in order to limit those costs, it is essential to use market-based regulatory instruments that foster cost-saving and innovation-enhancing flexibility. Such flexibility can best be achieved through (i) the comprehensive approach, including all major GHGs, sources, and sinks; (ii) international and domestic emissions trading; and (iii) expressing targets in terms of cumulative emissions over periods of time.

## Kyoto's Design Successes

Kyoto's basic regulatory design -- a comprehensive approach, a cap and trade system, and multi-year commitment periods -- is sound; it promotes flexibility and cost-effectiveness. These elements, which were advanced in the first Bush Administration by us and others (e.g. Stewart & Wiener 1990, 1992; DOJ 1991) and advocated in the Clinton-Gore administration as well (see Wiener 2001) are good, nonpartisan policy ideas. Although the comprehensive approach and emissions trading have been criticized from some quarters, they remain essential ingredients of climate policy.

*The Comprehensive Approach.* Because there is so much variety in GHG limitation opportunities across gases and sectors, the comprehensive approach would yield large cost savings -- 60% or more -- relative to an approach that fixes limits for CO<sub>2</sub> alone (Reilly et al. 1999). The comprehensive approach is also environmentally necessary to prevent perverse shifts in emissions from regulated gases (such as CO<sub>2</sub>) and sectors to unregulated ones (such as CH<sub>4</sub>), which could unintentionally exacerbate climate change (Wiener 1995). And it yields valuable

side benefits in reduction of other pollutants (Hansen 2000). Criticisms of the comprehensive approach as too complex and difficult to implement and are misplaced. Simplified, conservative default rules can be adopted to deal with cross-gas comparison indices and difficult-to-measure GHGs such as agricultural CH<sub>4</sub> and CO<sub>2</sub> sinks; these rules can be revised as monitoring and measurement techniques improve (Stewart & Wiener 1992).

*Emissions Trading.* Because there is so much variety in GHG limitation opportunities across countries, flexibility through emissions trading would yield large cost savings. Studies indicate that full international emissions trading would reduce the global costs of abatement by about 75% compared to wholly domestic CO<sub>2</sub> emissions limitations (e.g. Manne & Richels 2000).

(If the 60% savings from adopting the comprehensive approach is additive, which is plausible because the models of emissions trading assume CO<sub>2</sub>-only policies, then the combined cost savings from both comprehensiveness and trading could be 90% compared to a CO<sub>2</sub>-only policy with national caps and no trading. Thus reducing US emissions to 7% below 1990 levels -- the Kyoto target -- could cost not 1 to 4% of GDP but 0.1 to 0.4% of GDP. As discussed below, however, the models unrealistically assume perfectly efficient implementation.)

In principle, taxes and emissions trading can achieve similar results. But at the global level, GHG emissions trading has several important advantages over GHG taxes. An international system of compulsory taxation is without precedent and contrary to traditional notions of national sovereignty; cap and trade regulatory systems have more affinities with traditional international environmental regulatory regimes. The effectiveness of an international system of GHG taxes would be severely compromised by "fiscal cushioning" games; countries would attempt to soften the domestic impact by adjusting their other taxes and subsidies in ways that would be very hard to police (Wiener 1999). Further, developing countries would never agree to impose the same tax levels as industrialized countries; lack of uniformity would result in significant leakage to lower tax nations. Also, taxes cannot meet the need for significant side payments (transfers of capital and technology) to developing countries to attract their participation and meet their equity concerns. Direct side payments to engage participation would undercut the incentive effect of emissions taxes. Emissions trading can solve these problems by maintaining a cap on total emissions while assigning extra allowances in excess of a country's current emissions to induce participation by countries, including developing countries and nations such as Russia and the Ukraine, who otherwise perceive no net national benefit to participation. These extra allowances should be seen as "headroom," not "hot air" -- as the necessary price to engage participation (Wiener 1999).

Despite its overall superiority, international GHG emissions trading does face some potential implementation difficulties. These include the risk that quantity limits on emissions could result in unexpectedly high compliance costs, potential problems of market power and transaction costs, and the compatibility of international emissions trading with domestic regulatory systems that rely on other instruments. We agree that these issues need attention; reasonable means for addressing them have been or are being developed.

## Kyoto's Design Failures

Notwithstanding the Kyoto Protocol's good points, its negotiators made two major design mistakes that require correction in future international agreements. First, they adopted quantitative emissions limitations without agreement on the ground rules for measuring reductions of GHG sources, enhancement of GHG sinks, and emissions trading and JI/CDM projects. The treaty accordingly fails to assure the most cost-effective means for achieving targets, including full scope for the comprehensive approach and international emissions trading. The adoption of targets without clarifying the permitted means for achieving them also made it impossible to predict the costs of achieving the targets and undermined the development of national and international measures for implementation. Worse, this confusion gave running room to those countries and interest groups who oppose the comprehensive approach and emissions trading for ideological reasons or out of economic self-interest; they have pushed all manner of restrictions on comprehensiveness and trading, castigating flexibility as an attempt to weaken the targets. The result was the post-Kyoto negotiation stalemate, which helped delay abatement efforts to the point that the Kyoto targets have now become unattainable.

The second basic design flaw in Kyoto was its failure to face squarely the issue of developing country participation. The complete omission of any developing country obligations, now or in the future, is contrary to the approach taken in prior global environmental treaties and to the principle of "common but differentiated" responsibility in the FCCC. A sound global climate regime must involve limitations obligations by all nations with significant sources and sinks, including developing countries, in order to ensure that the climate is actually protected; that the lowest-cost abatement opportunities can be tapped worldwide; that free-riding on limitations efforts by others is deterred; and that cross-border "leakage" of emissions is constrained. In short, the omission of developing countries makes the treaty much less (if at all) environmentally effective, and much more costly.

The developing countries have strong equity arguments, reinforced by practical economic and political considerations, that the industrialized countries should take the lead and the major burden of emissions limitations. Under international law, no country can be bound by a treaty without its consent; thus participation must be attracted. As discussed above and developed further below, there are a number of ways of meeting developing countries' concerns while attracting their participation in cooperative emissions limitations.

## Reconstructing Climate Policy

In light of the successes and failures of the Kyoto Protocol, the US should lead a reconstruction effort in order to build a better institutional design for climate policy. These efforts should proceed simultaneously at the international and national levels; the steps at each level would be in two linked stages. The first stage would lay the groundwork for the second, which would involve new international limitations targets and domestic GHG limitations.

*Building A New International Climate Regime.* At the international level, our proposed arrangement would be adopted in two stages, through protocols or other subsidiary agreements under the 1992 Framework Convention on Climate Change (FCCC).

The First Stage -- which could be concluded promptly, within a year -- would be an agreement among all industrialized countries and any interested developing countries who wished to participate to make pledges to limit cumulative net GHG emissions over ten years (say, 2005-2015), with a five year interim goal, progress reporting, and review provisions. Emissions limitation pledges would be fully comprehensive, measured in terms of net emissions of all major GHGs. Abatement efforts could include any reduction in sources or enhancement of sinks that would help achieve the pledged goal, under default measurement rules to address uncertainty. The agreement would authorize cooperative cross-border abatement efforts through emissions trading or credit trading on the JI/CDM model, by national governments, private sector firms, and NGOs who wish to participate in such arrangements. It would provide for an international registry for such transactions. The OECD countries would provide substantial capacity-building assistance to developing countries wishing to participate in such arrangements. This international agreement would not itself include any penalties (beyond reputational costs) for exceeding the pledged goals, but individual countries or groups of countries through bilateral or multilateral agreements could, if they chose, make such goals legally binding. The First Stage would also include a commitment by all countries to negotiate a follow-on Second Stage agreement with binding targets, and to accord credit against these new targets for net GHG emissions reductions achieved in accordance with First Stage pledges.

The Second Stage agreement would contain binding cumulative net emissions limitations for an initial commitment period (such as 5, 8, or 10 years), based on agreed implementation and compliance ground rules on comprehensiveness and flexibility mechanisms (including sinks and emissions trading) and on compliance assurance measures. The circumstance that no limitations commitments could be made until implementation and compliance matters were resolved would provide a strong impetus for prompt resolution of those matters. Aggregate emissions limits would be set at levels for which the costs (given flexibility mechanisms) would be reasonable in light of the expected benefits (see e.g. Hammitt 1999). The agreement would authorize full global emissions trading among countries with national targets. Its compliance assurance provisions might include, inter alia, penalties for excess emissions at a set rate per ton of carbon-equivalent; penalty revenues might be invested in compensatory abatement.

The Second Stage at the international level would provide several "windows" for inclusion of developing countries, including:

1. Clarifying and streamlining the CDM on market-based lines, and structuring it to encourage sector-wide approaches that minimize cross-project leakage. The CDM could also provide for bilateral sector-based technology transfer and assistance/credit arrangements between industrialized and developing countries.
2. Inviting voluntary national participation in emissions trading, including on a sector-based approach that would permit participation at scale without overall national caps.



3. Providing principles for the voluntary accession of developing countries to a global cap and trade system, with assignment of "headroom" allowances that developing countries could use or sell at a profit.
4. Agreeing on principles of automatic, incremental participation ("graduation") by developing countries in the global cap and trade system, once each country reaches pre-agreed levels of per capita income, with appropriate allocations of headroom.

The first three mechanisms would be transitional to the fourth. The overall suite of mechanisms would be established with a view to ensuring significant and increasing participation by developing countries in the global emissions limitation effort, toward a full global comprehensive cap-and-trade system.

*Building a Domestic US Climate Policy.* We also propose a two-stage process for the adoption of domestic US measures in tandem with the two stages at the international level. The domestic First Stage would not impose binding GHG limitations but would lay the groundwork for such measures, encourage voluntary emissions limitations and trading, and launch some of the non-regulatory elements of a serious US climate policy. At the Second Stage, the US would adopt domestic GHG limitations utilizing the comprehensive approach and domestic and international trading to the maximum feasible extent. These limitations would only be adopted in conjunction with international adoption of a climate agreement with binding limitations, maximum scope for flexibility, developing country participation, and a sensible incremental path to reductions. A US commitment to adopt domestic limitations is essential for its international credibility and ability to promote a sound global climate regime. Emissions trading and the comprehensive approach require emissions caps at some level. The US cannot persuasively advocate these flexibility mechanisms unless it eventually adopts caps itself. Nor, for similar reasons, can it persuade developing countries to join the emissions limitation effort unless it does so itself.

The US domestic First Stage would jump start voluntary domestic emissions limitations and domestic and international emissions trading, using the power of information and the prospect of second-stage regulation to provide incentives for early limitations efforts. A White House Climate Policy Office would develop a National Climate Protection Plan for limiting net US GHG emissions with quantitative goals and timetables; a national Climate Protection Scorecard would monitor and report progress. The plan would form the basis for the US pledge under Stage One of the international initiative described above. The government would establish comprehensive GHG emissions monitoring, record keeping, and reporting protocols and procedures for domestic sources and sinks and for projects abroad financed by US sources. It would phase in mandatory monitoring and reporting by domestic sources to create a Climate Release Inventory.

The President would be authorized to contract with business and other private entities to achieve reductions in net GHG emissions relative to specified baselines, in return for certified reduction credits that could be applied against future emissions limitation regulations. Credits would be accorded to actions taken outside as well as within the US. Credits could be traded domestically and internationally. Credits or allowances issued by other countries could be recognized in the

US under mutual recognition arrangements. The U.S. would develop a domestic credit registry and actively support the development of an international registry.

In addition, the government would initiate a program of low-GHG technology R&D, with an emphasis on basic science; take steps to identify and correct market barriers and non-market barriers (including existing government programs and policies) to adoption of measures to reduce energy use and otherwise reduce GHG emissions; and develop programs to reduce net GHG emissions by the government sector.

The federal government would also undertake the design of a domestic US cap and trade system, including consideration of sectoral design (e.g. electricity, transportation); point of application (upstream, downstream, mixed designs); and other regulatory/incentive measures for sectors and activities where trading may not be feasible. It should study the design and feasibility a hybrid trading/fee system under which sources with excess emissions would be required to purchase extra allowances from the government at a pre-set price. (This "safety valve" arrangement could protect against unexpectedly high abatement costs, but might allow emissions to grow excessively if the price were set too low.) The revenues from such a scheme might be invested in domestic and international abatement efforts. The government would also study the design, equity and efficiency characteristics of programs to ease impacts on sectors and localities that will be hard hit by GHG regulation.

The US domestic Second Stage program, building on the work done and experience gained in the First Stage, would adopt domestic regulatory net emissions limitations, with primary reliance on cap and trade using a comprehensive approach to all GHGs, plus other supplemental regulatory measures where necessary. Caps would be set as cumulative limits for a substantial period (e.g., ten years). Regulation could be phased in by sector – for example, utilities, heavy industry and transportation might go first. But there should be opportunities for opt in by other sources (as in the US SO<sub>2</sub> trading program), and purchase of external credits by covered sources, both from domestic and international sellers. Maximum opportunities for international trading should be incorporated into the system. In the Second Stage, the US could adopt integrated multipollutant legislation now being considered to control several major pollutants in concert – such as SO<sub>x</sub>, NO<sub>x</sub>, Hg, CO<sub>2</sub>, and CH<sub>4</sub> -- thereby improving environmental effectiveness and reducing costs compared to piecemeal legislation. The government might also adopt programs (beyond issuance of allowances) to ease the impact of GHG emissions limitations on the most adversely affected sectors and localities, such as possible recycling of revenues from sales of excess permits.

### The Path Forward

It would be premature to propose specific targets for either international or domestic GHG limitations. The costs and benefits of such targets depend on many interacting factors in addition to the target itself, including the length of the relevant commitment period, the amount of preceding lead time, the breadth of the comprehensive approach, the scope for emissions trading, and the extent of developing country participation. Moreover, even if these variables were specified, we do not have studies that would enable us to estimate the costs and benefits of

achieving such targets. Almost all of the cost studies that we now have deal with CO2 emissions only, ignoring the cost savings and environmental gains afforded by the comprehensive approach. On the other hand, the available studies generally make the unrealistic assumption of perfectly efficient implementation. Because better information about costs and benefits is essential to wise decisions on targets, it is imperative that the quantitative capabilities of the IPCC be invigorated and that it undertake the needed studies. The US should also sponsor a new generation of cost and benefit studies, looking both at the US and globally, as part of the new Climate Protection Plan.

The elements of climate policy set forth in this essay are sound. Whether they will be accepted by enough countries, both industrialized and developing, to establish an effective international climate regime within the near future is another matter. Under the international law principle of voluntary assent, nations will join such a regime only if they determine doing so is in their interest. For example, the developing countries, who may suffer the greatest harms from climate change, will ultimately have to decide for themselves whether they should continue their opposition to any participation in the global limitations effort once it becomes clear that such an effort will not go forward unless they join. One thing is clear, however. In order to maximize the chances of assent by a sufficient number of nations, the means for limiting GHG emissions should be as cost effective as possible. It is past time to stop moralizing about means and get on with the effort to build an effective, low-cost international climate protection program in order to obtain prudent climate insurance.

### Conclusions

The Kyoto Protocol was "deep, then broad": it set tight targets among a narrow group of countries now, and hoped to broaden later. Instead, we agree with others who have urged that climate policy be "broad, then deep" (Hahn 1998; Schmalensee 1998; Shogren 2000): it should design the institutions that will attract broad global participation by all key emitters, and that embody the comprehensive approach and emissions trading; only then should it take steps to adopt more stringent emissions limitations.

The phased approach proposed herein, at both the domestic and international levels, may seem too aggressive for some and too timid for others. To those who find our program too aggressive, especially US skeptics of Kyoto, we make three basic points. First, the climate change problem is serious enough to warrant an initial investment in climate insurance if it can be obtained at a reasonable cost. Second, the program that we propose represents sound environmental and economic policy and, through essential design elements, provides climate insurance at costs that are reasonable and justified. Third, important US economic and strategic as well as environmental interests require that it be a credible, effective player in the development of international climate policy; our program would assure protection of these interests. The US cannot let a new regime of international emissions trading be designed by others. The key to sensible climate policy is to get the institutional design right from the outset; the US must be a major participant in that effort.

To those, both at home and abroad, who view our proposal as unduly timid, we emphasize the need for prudence and realism. Our collective reach should exceed our current grasp; that is what

political leadership and international cooperation are all about. But it would disserve the integrity of the international regime for the US (or the EU, Japan, or others) to sign on to commitments in a global pact that it is unable to deliver. We have had enough experience with the pathologies of symbolic legislation and overinflated rhetorical commitments in our own domestic environmental legislation to know not to repeat such mistakes on a larger scale. We have seen unachievable targets and timetables consciously adopted, only to result in performance shortfalls and deferred timetables that weaken the credibility of regulatory standards and foster public cynicism about environmental law. A climate treaty that makes grand promises but does little to slow global warming at high cost will not only be a climate policy failure but will also undermine the case for other needed international environmental protection regimes in the future. These admonitions were appropriately heeded in the FCCC in 1992, but neglected in Kyoto in 1997. They need to be taken seriously in 2001 and beyond.

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<b>DATE:</b>	8/21/01	<b>NUMBER OF PAGES:</b> <u>  3  </u> (including cover)
<b>FROM:</b>	John Novak	<b>DEPT/DIV:</b> Environment
<b>SUBJECT:</b>	Concept Paper on Climate Change	

TO	COMPANY	FAX NUMBER
Jim Connaughton	CEQ	456-2710
Phil Cooney	CEQ	456-2710

**MESSAGE:**

Dear Jim and Phil,

Attached is a discussion paper on a proposal to develop a public-private initiative to identify, develop, demonstrate and deploy advanced electricity-sector technologies to address concerns about global climate change. I believe this proposal could contribute to the Administration's National Climate Change Technology Climate Initiative by providing some insights into what technologies are priorities in addressing climate change, by providing a focus for deployment of technologies in the nearer term - IGCC, NGCC, renewables, etc. - and by providing a focus for research to develop technologies over the longer term - carbon capture, separation and storage, soils sequestration, etc. I would greatly appreciate your thoughts on this proposal and ideas on how to move this proposal forward. I hope you find this helpful. I look forward to hearing from you. Thank you for your attention to this matter.

John Novak

293-6180

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CEQ 000127

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EPRI

## Discussion Paper

### Regional Electrification Strategies for a Carbon-Constrained World

#### Summary

EPRI's *Electricity Technology Roadmap*—developed through an extensive series of consultations among more than 150 industry, government, academic, and non-governmental organizations—identifies *the energy/carbon conflict as the key contingency upon which the global energy future hinges*. Indeed, decoupling the link between carbon emissions and electricity generation will be one of the grand challenges of the 21<sup>st</sup> century, especially in developing countries with rapidly growing populations and abundant fossil fuel resources. *The potential value of new technologies that reduce venting of carbon dioxide to the atmosphere is enormous—literally amounting to trillions of dollars globally*. However, the way forward is by no means clear, and technology needs will vary substantially over time and across regions of the globe.

This paper is intended to stimulate discussion of a proposal to form an *international, collaborative, public-private initiative that will help facilitate the transition to a sustainable global energy future*. The proposed initiative will (1) identify viable region-specific technology paths for sustainable electricity growth, and (2) develop, demonstrate, and disseminate a robust set of advanced electricity-sector technologies that contribute to stabilization of atmospheric greenhouse gas concentrations.

#### The Challenge

The energy/carbon conflict has the potential to fundamentally change the path of global electrification. As the EPRI *Roadmap* observes, "...the world will require 50–100% more energy in 2050 than it does today [as a result of population growth and economic expansion].... Without a major change in the structure and composition of the global energy system, the world will have limited means for dealing with the growing energy/carbon challenge... The problem is compounded by the fact that by 2050, 85% of the world's population will be living in developing countries, and those countries will account for the major part of the world's greenhouse gas emissions."

Initial findings from the Global Energy Technology Strategy Program (established in 1998 by Battelle Memorial Institute and EPRI) conclude that substantial technology breakthroughs are essential both to stabilize greenhouse gas concentrations and to control costs. Furthermore, the Program has identified the necessity of developing a portfolio of technologies to manage the risks of climate change and to respond to evolving conditions.

Despite universal agreement that developing cost-effective responses will require larger investments in energy technology R&D, public- and private-sector investments have declined significantly since the 1980s. Moreover, neither public nor private investments are adequately focused on the technologies that could be critical for stabilizing concentrations in the long term. A well-coordinated program of international electricity research, development, demonstration,

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CEQ 000128



AUGUST 2001

EPRI

and dissemination is needed if the ultimate objective of the UN Framework Convention on Climate Change\* is to be met.

### **Response**

In response to this challenge, EPRI is proposing a major initiative designed to identify and facilitate the implementation of technology paths that address global climate change and sustainable energy. The proposed initiative is international in scope, and will include both private- and public-sector sponsors. Two principal activities are envisioned:

Phase I: Conduct analyses of electricity needs in various regions of the globe, to identify technology paths that are required to meet the economic, environmental, and national security goals of a region in a manner that is consistent with development patterns and indigenous resources.

Phase II: Collaborate with development banks, governments, and the private sector domestically and internationally to develop, demonstrate, and disseminate advanced electricity technologies, consistent with the needs identified in the analysis phase.

Phase I will commence with a scoping study to be completed in 2001, providing the foundation for preparation of a detailed implementation plan and building of a collaborative team to fund and engage in the initiative. The scoping study will have two key components—development and application of a prototype framework for analyzing regional electrification strategies, and a workshop attended by diverse stakeholders to review the prototype framework and preliminary analyses, to suggest improvements, and to help outline the strategy and resource needs for implementing the collaborative initiative. A key part of the workshop will be to determine how best to deal with the range of issues such as air quality and socioeconomic issues that together with economic considerations would largely determine a nation's technological response to carbon limits. Implementation of the remainder of Phase I will proceed subsequent to the workshop, and is expected to take approximately two years to complete, at a cost of several million dollars.

As analytical insights are generated, plans and funding for Phase II will be developed. This phase is expected to last for a minimum of 10 years at a funding level of several hundred million dollars annually, and may require funding of several billion dollars if full-scale demonstrations of fundamentally new technologies are required. The expectation is that Phase II will address the full gamut of electricity-related technologies having the potential to reduce the carbon-venting intensity of the world energy system, including electricity generation, transmission, distribution, and end-use technologies as well as carbon capture and sequestration.

\* \* \* \* \*

EPRI believes that only through the kind of collaborative initiative suggested here will our global society be able to achieve a sustainable energy future. We welcome the participation of all who are ready to join with us.

---

\* Article 2 of the UNFCCC states that the ultimate objective of the treaty is "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

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CEQ 000129



**FAX/TELECOPY****EPRI**

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 Washington, D.C. 20036  
 Phone: 202/872-9222  
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<b>DATE:</b>	8/21/01	<b>NUMBER OF PAGES:</b> <u>  3  </u> (including cover)
<b>FROM:</b>	John Novak	<b>DEPT/DIV:</b> Environment
<b>SUBJECT:</b>	Concept Paper on Climate Change	

<b>TO</b>	<b>COMPANY</b>	<b>FAX NUMBER</b>
Jim Connaughton	CEQ	456-2710
Phil Cooney	CEQ	456-2710

**MESSAGE:**

Dear Jim and Phil,

Attached is a discussion paper on a proposal to develop a public-private initiative to identify, develop, demonstrate and deploy advanced electricity-sector technologies to address concerns about global climate change. I believe this proposal could contribute to the Administration's National Climate Change Technology Climate Initiative by providing some insights into what technologies are priorities in addressing climate change, by providing a focus for deployment of technologies in the nearer term - IGCC, NGCC, renewables, etc. - and by providing a focus for research to develop technologies over the longer term - carbon capture, separation and storage, soils sequestration, etc. I would greatly appreciate your thoughts on this proposal and ideas on how to move this proposal forward. I hope you find this helpful. I look forward to hearing from you. Thank you for your attention to this matter.

John Novak

293-6180

**001502**

CEQ 000131

AUGUST 2001

EPRI

## Discussion Paper

### Regional Electrification Strategies for a Carbon-Constrained World

#### Summary

EPRI's *Electricity Technology Roadmap*—developed through an extensive series of consultations among more than 150 industry, government, academic, and non-governmental organizations—identifies *the energy/carbon conflict as the key contingency upon which the global energy future hinges*. Indeed, decoupling the link between carbon emissions and electricity generation will be one of the grand challenges of the 21<sup>st</sup> century, especially in developing countries with rapidly growing populations and abundant fossil fuel resources. *The potential value of new technologies that reduce venting of carbon dioxide to the atmosphere is enormous—literally amounting to trillions of dollars globally*. However, the way forward is by no means clear, and technology needs will vary substantially over time and across regions of the globe.

This paper is intended to stimulate discussion of a proposal to form an *international, collaborative, public-private initiative that will help facilitate the transition to a sustainable global energy future*. The proposed initiative will (1) identify viable region-specific technology paths for sustainable electricity growth, and (2) develop, demonstrate, and disseminate a robust set of advanced electricity-sector technologies that contribute to stabilization of atmospheric greenhouse gas concentrations.

#### The Challenge

The energy/carbon conflict has the potential to fundamentally change the path of global electrification. As the EPRI *Roadmap* observes, "...the world will require 50–100% more energy in 2050 than it does today [as a result of population growth and economic expansion].... Without a major change in the structure and composition of the global energy system, the world will have limited means for dealing with the growing energy/carbon challenge...The problem is compounded by the fact that by 2050, 85% of the world's population will be living in developing countries, and those countries will account for the major part of the world's greenhouse gas emissions."

Initial findings from the Global Energy Technology Strategy Program (established in 1998 by Battelle Memorial Institute and EPRI) conclude that substantial technology breakthroughs are essential both to stabilize greenhouse gas concentrations and to control costs. Furthermore, the Program has identified the necessity of developing a portfolio of technologies to manage the risks of climate change and to respond to evolving conditions.

Despite universal agreement that developing cost-effective responses will require larger investments in energy technology R&D, public- and private-sector investments have declined significantly since the 1980s. Moreover, neither public nor private investments are adequately focused on the technologies that could be critical for stabilizing concentrations in the long term. A well-coordinated program of international electricity research, development, demonstration,

Draft

CEQ 000132

AUGUST 2001

**EPRI**

and dissemination is needed if the ultimate objective of the UN Framework Convention on Climate Change<sup>\*</sup> is to be met.

### **Response**

In response to this challenge, EPRI is proposing a major initiative designed to identify and facilitate the implementation of technology paths that address global climate change and sustainable energy. The proposed initiative is international in scope, and will include both private- and public-sector sponsors. Two principal activities are envisioned:

**Phase I:** Conduct analyses of electricity needs in various regions of the globe, to identify technology paths that are required to meet the economic, environmental, and national security goals of a region in a manner that is consistent with development patterns and indigenous resources.

**Phase II:** Collaborate with development banks, governments, and the private sector domestically and internationally to develop, demonstrate, and disseminate advanced electricity technologies, consistent with the needs identified in the analysis phase.

Phase I will commence with a scoping study to be completed in 2001, providing the foundation for preparation of a detailed implementation plan and building of a collaborative team to find and engage in the initiative. The scoping study will have two key components—development and application of a prototype framework for analyzing regional electrification strategies, and a workshop attended by diverse stakeholders to review the prototype framework and preliminary analyses, to suggest improvements, and to help outline the strategy and resource needs for implementing the collaborative initiative. A key part of the workshop will be to determine how best to deal with the range of issues such as air quality and socioeconomic issues that together with economic considerations would largely determine a nation's technological response to carbon limits. Implementation of the remainder of Phase I will proceed subsequent to the workshop, and is expected to take approximately two years to complete, at a cost of several million dollars.

As analytical insights are generated, plans and funding for Phase II will be developed. This phase is expected to last for a minimum of 10 years at a funding level of several hundred million dollars annually, and may require funding of several billion dollars if full-scale demonstrations of fundamentally new technologies are required. The expectation is that Phase II will address the full gamut of electricity-related technologies having the potential to reduce the carbon-venting intensity of the world energy system, including electricity generation, transmission, distribution, and end-use technologies as well as carbon capture and sequestration.

\* \* \* \* \*

EPRI believes that only through the kind of collaborative initiative suggested here will our global society be able to achieve a sustainable energy future. We welcome the participation of all who are ready to join with us.

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<sup>\*</sup> Article 2 of the UNFCCC states that the ultimate objective of the treaty is "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

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CEQ 000133



## ***Global Climate & Energy Report No. 159***

Date: August 21, 2001

To: Phil Cooney

From: Bob Reinstein

Number of pages (including cover sheet): 8

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### **REINSTEIN & ASSOCIATES INTERNATIONAL**

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INTEGRATING ENERGY, ECONOMICS  
& ENVIRONMENT

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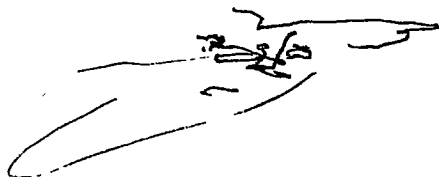
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- As negotiators rest from their efforts at COP-6 bis to revive the Kyoto Protocol through the Bonn Agreement, it is worth examining whether and how the Protocol might be fixed to make it possible for the US to participate at some point. This report focuses on that rather central question. Much has been said about the political importance of the Bonn Agreement. However, as noted in earlier GCERs, without the world's largest source of emissions and also the largest potential source of money and technology, the Protocol as now organized must be considered a "pilot phase" for the global effort. Moreover, the current Protocol without the US would do little to influence the climate system.



001504

## **What Next: Fixing the Kyoto Protocol?**

As negotiators rest from their efforts at COP-6 bis to revive the Kyoto Protocol through the Bonn Agreement, it is worth examining whether and how the Protocol might be fixed to make it possible for the US to participate at some point. This report focuses on that rather central question.

### ***Protocol Must Be Amended to Set Targets for Second Commitment Period***

Much has been said about the political importance of the Bonn Agreement. As a result of this Agreement, the Protocol can now go forward into the first commitment period without the US, and without any amendments to the Protocol, which the EU and many others are firmly opposed to.

However, as noted in earlier GCERs, it fails to include the world's largest source of emissions and also the largest potential source of money and technology. Without the US, it would do little to influence the climate system. Also, the rules agreed in Bonn are all essentially ad-hoc adjustments to get others (Japan, Canada, etc.) through the first commitment period. Thus, the Protocol as now organized must be considered a "pilot phase" for the global effort.

There is virtually no possibility of the US being able to participate in the first commitment period with the target currently listed in Annex B. As explained in earlier reports, that target was hopelessly unrealistic on the day it was agreed and there simply would not be enough flexibility credits in the world to cover the US problem.

But when countries begin to consider the second commitment period targets, they will need to take a fresh look at everything, not just the targets themselves but also the process by which the targets are determined, the longer-term rules regarding mechanisms and sinks, etc. In other words, at that stage everything is open for negotiation, since an amendment will be required in any case to set the targets.

The discussion that follows indicates a way the process might develop from the present situation that could correct the mistakes made in Kyoto that ultimately led to the US withdrawal from the Protocol. It focuses on how countries might approach the negotiation of the commitments for the period 2013-2017, and in particular on the analytical preparations that should precede those negotiations.



### ***Process-Based Approach Would Be Based on Convention***

What is needed is a process-based initial approach to understanding how to proceed beyond the present situation. This process would be based on the provisions of the FCCC, which all Parties have ratified, and would be parallel to the present process of elaborating the rules for the Kyoto Protocol on mechanisms, sinks and compliance. It is not intended in any way as a substitute or alternative to the present process under the Protocol.

The key to bringing the US back in is to begin this process as part of the larger FCCC process. In particular, it would rely on the review process referred to in Article 4.2(b) but never fully implemented.

This provision calls on all industrialized countries listed in Annex I to provide information about the policies and measures they have adopted and implemented in accordance with their commitments in Article 4.2(a), to quantify the results of such policies and measures and to provide projections showing the impact of the policies and measures on their future emissions.

It also calls on the Conference of the Parties to review this information, which has yet to occur. Such a review would help all Parties better understand their own and each others' situations with regard to the progress that this provision of the Convention is intended to promote.

The intent at the time this provision was written in 1992 was that it should function as a kind of "reality check" to get governments to be more realistic about what was achievable in a given shorter-term time frame. It was understood that most industrialized countries would probably not achieve the non-binding aim established in this paragraph of returning emissions to their 1990 levels by 2000.

The projections of most countries included in their national communications already show that they are not on track to meet their Kyoto targets through domestic measures. The in-depth reviews of this information by the FCCC secretariat and international experts confirm this situation, which has been explained in some detail in earlier GCERs. This may be why most governments seem reluctant to implement the full COP review called for in the final sentence, because it may be embarrassing to them.

The proposed approach would have two purposes:

- It would assist Protocol Parties to prepare for negotiation of the second commitment period, and for the review of “significant progress” by 2005.
- It would allow Annex I Parties to the FCCC to show what they are already doing with regard to Article 4.2(a) and to ask questions of others regarding their own performances.

This bottom-up process-oriented approach would be a necessary part of the preparations leading to agreement on specific commitments for the second commitment period under the Kyoto Protocol, for those Parties seeking to continue to evolve and strengthen the global response to climate change using this agreement. The EU and some others would like this aspect as it would move the process forward toward the second commitment period and would bring in the question of policies and measures, which is a high priority for the EU.

The approach could also lead to more effective further evolution and implementation of the Convention for those Parties that believe other alternatives to the Protocol should also be considered. The US would like this aspect as it would provide an alternative path and a chance to raise some legitimate questions about promises as opposed to actual results.

### ***Need to Appreciate Importance of Differences in National Circumstances***

One critical aspect of the process is that it would need to examine how differences in national circumstances can affect emissions trends and projections and the feasibility of various policies and measures.

The draft decision on “best practices” that is part of the package evolving for final approval at COP-7 highlights the importance of differences in national circumstances. It clearly states many times that the choice of policies and measures and their relative feasibility and effectiveness will necessarily vary from country to country in accordance with differences in national circumstances.

Commitments under both the Convention and the Protocol must take into account these differences in national circumstances, as set out in Article 4.2(a) of the Convention and repeated in the Berlin Mandate. When Article 4.2(a) was written, it included a specific list of factors related to national circumstances that needed to be taken into account.

This list was repeated verbatim in the Berlin Mandate and clearly implied that the targets agreed in Kyoto should not only have been differentiated (which key countries finally acknowledged only at

the last minute) but should have been chosen in a way that reflected these different factors. The failure to get the targets in line with national circumstances is what has led to most the difficulties since 1997, including the US withdrawal.

Among the many factors that can influence emission trends are the following (listed according to the broader categories contained in the FCCC and the Berlin Mandate):

- **Starting Points and Approaches:** size, location, geography, climate, population, population density, population growth, level of energy efficiency already achieved in 1990, etc.
- **Economic Structures and Resource Bases:** energy and non-energy resource endowments, industrial structure, relative importance of energy-intensive manufacturing vs. service sectors, energy intensity and carbon intensity, imports and exports, etc.
- **Need to Maintain Strong and Sustainable Economic Growth:** GDP growth outlook, GDP per capita, development needs and priorities, circumstances of the countries with economies in transition, etc.
- **Available Technologies:** which sources are principally responsible for emissions and what technologies may be available in relation to those sources in what time frame, such as the high proportion of agricultural methane in New Zealand's emissions
- **Other Individual Circumstances:** special circumstances unique to one or a few countries, such as German reunification, UK restructuring of its electricity and coal sectors, steel industry restructuring in Luxembourg, the impact of the Russian economic situation on Finland, the construction of a major gas pipeline from Norway's offshore gas fields to Germany, the construction of two energy-intensive manufacturing facilities in Iceland, etc.

It is clear that such factors had relatively little to do with the targets negotiated in Kyoto, except for the few countries who argued on this basis (Australia, New Zealand, Norway and Iceland). Others were mostly caught up in the rush to set targets in the range between the original US proposal (0% reduction from 1990 levels) and the original EU proposal (15% reduction from 1990 levels). Countries will need to have a much better understanding of what factors affect their own and others' emission levels, and where possible have quantified indicators of these factors as a guide.

***There Is a Need for a Longer-Term Target***

In addition to this enhanced cooperation under Article 4.2(b), countries need to also consider the longer-term implications of policies and measures for purposes of advancing progress toward the ultimate objective of the Convention, as called for in Article 4.2(d). Short-term targets, even for the second commitment period, will mostly be based on existing available technology and will not have a major impact on longer-term emission trends, which industrialized countries committed themselves to modify in Article 4.2(a) of the FCCC.

Reaching the objective of the Convention will involve significant technology development and dissemination, and should be guided by some interim target (e.g., a 30% reduction in emissions by 2030) that could give a clear signal to industry about the direction of government policies and the need for research and development of the necessary technologies. This mid-term interim target would be non-binding and would not be differentiated. It would be reviewed and updated periodically in light of science and technology progress.

This technological development for meeting the objective of the Convention would, over the longer term, and consistent with the principle of common but differentiated responsibilities and capabilities, provide a means of involving a larger number of Parties in the global response. Part of the partnership that will be needed should involve examining the technology development needs of the developing countries, which may be rather different from those of the industrialized countries.

### ***Negotiation Process Might Be Analogous to a Trade Negotiation***

What could evolve on the basis of this approach is a very comprehensive negotiation over the next several years that would begin rather slowly and carefully with a review and assessment process like that outlined above, beginning in 2002 or 2003, proceeding through a bottom-up negotiation of commitments and being completed with a full package of amendments including the second commitment period targets in about 2006 or 2007.

The process for determining national commitments would be a two-stage (or multi-stage) process, beginning with an initial "bid" that would represent the country's opening "offer" in the process. The approach is similar in some ways to trade negotiations in which countries begin the process by an initial proposal for tariff reductions that would be conditional on comparable offers by other participants in the negotiations. As in trade negotiations, there would be various components of the bid, such as offers on non-tariff trade-related measures, that would be designed to achieve an overall balance in the total package.

Indicators of national circumstances would be used to guide the negotiations of each country's final package of commitments. These indicators (which would need to be developed and agreed upon) would be quantified wherever possible and would be used for all Parties making commitments, but would have different values for different Parties. In addition, certain special circumstances that might not be quantifiable and/or might apply to only a few Parties would also be recognized.

Based on the available materials, each Party would seek to assess the level of efforts being made by other Parties in light of the national circumstances of each and with reference to its own perceived efforts, as reflected in its initial bid. The goal would be to achieve a comparable level of effort, or "equitable and appropriate contributions" as referred to in Article 4.2(a), by each of these Parties.

The most obvious comparison would be between the individual emission limitation commitment and some aggregate objective or aim of all industrialized countries as a whole. The expectation in an ideal world would be that each of the individual objectives would match or exceed the aggregate aim. But this is unlikely to be the case at least during the initial round of bids, because of the difficulties of many countries resulting from their national circumstances.

Even for those Parties whose national objectives exceed the aggregate aim, this may be due to circumstances that actually involve a relatively modest level of effort made for climate-change reasons to reduce emissions. This effort may be significantly less than that made by some other Parties whose emissions are projected to increase. Thus, a national objective or target that exceeds the aggregate aim is not necessarily proof of greater efforts or economic pain than other Parties.

Parties would review each other's national circumstances, as described by the quantified indicators and other factors, and would submit questions regarding national efforts to limit or reduce emissions through various policies and measures as described in the available materials.

For example, if a Party's national circumstances would imply a significant potential for limiting emissions through one or more policies and measures and these actions are not included in the Party's initial bid, other Parties may be expected to ask for a detailed explanation for the omission. It is also to be expected that Parties would "improve" their bids or offers as a result of the comments and questions of other Parties. These improvements would be the essence of the negotiation process.

Although this process should be essentially cooperative and non-confrontational, Parties would be asked to demonstrate the seriousness of their efforts. It is critically important that each Party believe

that its own level of efforts has been matched by its "peers" in light of their different national circumstances. Without this assurance, it will difficult for governments to submit the results to the domestic political process for ratification and implementation. Parties will also try to assure during this negotiation process that the efforts made by individual countries do not lead to unfair trade distortions between countries.

Of course, it is virtually impossible to demonstrate comparable levels of effort quantitatively because of the large number of factors involved and the complexity of assigning relative weights to each of these factors. And some factors, including social and political considerations, will not be quantifiable. Thus, in the end the judgment each Party makes as to the balance of commitments made by all Parties will essentially be a political judgment. But this is basically also the case in most major negotiations, including trade.

If this process were designed and implemented properly, it could in principle include a target for the US for 2013-2017. Since the real goal is longer term, a delay of five years for US participation is not significant, and worth the wait. In the meantime the US could continue with implementation of the FCCC. This could provide a way for the US to show by example how it believes the global response should be evolved. It could include cooperation with other countries through JI as established in FCCC Article 4.2(a), which should be graduated from the "pilot phase" to the full status it should have achieved already at COP-1.





Karousakis.Katia@epamail.epa.gov  
08/24/2001 10:12:31 AM

Record Type: Record

To: Phil Cooney/CEQ/EOP@EOP  
cc:  
Subject: ET in other countries

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Tried sending this yesterday but had the wrong email address.  
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Katia Karousakis  
Clean Air Markets Division (formerly the Acid Rain Division)  
US Environmental Protection Agency  
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----- Forwarded by Katia Karousakis/DC/USEPA/US on 08/24/01 10:13 AM -----

Katia  
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                    cc: Paul Stolpman/DC/USEPA/US@EPA, Brian  
08/23/01          Mclean/DC/USEPA/US@EPA, Reid  
05:42 PM          Harvey/DC/USEPA/US@EPA,  
                    breidenichcr@state.gov, TalleyT@state.gov,  
                    Jennifer Macedonia  
                    Subject: ET in other countries

Phil,

As a follow-up to yesterday's discussion with Trigg, attached is a summary of the status of emissions trading programs in other countries. There is significant additional information on these programs. If you have specific questions or would like more information, please let me know.  
Thanks.


(See attached file: DET brief.doc)

-----  
Katia Karousakis  
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**001567**

CEQ 000144



 - DET brief.doc



## American Gas Association

Copies to: ES  
JH  
KB

CHARLES H. FRITTS  
Vice President  
Government Relations

August 27, 2001

Mr. James Connaughton  
Chair  
Council on Environmental Quality  
360 Old Executive Office Building  
Washington, D.C. 20503-0002

Dear Jim:

We enjoyed meeting with you and Phil on July 31. I would like to follow up with some information that we promised to send you. We made the point that increasing the end use of natural gas would provide significant environmental benefits. We also encouraged you to keep a watchful eye for rules and regulations that might unknowingly discourage the end use of natural gas. You asked us to prepare an estimate of the emissions reductions that could be gained increasing the end use of natural gas.

### Environmental Benefits of End Use

A shift in the market of one million homes to natural gas from electricity would result in the following emissions reductions:

- SO<sub>2</sub> - Reduction of 37,515 tons per year
- NO<sub>x</sub> - Reduction of 3,599 tons per year
- CO<sub>2</sub> - Reduction of 3,571,000 tons per year

On average, the direct use of natural gas for space heating, water heating, cooking and clothes drying in one million homes avoids the need for nine 250 MW power plants. This estimate is based on an electric generation mix of 50% combined cycle gas turbines and 50% coal.

### Efficiency Standards

In setting efficiency standards, we encourage DOE to:

- Incorporate an independent third party review of the model, the assumptions and the data.
- Evaluate all of the energy consumed or used over the full fuel cycle, not only the end use.
- Give greater weight to Life Cycle Cost analysis.
- Evaluate the market impact of any new standards.

001505

Mr. James Connaughton  
August 27, 2001  
Page Two

Furnaces

DOE is working on a residential furnace standard. We are concerned that DOE might go beyond setting a single minimum efficiency standard and create a separate class and standard for condensing furnaces.

ASHRAE

We recommend that no action be taken on ASHRAE 90.1 until it can be clearly demonstrated that it will result in significant energy savings.

We appreciate your straightforward approach to the demands of your new position. If we can be of any assistance to you, please do not hesitate to call.

Sincerely,



Charles H. Fritts

Cc: Philip A. Cooney



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II, M, 30

Memorandum

To: Sara Glenn  
From: Gerry Matthews  
Date: August 28, 2001

Domestic  
Climate Change -  
Royal Dutch / Shell

Sara, herewith a brief note towards addressing the climate venting and flaring data as

/ Shell Group is taking total global upstream's

Royal Dutch / Shell app

- We have accepted the case that there is sufficient evidence of a human impact on the climate system and support taking **appropriate** action on climate change.
- Shell Companies support the establishment of an equitable **comprehensive international framework** to address climate change. National or regional measures are inadequate – without co-ordination - and will lead to distortion of competition and energy markets. Short term policies need to be balanced with a long term perspective to avoid unnecessary economic costs.
- Market-based approaches release business creative capacity and are essential to the achievement of the aims of climate protection. A market-based approach is essential to the development of the technologies that will lead to long run solutions to climate change. Indiscriminate energy taxation will further distort these positive market forces and should not be a component of the policy response.
- The Group treats climate change is a business and economic issue.
- Hydrocarbon sources of energy can be compatible with a carbon constrained future / climate protection. (see Shell's Long Term Energy Scenarios).
- The Group will continue to incorporate the cost of carbon into investment decision making as a prudent measure to manage the risk of exposure to future constraints on the emissions of greenhouse gasses.

The Group Programme 1998 – 2000

The Group committed to:

- Reduce greenhouse gas (GHG) emissions from our operations by 10% by the end of 2002 over 1990 levels. Emissions from Group's operations in 2000 are 11% below 1990 levels.
- Helping customers reduce GHG emissions by investing in renewables and providing lower carbon fuels such as LPG. Providing greater choice to our customers and markets through the development of gas and commercially viable alternatives to fossil fuels in addition to traditional sources of energy.
- Including the impact of a cost of carbon in the investment appraisals of major projects.
- Using market solutions, for example, by developing a pilot internal carbon trading system and utilisation of the clean development mechanism (CDM<sup>1</sup>).
- Development of a strategy for technology in a carbon constrained future.

<sup>1</sup> CDM: Clean Development Mechanism: Created in Article 12 of the Kyoto Protocol to the UN Framework Convention on Climate Change (UNFCCC). Energy-related projects are expected to comprise a majority of the activity in the CDM.

001387

Memorandum

To: Sara Glenn  
From: Gerry Matthews  
Date: August 28, 2001

Sara, herewith a brief note describing the general approach that Royal Dutch / Shell Group is taking towards addressing the climate change issue. I have appended details of the total global upstream's venting and flaring data as requested. I hope this is useful.

---

**Royal Dutch / Shell approach to addressing climate change:**

- We have accepted the case that there is sufficient evidence of a human impact on the climate system and support taking appropriate action on climate change.
- Shell Companies support the establishment of an equitable comprehensive international framework to address climate change. National or regional measures are inadequate – without co-ordination - and will lead to distortion of competition and energy markets. Short term policies need to be balanced with a long term perspective to avoid unnecessary economic costs.
- Market-based approaches release business creative capacity and are essential to the achievement of the aims of climate protection. A market-based approach is essential to the development of the technologies that will lead to long run solutions to climate change. Indiscriminate energy taxation will further distort these positive market forces and should not be a component of the policy response.
- The Group treats climate change is a business and economic issue.
- Hydrocarbon sources of energy can be compatible with a carbon constrained future / climate protection. (see Shell's Long Term Energy Scenarios).
- The Group will continue to incorporate the cost of carbon into investment decision making as a prudent measure to manage the risk of exposure to future constraints on the emissions of greenhouse gasses.

**The Group Programme 1998 – 2000**

The Group committed to:

- Reduce greenhouse gas (GHG) emissions from our operations by 10% by the end of 2002 over 1990 levels. Emissions from Group's operations in 2000 are 11% below 1990 levels.
- Helping customers reduce GHG emissions by investing in renewables and providing lower carbon fuels such as LPG. Providing greater choice to our customers and markets through the development of gas and commercially viable alternatives to fossil fuels in addition to traditional sources of energy.
- Including the impact of a cost of carbon in the investment appraisals of major projects.
- Using market solutions, for example, by developing a pilot internal carbon trading system and utilisation of the clean development mechanism (CDM<sup>1</sup>).
- Development of a strategy for technology in a carbon constrained future.

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<sup>1</sup> CDM: Clean Development Mechanism: Created in Article 12 of the Kyoto Protocol to the UN Framework Convention on Climate Change (UNFCCC). Energy-related projects are expected to comprise a majority of the activity in the CDM.

## **CONFIDENTIAL**

- Contributing knowledge and experience to the international debate on climate change.

### **Shell's Forward Programme**

The Shell forward programme will build on 5 primary cross cutting themes:

1. Continue to reduce greenhouse gas emissions
2. Continue to develop market solutions
3. Contribute to the policy debate: Dialogue with Stakeholders
4. Technology strategy
5. Business Development

### **Programme Details**

#### **1. Reduce greenhouse gas emissions**

- To deliver the Group 2002 GHG reduction target.
- Ongoing development of the GHG gas measurement and reporting protocol.
- Develop an improved picture of Group GHG emissions out to 2010.
- Deepen our understanding of the marginal abatement curve for GHG emissions across the Group.
- Establish a position on the impact of the Group's products on the global climate and how this may evolve incorporating the use of life cycle analysis.

#### **2. Market solutions**

- Demonstrate that the emission trading system has delivered its objectives in 2002.
- Establish a forward strategy for trading beyond 2002.

#### **3. Dialogue with Stakeholders**

- The Long Term Energy Scenarios will play an important role in expressing our views on climate change in a broader energy context. These are critical in underpinning our dialogue with stakeholders around both the Group's positioning on climate change and challenges on specific projects.
- Consider whether to establish a Panel of External Advisers at Group level.

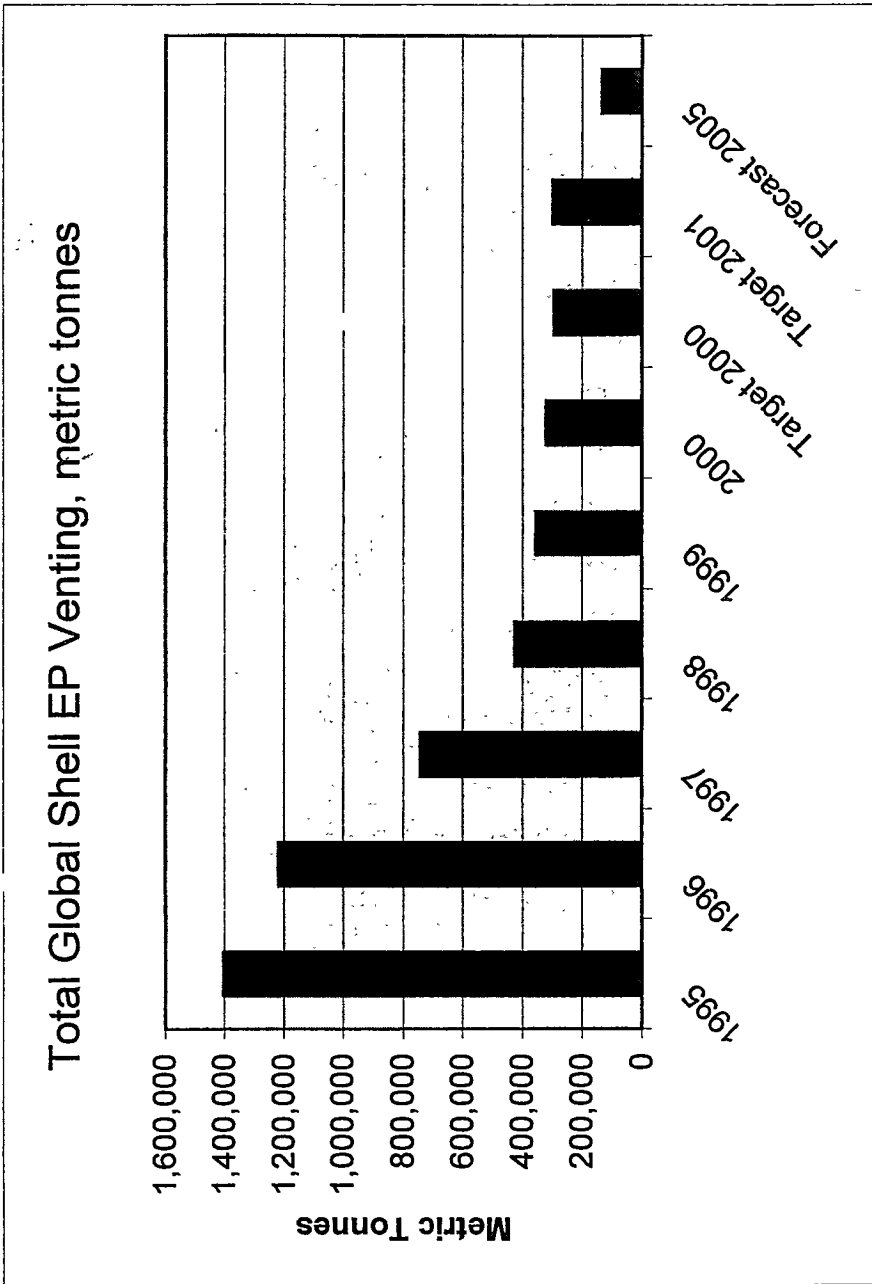
#### **4. Technology strategy**

- Further development of programmes specifically supporting business objectives.

#### **5. Business Development**

- Provision of ongoing specific project based support to the businesses on carbon / climate change related matters – acting as a centre for expertise.
- Develop a better understanding of the price of carbon using analysis from the Long Term Energy Scenarios, Group marginal abatement curve and findings of the technology strategy.
- Review and further examine the application of carbon values in project appraisal.
- Review of supplier / contractor policies: Consider the impact of the Group supply chain on climate change and seek no regret opportunities to reduce emissions.
- Legal and contractual implications – incorporation of carbon liabilities / assets into long term contractual arrangements (gas supply agreements, electricity consumption etc).
- Carbon/Energy Taxation: Systematic examination of emerging national carbon/energy taxation policies and adapt the Group's policy in line with our positioning on climate change.

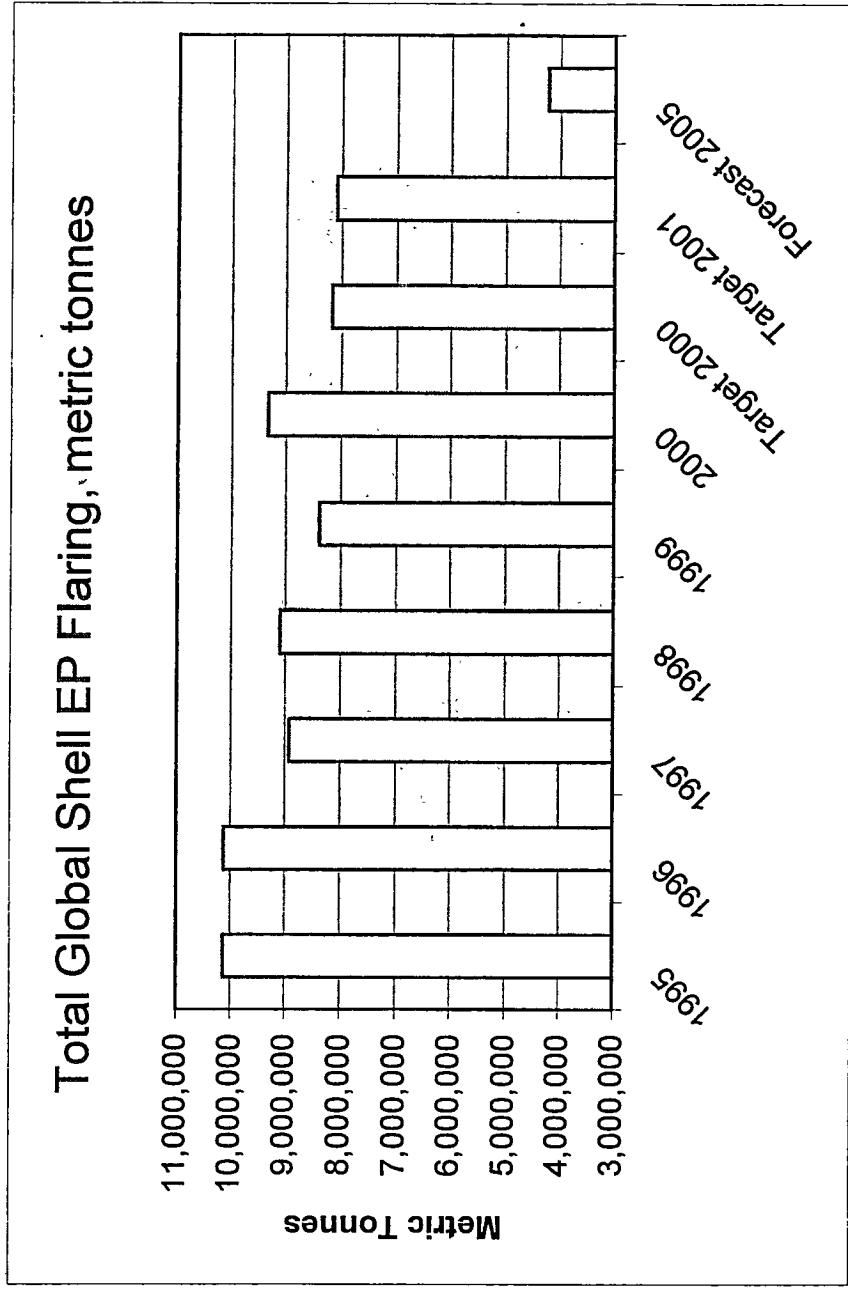
Year	Total Global Shell EP Venting, metric tonnes
1995	1,401,565
1996	1,219,991
1997	741,637
1998	423,707
1999	354,300
2000	320,232
Target 2000	293,000
Target 2001	296,589
Forecast 2005	133,637





**Total Global Shell EP Flaring, metric tonnes**

Year	Total Global Shell EP Flaring, metric tonnes
1995	10,128,061
1996	10,122,801
1997	8,916,520
1998	9,096,711
1999	8,380,816
2000	9,340,093
Target 2000	8,172,119
Target 2001	8,085,606
Forecast 2005	4,218,618



Note: The increase in 2000 was due to an overall increase in production in Nigeria which also masks reductions achieved elsewhere.



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RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR: LexisNexis Print Delivery <lexisnexis@prod.lexisnexis.com> (TM) ( LexisNexis Print Delivery <lexisnexis@prod.lexisnexis.com> (TM) [ UNKNOWN ] )

CREATION DATE/TIME: 30-AUG-2001 13:26:31.00

SUBJECT:: LexisNexis(TM) Email Request (702:0:33941653)

TO: Samuel A. Thernstrom ( CN=Samuel A. Thernstrom/OU=CEQ/O=EOP@EOP [ CEQ ] )  
READ: UNKNOWN

TEXT:

1109PX

Print Request: Selected Document(s): 1-47

Time of Request: August 30, 2001 01:19 pm EST

Number of Lines: 4472

Job Number: 702:0:33941653

Client ID/Project Name: .

Research Information:

<b>Power Search Results for: </b>"new source review"

Note:

1 of 47 DOCUMENTS

Copyright 2001 The Idaho Statesman

Idaho Statesman

August 28, 2001 Tuesday

SECTION: Idaho ; Pg. 04

LENGTH: 618 words

HEADLINE: Capital News

BODY:

Panel will review environmental issues

A new panel of business and government leaders has been formed to review environmental issues as they concern small businesses in Idaho.

The Small Business Compliance Assistance Panel, authorized by the federal

Clean Air Act, will evaluate the effectiveness of the state's Small Business

Assistance Program and concerns of small businesses affected by state and federal environmental regulations.

The panel has seven members: Con Mahoney, CEO, Atlas Mechanical, Idaho Falls;

Gary McCracken, owner, Clothesline Cleaners, Boise; Marta Moyle, owner,

Page 1

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CEQ 000155

Moyle

Mink and Tannery, Heyburn; Katie Sewell, deputy director, Small Business Development Center, Boise; Greg Anderson, mayor of Pocatello; and Dan Salgado, new source review coordinator, Idaho Department of Environmental Quality.

Serving as an ex-officio member is Nick Purdy, Picabo, board member of the department. Another appointment is pending.

The panel held an organizational meeting in July. The next meeting is Sept. 11 at the department's Boise headquarters.

Ag Department plans pesticide disposal

Agricultural producers, dealers, applicators and homeowners who store unusable pesticides will have an easier, free way to dispose of the pesticides next month, the Department of Agriculture said Monday.

Disposal is free for the first 1,000 pounds of pesticides per participant. Preregistration is not required.

The collection times will be from 9 a.m. to 2 p.m. at the Madison County Solid Waste Site in Rexburg on Sept. 10; the Eastern Idaho Fairgrounds in Blackfoot on Sept. 11; the Power County Landfill in American Falls on Sept. 12; the Bureau of Land Management Yard in Burley on Sept. 13; Twin Falls Canal Co. in Twin Falls on Sept. 14; and at the Jerome County Fairgrounds in Jerome on Sept. 15.

"These collections provide a mechanism for disposing of chemicals in an environmentally sound manner," said Rodney Awe, manager of the department's pesticide disposal and container recycling programs.

DEQ awards three wastewater grants

The Department of Environmental Quality has awarded three wastewater grants totaling more than \$35,000.

The city of Troy will receive \$15,000 to conduct an engineering analysis of its current waste water facilities to determine upgrades needed.

The cost of the analysis is \$30,000. The amount not covered by the grant will be paid for by the city.

The Valley View water and Sewer District near Kamiah was awarded two grants totaling \$20,637.

The funds will be used to develop a drinking water master plan for the district and to determine upgrades needed.

The total eligible cost of the projects is \$51,274, with the amount not covered by the grant to be paid by the district.

Idaho Calendar

Wednesday

The Idaho Legislature's Health Insurance Premium Task Force will meet at 9 a.m. in the Senate Majority Caucus Room on the third floor of the Statehouse.

Among the agenda items is a discussion of health insurance coverage for employees of Idaho's small businesses.

The Department of Administration's Information Technology Resource Management Council will meet from 8:30 a.m. to 11:30 a.m. in the East Conference Room of the Joe R. Williams Building.

The Idaho Housing and Finance Association will hold a public hearing on changes to Idaho's 2002 Low-Income Housing Tax Credit Allocation Plan at 9 a.m. at 565 W. Myrtle St.

Those involved in affordable housing and interested in building multifamily housing are encouraged to attend. For more information, check the association's web site at [www.ihfa.org](http://www.ihfa.org).

Thursday

U.S. Rep. C.L. "Butch" Otter will hold a town hall meeting at 4 p.m. in the City Council chamber on Main Street in Emmett.

LOAD-DATE: August 29, 2001

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Copyright 2001 The Austin American Statesman

Austin American Statesman

August 26, 2001, Sunday

SECTION: Editorial; Pg. H2

LENGTH: 667 words

HEADLINE: Stand by right to clean air

BODY:

They weren't the good old days -- don't take us back. That's our message to the Bush administration as it wrestles with the contentious, important issue of air quality.

Opposed in the debate are industrial polluters that for decades have slipped through Clean Air Act loopholes and two large and vulnerable "special

interest"  
groups -- breathers and park users. For three decades, these groups have sought protection under the nation's 1972 Clean Air Act. During all that time, the act has been ceaselessly attacked by major polluters. They think they smell victory.

Central Texans regularly see a stark example of how the law's loopholes have been exploited to the detriment of citizens. Under a "grandfather" exemption for aged plants, Alcoa's half-century-old Sandow aluminum smelter and power plant near Rockdale and its associated lignite mine pollute as far north as Dallas. The facility is a major producer of harmful emissions in a state that leads the nation in emissions.

Another sad Texas example is the increasing haze in Big Bend National Park. The pollution is believed to come from coal-burning power plants in Texas as well as plants in Mexico.

Efforts to reduce air pollution at the nation's parks are vital, advocates of the parks and recreation-dependent businesses testified to the U.S. Environmental Protection Agency last week. Representatives of major polluters argued with equal passion that protecting the parks would be too costly.

That was just a taste of the arguments flying as the EPA and its director, Christie Todd Whitman, consider revision of the Clean Air Act. Despite considerable pressure from the industry to retreat on the act's promise, the administration should stand firm. President Bush's reversal on action to curb global warming should not be followed by a capitulation on the Clean Air Act.

Whitman appears to be wrestling hard with the issue of pollution from older plants. Her decision on whether to pursue so-called new source review enforcement was scheduled for Aug. 17, then postponed at the last minute. The question is whether older plants must curb emissions in the same way as more modern facilities. Vice President Dick Cheney suggested the review as part of the nation's evolving energy plan.

This puts Whitman in a difficult position. As Gregg Easterbrook put it in The New York Times Magazine: "If Whitman decides to stand by new source review (as her office has intimated she will), Cheney and important lobbies like the Edison Electric Institute may blow a fuse." The profile of the embattled EPA director's hard choices was titled "Hostile Environment."

Streamlining federal clean air laws and regulations is a laudable goal for the EPA. This goal must not, however, become an excuse to usurp ordinary people's right to health and recreation. Nor should it become an excuse for placating big contributors.

State governments and citizen groups, like Neighbors for Neighbors near the Alcoa plant, are fighting hard to force polluting industries to reduce emissions. Owners of many of these plants, Alcoa's Sandow included, have been accused of rebuilding the facilities without installing the cleanup equipment such modernization required.

Alcoa officials recently volunteered to significantly reduce emissions, just beating requirements of a new state environmental cleanup law. They warned, however, that if no "economical option" for emission reductions can be found, shutdown would be considered.

Citizens may not grasp the technical and political intricacies of "new source review." But they understand the importance of protecting their children's health and of clearing the air in parks and population centers. They should demand that Whitman and President George W. Bush stand firm for clean air. Streamline the law, yes. But don't back away from commitment to a healthy environment. Don't bring back the bad days before 1972, when the rights of polluters effortlessly trumped those of the people.

LOAD-DATE: August 27, 2001

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Copyright 2001 News world Communications, Inc.

The Washington Times

August 22, 2001, Wednesday, Final Edition

SECTION: PART A; COMMENTARY; Pg. A12

LENGTH: 890 words

HEADLINE: Reducing red tape, not energy output

BYLINE: Ben Lieberman

BODY:

One of the more controversial elements in President Bush's energy policy is his decision to review the large number of pending federal lawsuits and enforcement actions against electric utilities and oil refineries. The Washington Post, Newsweek and other major publications have run articles essentially accusing the administration of attempting to get its corporate polluter friends off the hook under the guise of solving the nation's energy

problems.

In truth, Mr. Bush's review is smart policy, as these actions are on shaky legal grounds and are far more anti-energy than pro-environment.

As with Bill Clinton's blizzard of midnight regulations, the 1999 enforcement blitz against more than 50 coal-fired power plants and oil refineries in the Midwest and South was a late-administration change in policy. Until midway into its second term, the Clinton EPA and Department of Justice accepted the longstanding distinction between routine maintenance and major modifications at industrial facilities. The former were exempt from the extensive procedural and substantive requirements under the Clean Air Act, while the latter must face the regulatory gauntlet known as New Source Review.

Thus, by redefining as major modifications dozens of past power plant and refinery projects - most of which were known to EPA when they were performed and treated as routine maintenance at the time - the agency manufactured this noncompliance crisis.

The Department of Justice, on behalf of the EPA, announced the first wave of lawsuits on Nov. 3, 1999, claiming a national threat to air quality and public health. "When children can't breathe because of pollution from a utility plant hundreds of miles away, something must be done," said then-Attorney General Janet Reno.

Some of the alleged violations date back to the 1970s. In his energy plan, Mr. Bush requested that EPA take a second look at the merits of this enforcement initiative, particularly its impact on electricity and gasoline supplies in the areas served by the targeted facilities. The EPA is scheduled to complete its review on Aug. 17.

Many reporters, politicians and activists have portrayed this issue as a fight between good-guy federal bureaucrats and greedy corporate polluters leveraging their soft-money contributions to the GOP into lax environmental enforcement. But one of the most vocal critics of EPA's new policy is not a publicly traded utility, but the federal government's own Tennessee Valley Authority. TVA is perplexed by what it sees as an ex post facto rewrite of the Clean Air Act, and is currently fighting EPA in federal court over this matter. "All of TVA's activities meet the Clean Air Act's requirements as EPA has historically interpreted it," notes Joe Bynum, executive vice president of the TVA Fossil Power Group. "Now, EPA is changing the rules," he adds.



A close look at how EPA now defines major modifications demonstrates why this is such bad policy. The agency has not even attempted to target facility changes likely to result in actual emissions increases, or to avoid harassing those likely to cause reductions. Quite the contrary, EPA went out of its way to make such determinations nearly irrelevant. It has instead focused more on the purpose of these projects. EPA has, for example, singled out for extra scrutiny any activity the agency believes will result in "decreases in forced outages and curtailments attributable to break down of the component being replaced."

In other words, actions taken to prevent downtime, previously considered routine maintenance, may now be categorized as major modifications. As such, they face months of red tape, and in some cases may be halted altogether. "If TVA must go through EPA's lengthy permitting processes and install more expensive controls each time it does routine maintenance, it cannot keep its fossil plants running," warns Mr. Bynum.

In addition to reliability concerns, TVA predicts rate increases up to 14 percent, if EPA is successful.

EPA has also gone after improvements in efficiency. In the past, like-kind replacements of old parts with new ones had fit squarely within the routine maintenance exclusion. For example, the periodic replacement of corroded turbine blades was done with a minimum of government interference. However, improvements in turbine blade design mean that new blades can generate several percent more electricity without any increase in fuel consumption or emissions. Government lawyers have pounced on this technological advance, and now argue that turbine blade replacement be treated as a major modification:

Several targeted companies have chosen to settle with EPA, in order to avoid years of regulatory uncertainty, including delays of efforts to maintain reliability and improve efficiency. Others have continued to fight in federal court, but for them a final decision might take several years. In the meantime, the uncertainty is exerting a chilling effect on maintenance and repairs at other facilities.

Rather than wait for the courts and the appeals process, the administration should put a quick end to this legally questionable and environmentally unnecessary contribution to the nation's energy problems.

Ben Lieberman is a senior policy analyst with the Competitive Enterprise Institute.

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LOAD-DATE: August 22, 2001

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Copyright 2001 Blethen Maine Newspapers, Inc.

Portland Press Herald

August 21, 2001 Tuesday, Final Edition SECTION: FRONT; Pg. 1A

LENGTH: 869 words

HEADLINE: MAINE LAWMAKERS WANT CLEAN AIR ACT ENFORCED;

The federal government may no longer force Midwest power plants to cut harmful emissions.

BYLINE: BART JANSEN Staff Writer

DATELINE: WASHINGTON

BODY:

U.S. Sen. Olympia Snowe asked the nation's environmental and energy chiefs Monday for assurances that the Bush administration plans to enforce the Clean Air Act for older power plants that cause pollution in Maine. Other members of the state's congressional delegation also voiced alarm that the Bush administration is backtracking on enforcement of the Clean Air Act against power-plant pollution, a major concern in this state.

The politicians, as well as environmental groups, were reacting to a front-page story published in The New York Times on Monday, reporting that the federal government is considering dropping out of lawsuits to force Midwest power plants to curb harmful emissions. Much of the pollution from these plants blows into the Northeast.

"I would be seriously concerned if the administration were to condone any rollback of the Clean Air Act and its regulations," Snowe, a Republican, said in letters to Christine Todd Whitman, administrator of the Environmental Protection Agency, and Energy Secretary Spencer Abraham.

Former Maine Sen. Edmund Muskie helped draft the 1970 act, which establishes standards for clean air across the nation.

"It's a very big deal," said U.S. Rep. Tom Allen, D-Maine. "If the federal government stops enforcing federal law, the Clean Air Act will be severely damaged. These lawsuits are not frivolous."

Pollution from power plants is a major issue in Maine because the emissions drift in from neighboring states, bringing acid rain that kills fish and

trees,  
and mercury that taints fish in lakes and streams. Any move to weaken  
pollution  
controls alarms environmentalists.

"To me, it's like pardoning a convicted killer," said Sue Jones, air  
quality  
project director for the Natural Resources Council of Maine. "Power-plant  
pollution kills."

A study released Thursday by the U.S. Centers for Disease Control and  
Prevention found that Maine had the highest rate of people suffering from  
asthma  
in the country. About 9 percent of state residents suffer from the chronic  
ailment, whose symptoms include wheezing, shortness of breath and coughing  
blamed on indoor and outdoor pollution.

"We want them to crack down on this," said U.S. Rep. John Baldacci,  
D-Maine.

"To backpedal on that is a big concern."

The issue surfaced Friday when the EPA postponed an announcement about  
legislation to reduce three major air pollutants: nitrogen oxide, sulfur  
dioxide  
and mercury. The legislation is now expected in September as part of a  
broader  
package.

Whitman proposed changes in the program called "New Source Review." The  
proposals are expected to set caps on pollution while giving the industry  
more  
flexibility in how to meet them. Dirtier plants could buy credits from  
cleaner  
plants, forcing companies to pay a financial penalty to keep operating.

Whitman said the proposal "will reduce air pollution from power plants  
significantly more than the existing system" while streamlining the  
regulatory  
system.

"I'm skeptical," Allen said. "I don't believe it."

President Bush already has been criticized for refusing to target carbon  
dioxide, despite its links to global warming and despite a campaign  
promise to  
take action.

All four members of Maine's congressional delegation have sponsored  
legislation to include carbon dioxide in the list of pollutants, and to  
bring  
power plants that were grandfathered under the 1970 Clean Air Act up to  
modern  
standards.

Industry officials have complained that the EPA applies modern  
standards to  
routine maintenance and replacement work at the aging power plants.  
Enforcing  
tougher standards could drive up the cost of maintenance and hinder the  
supply  
of electricity, they say.

The Clinton administration's Justice Department sued dozens of older

power plants, alleging they violated the Clean Air Act by modernizing without adding anti-pollution machinery.

Maine hasn't participated, but states including Massachusetts, New Hampshire and Vermont sued 17 plants in Virginia, West Virginia, Indiana and Ohio. The EPA has sued 34 plants and taken other enforcement action against 20 others, with targets in North Carolina, South Carolina, Georgia, Florida, Tennessee, Kentucky, Alabama and Illinois.

Abraham, the energy secretary, reportedly favors withdrawing from the cases; Whitman reportedly prefers to stay involved.

"What they're planning to do is gut every meaningful program we've had for 10 years and replace it with a cap-and-trade program," Jones said. "Bush is basically removing the ability of downwind states to go after upwind pollution."

Snowe said she would be "seriously concerned if federal support for state lawsuits was withdrawn."

U.S. Sen. Susan Collins, a Maine Republican, and U.S. Sen. John Kerry, D-Mass., wrote Whitman July 25 urging her to continue efforts to clean up the country's dirtiest power plants.

"We strenuously object to any efforts to derail pending Clean Air Act enforcement actions against electric utilities and oil refineries," the senators wrote. "The nation's environmental laws can and must be faithfully enforced, while still meeting our energy needs."

Staff writer Bart Jansen can be contacted at 202-488-1119 or at:

[bjansen@pressherald.com](mailto:bjansen@pressherald.com)

GRAPHIC: File photo  
Maine's congressional delegation is fighting efforts to weaken enforcement of Clean Air Act rules governing power plants.

LOAD-DATE: August 21, 2001

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Portland Press Herald

August 21, 2001 Tuesday, FINAL Edition

SECTION: EDITORIAL; Pg. 8A

LENGTH: 391 words

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HEADLINE: EPA OUGHT TO CONTINUE FEDERAL FIGHT FOR CLEAN AIR;  
Curbing its role in lawsuits against power plants is bad policy.

BODY:

Before the Bush administration withdraws the federal government from lawsuits against some of the nation's dirtiest power plants, it ought to check in with its own environment czar, Christie Whitman.

Whitman was governor of New Jersey when that state - and six others in the Northeast - joined the U.S. Environmental Protection Agency in suing Midwestern and southern power plants. The suits alleged that these pre-1970 coal-fired facilities - which emit up to 10 times more pollutants than modern plants - were violating standards imposed by the Clean Air Act and fouling the air in downwind states.

The suits have found some success. Three utility companies have settled their cases with the EPA and the states. Their readiness was prompted, no doubt, by recent court rulings upholding the Clean Air Act's constitutionality and the authority of the EPA to set and enforce standards.

President Bush, however, says he wants to give the plants more flexibility in meeting environmental goals. Part of that flexibility includes eliminating the new source review standards that were central to the suits and leaving the states to slug it out with the utilities on their own.

The president shouldn't withdraw the EPA from the legal battle for three reasons. First, the states couldn't make up for the loss of the federal government's technical and legal team. Its scientists provide much of the computer modeling crucial to the case, and its lawyers have far more experience in interstate pollution cases.

Second, the states can't establish the legal standing necessary to bring all the suits forward. Specifically, they would need to be able to prove how much pollution from each plant came into their states, whereas the EPA only needs to show how much pollution each plant emitted.

Third, courts grant agencies like the EPA deference when enforcing their own rules. If the EPA isn't involved, the courts won't extend the same deference to the states.

These are technical grounds for maintaining the EPA's role in the suits. However, the simplest reason - and the most compelling - is that the federal government is obliged to protect the health of its citizens. As Whitman

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knows,  
if the EPA isn't part of the clean air solution, it is essentially  
condemning  
residents in the Northeast to breathe polluted air for years to come.

LOAD-DATE: August 21, 2001

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United Press International

August 21, 2001, Tuesday

SECTION: GENERAL NEWS

LENGTH: 1197 words

HEADLINE: Blue Planet: EPA delays clean air review

BYLINE: By JOE GROSSMAN, UPI Science News

BODY:

The Environmental Protection Agency has postponed release of a hotly debated review of air pollution regulations governing power plants and refineries. The EPA review of the regulations, originally due out on Aug. 17, will instead be rolled into a "comprehensive air pollution reduction strategy," the agency said.

The regulations, called New Source Review, detail the procedures to follow when a power company or refinery creates a pollution source or modifies an existing one.

In a prepared statement, EPA Administrator Christie Todd Whitman said the agency will "put forward an ambitious proposal that will reduce air pollution from power plants significantly more than the existing system. Subsequently, we will release the NSR report called for by the national energy policy." The comprehensive plan would address sulphur dioxide, nitrous oxide and mercury emissions.

In May, President George Bush directed the agency to review NSR regulations, which are part of the Clean Air Act. The power and refining industries have lobbied hard for changes in the guidelines, saying routine maintenance has become burdensome as a result of the regulations. Environmental groups and some state officials say industry claims are bogus and part of an attempt to gut the Clean Air Act.

Opponents of any regulation-tinkering say spending tens of millions of dollars from capital budgets, extending plant life by decades, is not

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CEQ 000166

routine maintenance. Furthermore, critics of any changes say many of the plants wind up operating more and emitting more pollutants, regardless of what new equipment is installed.

Scott Segal, spokesman for the Electric Reliability Coordinating Council, a lobbying group for power and refining companies, told United Press International the current NSR interpretation "blurs the distinction between applying the act to routine maintenance activities and applying it to major changes at existing facilities. If you apply the full force of the Clean Air Act to every instance of routine maintenance, the result would be perpetual enforcement actions against electric generating units." Critics of this argument say that the Clean Air Act clearly distinguishes between routine maintenance and major modifications.

An EPA official, speaking on the condition of anonymity, denied NSR would be weakened. "We are looking, from our perspective, that the New Source Review program continues to achieve the same environmental benefit or protection after any changes we might consider. We're not looking to 'relax' anything or roll back anything.

"What we're looking to do maybe, if it looks necessary, (is) to address some of the concerns that are currently affecting industry, but with guaranteeing the same environmental protection. Give them more flexibility maybe, but still ensure that we get the protection that was envisioned by the New Source Review program," the official said.

Whitman's statement indicated some form of industrywide emissions cap would be put in place, and companies would be allowed to trade emissions, with dirty plants buying credits from cleaner ones. The statement cited "the Clean Air Act's acid rain 'cap and trade' program, which is widely recognized as the most successful air pollution control program in the world."

John Walke, an attorney with the Natural Resources Defense Council and a former EPA lawyer, was skeptical about the administration's claims of success by capping nationwide emissions and allowing companies to trade emissions.

"The history would suggest the opposite," Walke told UPI. "The acid rain program was adopted on top of existing Clean Air Act programs because everyone recognized that the acid rain program would serve a useful but limited purpose.

No one pretended it would accomplish what the New Source Review program

and these host of other programs are designed to accomplish."

Walke said the administration is claiming that adopting a cap and trade program would allow the removal of programs focused more on direct local effects. "We don't believe a cap and trade program can fully replace or serve (the same purpose)," Walke said.

Armond Cohen, executive director of the Clean Air Task Force, an environmental group that has battled against any weakening of New Source Review, told UPI he believed the delay was a response to public concerns. "(The) decision reflects the enormous outcry that the administration has received from the public on the direction they seemed to be headed, which was gutting the New Source Review provisions of the (Clean Air) Act directed at grandfathered plants."

But Cohen sees risks. "The way it's been formulated by Administrator Whitman the administration is proposing, as part of a single package, to unilaterally review, revise or scale back public-health protections that are contained in current public health law and regulation in return for a proposal for further public health protections in a future law. The problem with that is that the president and the EPA do not have the power to assure what Congress will do with that proposal," Cohen said.

The Clean Air Task Force commissioned a study by Abt Associates, a consulting group also used by the EPA. The study concluded that pollution from 51 plants targeted for legal action under the NSR "shortens the lives of, at a minimum, 5,500 people and as many as 9,000 people a year," and leads to between 107,000 and 170,000 asthma attacks annually. An EPA official told UPI that EPA did not agree with all the assumptions of the Abt report.

Weakening NSR would eviscerate the Clean Air Act, Connecticut Attorney General Richard Blumenthal said in response to Whitman's announcement. "To credit the absurd claims of utility polluters -- about cost and time -- and then to dilute these environmental standards would mark a monumental surrender, a self-inflicted wound for the EPA and an irreparable blow to environmental enforcement," Blumenthal said.

The state is suing power companies in the South and Midwest, claiming their pollution blows into Connecticut and causes death and illness.

During the Clinton administration, lawsuits based on information provided by the EPA were brought by the Department of Justice against 51 power plants and



refineries and many cases are still in process. Some legally binding agreements, such as the one between the U.S. government and Dominion Power involving the required installation of more than \$1 billion of pollution control equipment, are near completion.

In May, President Bush ordered the Department of Justice to "review existing enforcement actions with regard to New Source Review to ensure that the enforcement actions are consistent with the Clean Air Act and its regulations."

The Department of Justice has vigorously denied published reports that they have slowed down any legal actions. Christine Romano, a Justice spokeswoman, told UPI, "Until there are any changes in the guideline, litigations will proceed as in the past, unless there are some changes in the guideline." Romano said it is not possible to speculate or predict what will happen in the future. "Everything right now is going along as it has been," she said.

LOAD-DATE: August 22, 2001

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The Associated Press State & Local Wire

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August 20, 2001, Monday, BC cycle

SECTION: State and Regional

LENGTH: 600 words

HEADLINE: Klink helps utilities ease regulatory burden

BYLINE: By CLAUDE R. MARX, Associated Press Writer

DATELINE: WASHINGTON

BODY:

Nine months after being rejected by Pennsylvania voters, former Rep. Ron Klink has found success helping utilities reduce government regulations.

The unsuccessful Democratic challenger against Sen. Rick Santorum was a key strategist in the effort to persuade the Environmental Protection Agency to delay regulations that would have tightened anti-pollution requirements for power plants.

Klink, who did not return phone calls last week, cannot lobby his former colleagues until next January because of congressional rules, but he can

advise clients on strategy and does so from his lobbying firm's offices in Washington and Pittsburgh.

That is what he has done for the Electric Reliability Coordinating Council, a coalition of 12 utility companies concerned about rules affecting 215 power plants around the country, including six in Pennsylvania.

Council spokesman Scott Segal described Klink's role as helping to enlist the aid of labor unions in lobbying the EPA.

"He spearheaded our efforts to discuss the issue with the unions. Labor has important interests in the regulations because they want plants to be efficient and safe so there are more jobs for their members," Segal said.

The efforts paid off last Tuesday when the EPA said it would wait until September to decide whether to stop tightening pollution standards on old coal-fired power plants.

That move pleased the council but disappointed environmentalists, who said it indicated that the EPA was likely to weaken the regulations.

The council is also planning to try to persuade Congress to change the language of the Clean Air Act to ease the burden on utilities.

As interest groups do in many lobbying campaigns, the utilities have hired specialists with ties to both political parties.

Klink is part of a team of Democrats that includes former Rep. Jim Chapman of Texas.

Republicans working on the effort include former Republican National Committee Chairman Haley Barbour and former White House Counsel C. Boyden Gray, who worked for former President George Bush.

The utilities contend that former President Clinton's EPA officials misinterpreted the Clean Air Act by applying the same standards to older plants that were upgraded, discouraging modernization.

At issue is a policy called "new source review" that requires utilities to upgrade pollution-control equipment each time an aging power plant is renovated.

The Pennsylvania plants are located in Monongahela, Washington County; Portland, Northampton County; Reading, Berks County; Seward, Westmoreland County; Shawville, Clearfield County; and Shelocta, Indiana County.

Klink's work on behalf of utilities is in keeping with his congressional record. He was a frequent critic of what he saw as excessive environmental regulation during the eight years he represented a suburban Pittsburgh district

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in the House of Representatives.

He served on the Commerce Committee, which has jurisdiction over a range of regulatory issues, and unsuccessfully fought to delay the implementation of EPA rules to reduce the amount of coal and soot in the air.

He said the rules would brand southwestern Pennsylvania a "noncompliance" area and make new businesses less likely to locate there. The region is still trying to recover from the collapse of the steel and coal industries.

Klink gave up his House seat to run for the Senate and won a six-candidate Democratic primary but lost to Santorum in the general election, 52 percent to 46 percent.

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Claude R. Marx covers Pennsylvania issues in Washington for The Associated Press.

LOAD-DATE: August 21, 2001

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Newhouse News Service

August 20, 2001 Monday

SECTION: COMMENTARY

LENGTH: 1023 words

HEADLINE: Bitter Debate Looms Over How to Regulate Power Plant Emissions

BYLINE: By STEPHEN KOFF and TOM DIEMER; Stephen Koff and Tom Diemer are staff writers in the Washington bureau of The Plain Dealer of Cleveland. They can be contacted at skoff(at)plaind.com and tdiemer(at)plaind.com

DATELINE: WASHINGTON

BODY:

A possible overhaul this fall of the nation's air pollution laws has utilities, environmentalists, Congress and the White House staking positions for what could be a bitter debate over clean air and energy.

Coal-burning utilities are hoping they'll find simpler alternatives to numerous, complex clean-air regulations that affect how they produce electricity.

But in exchange for revamping the Clean Air Act a law credited with

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cleaning  
up billions of tons of pollution in the past three decades some utilities  
worry  
they could wind up facing even stiffer requirements for the fumes emitted  
from  
their smokestacks.

Environmentalists meantime are gearing up to fight what they say could  
be an  
opposite result: weaker clean-air rules that lead to more smog, haze and  
respiratory problems.

The debate, expected to begin in earnest in September, will be about  
more  
than clean air. It will involve President Bush's priorities and promises,  
the  
role of energy companies in lobbying and making campaign contributions,  
and  
criticism of former President Clinton's zeal in enforcing what some say  
were  
overly broad environmental policies.

"The utilities have a lot to gain by this, and I think the Bush  
administration knows they've got a limited window to get this job done  
because  
they're banking on the fact that everyone's going to forget about this by  
the  
2004 elections," said John Stanton, a lawyer for the National  
Environmental  
Trust and an air quality specialist in the Clinton administration.

Sen. George Voinovich, R-Ohio, a member of the Senate Environment and  
Public  
Works Committee, has a different viewpoint. "Some clarification has to be  
made  
or we are not going to see the environment improved and emissions  
reduced," he  
said. "At the same time, I have to be candid: In the process of doing  
that, we  
have to use clean coal technology and coal."

Two regulatory approaches are at the heart of the issue. One involves an  
Environmental Protection Agency regulation called New Source Review. It  
allows  
power plants built before 1977 to continue operating under old, more  
lenient  
rules, as long as the facilities are not modified to increase generating  
capacity or emissions.

The New Source Review argument, which intensified during the closing  
years of  
the Clinton administration, is over what constitutes maintenance vs. what  
amounts to plant expansion or modernization.

The EPA "has lowered the bar so much that a power plant can do almost  
nothing  
without being possibly liable for violating the New Source Review," said  
Dan  
Riedinger, spokesman for the Edison Electric Institute, a utility trade  
group.

Clinton's aggressiveness in enforcing this New Source Review culminated  
in a

1999 Justice Department lawsuit accusing utilities of extending the life of aging, coal-burning plants by modifying them without adding required control equipment.

The battle has had little direct impact on consumers thus far. In the long haul, however, changes in the clean-air law could have a direct bearing on air quality, energy supply and the price of electric power.

President Bush sought to approach the New Source Review program from a broad perspective, asking: Does New Source Review, with its costs and delays, stand in the way of the nation's need to produce more energy?

Christie Whitman, EPA administrator, has said that she would provide an answer in September, and that's where the second regulatory approach comes in.

Sources in the utility industry and environmental community say Whitman and Bush might propose legislation scrapping or scaling back the New Source Review program as well as several other programs under the Clean Air Act, some arguably duplicative.

They include a program to cut haze at national parks, a still-developing program to curtail the movement of ozone from Midwest utilities to the Northeast, and a program to reduce acid rain.

"We've got about 15 different regulatory regimes affecting coal plants, and trying to deal with these things piecemeal just gets in the way of each other," said Dave Woodburn, spokesman for Cincinnati-based Cinergy Corp., a utility holding company.

But Whitman is expected to seek a tradeoff for that simplification: a broad requirement for significant cuts in three pollutants by the utilities. The pollutants are nitrogen oxide, sulfur dioxide components of acid rain and smog and mercury, which blends with ash to form a sooty emission from smokestacks.

A bill introduced by Sen. James Jeffords, I-Vt., would add a fourth substance for heavy regulation: carbon dioxide, cited by scientists as one of the greenhouse gases that cause global warming. In his campaign, Bush said he would regulate carbon dioxide but backed off that commitment after the election.

The key issue for this fall is how far the restrictions on all four substances go.

Environmentalists are waiting to see what emerges. "There is a lot of ambiguity here," said Ed Hopkins, director of the Sierra Club's clean-air program. "It depends on the scope of the changes they want."

Stanton, of the National Environmental Trust, already is calling the

probable

Bush plan a "dodge." If only the government would strictly enforce the existing Clean Air Act and all its amendments, it could dramatically cut nitrogen oxide, sulfur dioxide and mercury emissions without changing the law, he says.

The environmentalists, still a strong voice on Capitol Hill, have their work cut out for them, as lobbying on the other side is intense.

Lobbyists for utilities and refineries have enlisted former Republican National Committee Chairman Haley Barbour and former White House Counsel Boyden Gray as spearheads of a group called the Electric Reliability Coordinating Council. Barbour was senior adviser to Bush during the presidential campaign.

"The president is president today because he won in the eastern coal-producing states," said Dale Heydlauff, senior vice president for environmental affairs at American Electric Power in Columbus, Ohio, laying out the "blatant politics" he says will be at play. "They were the difference, and he knows it."

LOAD-DATE: August 23, 2001

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OCTANE WEEK

August 20, 2001

SECTION: Vol. 16, No. 34

LENGTH: 699 words

HEADLINE: WILL EPA'S 'MULTI-POLLUTANT' CONTROL STRATEGY SPELL THE END OF NSR?

BODY:

The U.S. EPA missed last Friday's deadline for issuing a report on the Clean Air Act's New Source Review (NSR) program, but environmental groups speculate that when it is released, the report will recommend that NSR be eliminated and replaced with a program aimed at reducing emissions of three pollutants - nitrogen oxides (NOX), sulfur oxides and mercury. The "multi-pollutant" strategy, details of which emerged in testimony by EPA Administrator Christine Whitman to a Senate committee last month, is designed around the electric generating industry but like NSR, it could apply to other sectors, including the refining

industry. "The President has directed me to develop proposed legislation that would significantly reduce and cap NOx, SO2 and mercury emissions from power generation," Whitman told the Senate Environment and Public Works committee. "[O]ur current regulatory programs are not the most efficient way to achieve the goal of ensuring a reliable energy supply in an environmentally responsible manner. Rather than take a pollutant-by-pollutant, problem-by-problem approach, we have the opportunity to examine the sector as a whole."

The administration is expected to introduce its multi-pollutant approach in legislative form next month. According to Whitman, the legislation the administration will propose will:

- \* establish reduction targets for emissions of SO2, NOx and mercury;
- \* phase in reductions over a reasonable time period, similar to the Acid Rain Program;
- \* provide regulatory certainty to allow utilities to make modifications to their plants without fear of new litigation; and
- \* provide market-based incentives, such as emissions trading, to help achieve reductions.

Environmentalists were quick to criticize the initiative, which the Washington, D.C.-based Clean Air Trust called "junking virtually every meaningful federal regulatory and enforcement program for electric power plants in return for unspecified emission reductions." The multi-pollutant strategy is the "dirty" energy industry's way to ditch existing clean-air controls, Trust Director Frank O'Donnell said.

Environmentalists by and large support the current NSR program, particularly its enforcement. "The NSR program has reduced millions of tons of pollution that would still be here if the program had not existed," the Natural Resources Defense Council (NRDC) said. "Industrial groups and their high-powered lobbyists, by contrast, have demanded the weakening or even elimination of the NSR program, relying upon false conflicts with energy production objectives. We expect to learn shortly whose voices EPA is more likely to heed."

EPA's NSR report is expected to also contain information about the status of pending enforcement actions against power plants and oil refineries, NRDC said. EPA has already settled NSR cases with six refiners - BP, MAP, Motiva, Equilon, Deer Park Refining Co.

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and Premcor, and the agency recently won a court case against Murphy Oil (see Octane Week, 8/13/01, p1). Many more refiners have received notices of violation relating to NSR. "Refiners will probably know later (than power plants) how they are affected by NSR changes," said NRDC Director John Walke.

EPA has not focused the multi-pollutant approach beyond the power industry, EPA spokesperson Dave Ryan said. But environmentalists predict other industrial sectors will seek to escape NSR and participate in the multi-pollutant strategy. A coalition of industries, led by the National Association of Manufacturers, is already seeking a similar easing of enforcement. "By encouraging outlaw electric power companies to believe they can get a break, Whitman has set off a polluter feeding frenzy," O'Donnell claimed. "The industry coalition, which also includes the chemical, steel, pulp and paper and automobile industries, has written EPA asking, in effect, if the electric power companies can get a break, why can't we?"  
-Carol Cole

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The Times-Picayune (New Orleans)

August 19, 2001 Sunday

SECTION: NATIONAL; Pg. 1

LENGTH: 1695 words

HEADLINE: EPA's new rules may land in court;  
Bush plan angers environmentalists

BYLINE: By John M. Biers; Energy writer

BODY:

Addressing lobbyists at a Washington breakfast meeting in June, Christine Todd Whitman signaled that President Bush would be shifting course on the environment.

In an implicit criticism of the Clinton administration, the new Environmental Protection Agency administrator said she would compel industrial companies to improve their emissions and penalize only the most flagrant polluters. The change would mean fewer government resources spent in court.

"I don't want to insult any lawyers who might be in the room, but I

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don't see  
it as our responsibility to enhance your bottom line," whitman told the  
National  
Association of Manufacturers.

But federal court seems to be the inevitable destination for the Bush  
administration's emerging policy to overhaul controversial environmental  
rules  
affecting expansions at power plants and oil refineries.

The Bush administration had been expected to propose last week how it  
would  
alter the regulations known as "new source review." The rules, created in  
1977  
and amended since then, require plants to obtain permits and install  
pollution  
controls when they replace equipment, build new units or make other  
improvements. On Tuesday, whitman said she would announce the plan in  
September.

That plan, designed to boost electricity and fuel production, would  
require  
new regulations and possibly a change in the Clean Air Act, which would  
involve  
Congress.

Whitman's move delays the debate until the fall, but  
environmentalists already have said they probably will sue. If they do,  
the case  
would join the seemingly boundless litigation to befall recent  
environmental  
regulations. The biggest dispute went all the way to the Supreme Court,  
which  
upheld new clean air standards in February after four years of  
litigation. After  
the setback, industry officials said they would continue to fight the  
policy in  
court and in Congress.

No room for compromise

The sparring ensures the debate on utilities and refineries will consume  
plenty of time, money and paper. Likely absent will be something far more  
precious in recent environmental disputes: consensus.

"If industry thinks we're going in one direction, they'll sue us," said  
Jole  
Luehrs, chief of air permits at the Dallas regional EPA office. "If  
environmentalists think we're going the other way, they'll sue us."

The stalemate would seem to run counter to the interests of both  
industry and  
environmentalists. Plants can run more efficiently in the long term with  
stricter standards in a climate of regulatory certainty, industry  
analysts say.  
Environmentalists say the air will get cleaner faster if companies work on  
implementing the law rather than contesting it.

"I have seen a disturbing lack of willingness on both sides to  
compromise,"  
said Amy Myers Jaffe, an energy analyst at the James A. Baker III  
Institute at  
Rice University.

Though spotlighted in the current debate, new source review has been controversial for years.

Industry has complained that the rules are unclear and that EPA enforcement has been inconsistent. Utilities and refining companies say they often are not exactly sure what sort of plant upgrades, however minor, require a permit. EPA regulators say the industry criticism stems more from reluctance to spend extra money rather than confusion about what is required. The agency points to an 80 percent violation rate in some sectors.

The earlier Bush administration started a task force to study the rules. The Clinton administration kept the effort going, proposing reforms in 1996 and 1998 that tried to streamline the rules without harming the environment.

#### Questioning the rules

Their proposals didn't bring the two sides together, but they did spark plenty of colorful debate.

"What if a company puts a statue of a pink elephant over the plant gate?" asked the Coalition for Clean Air Implementation, an industry lobbying group, attacking the permitting standards in the Clinton proposal. "Or what if a company puts a fence around a roof on which people work?"

Would the EPA accept the change as a safety improvement, the industry group asked. Or would it require permitting under the thinking that emissions are higher because "the presence of the fence might conceivably improve output by allowing the workers to move more quickly because they will feel more secure."

The Natural Resources Defense Council, an environmental group, was equally biting, debunking an exemption for anti-pollution projects executed 20 years earlier. "No doubt a geologist would view events separated by 20 years as contemporaneous," the environmental group wrote, "but the deadlines in the Clean Air Act make it clear that Congress did not intend to justify its policies based on geologic time scales."

Thought industry officials said new source review originally was intended to prevent air from getting worse rather than to "achieve dramatic improvements," environmentalists said the policy was a vital tool in meeting clean air standards.

Clinton administration officials continued to tinker with their regulatory

reforms, but did not release any proposals after August 1998. The result of their efforts sits in an EPA file room in downtown Washington. If stacked, the papers would be 8 feet high, estimated Walter Whitaker, who manages EPA's docket.

#### EPA cracks down

While part of EPA was trying to reform the rule, agency enforcement staffers were taking a harder line. Believing as much as 80 percent of some industries to be in violation, the agency announced it was cracking down in January 1999. The government sued 51 power plants and issued letters demanding millions of pages of data from oil refineries.

In July 2000, with Bush and Democratic nominee Al Gore locked in a tight presidential campaign, EPA Administrator Carol Browner announced the Clinton-Gore administration had reached the biggest settlements ever with oil refineries, a total of \$600 million with BP Amoco and Koch Petroleum Group. In exchange for "a clean slate" for alleged past violations of new source review and other requirements, the companies promised to install pollution-control technology at 12 refineries nationwide.

"We're not litigating this. We've been able to get the job done more quickly for the people of these communities," Browner said. "With this settlement, we agree to a set of things that will be done, and we don't get into whether something in the past was or wasn't a violation."

EPA unveiled settlements with four more refineries this spring. Then, as part of his energy plan, Bush in May directed Whitman to undertake a 90-day re-evaluation of new source review.

On Tuesday, Whitman pushed back the report until September, broadly describing a utility proposal to allow emissions trading at power plants. She has criticized the program at times.

"I have heard too many instances where we interpreted it so literally in the field that we, in fact, are hindering environmental progress," she said in June. "It's a question of injecting a little common sense here, a little common sense that allows you to say: Always look at the big goal; the big goal is a clean environment."

Bush officials have not released a proposal on oil refineries, but the industry has been pushing to set emission limits for entire plants rather than at individual units within the plants. The EPA employed a version of the policy

in its most recent consent decree, a \$265 million agreement with Marathon Ashland Petroleum LLC.

Regulators say the success of such plans depends on the details. The Clinton administration included plantwide limits in its proposals, but the Natural Resources Defense Council said they lacked adequate enforcement mechanisms.

Environmentalists, comparing the retreat on new source review to removing police from the street, have attacked Bush and Vice President Dick Cheney for their links to the oil industry. NRDC attorney John Walke said the group probably would sue the Bush administration under the Clean Air Act.

"A court is going to have to resolve this, because the Bush administration is pushing something so radically at odds with the statute," Walke said.

Utilities and refiners approve of the outlines presented by Whitman, but await further details.

#### Fueling controversy

Refineries pose a special challenge for policymakers because about 30 percent of the industry has reached settlements for alleged violations under the old rules requiring companies to spend hundreds of millions of dollars for pollution-control equipment.

For example, BP's agreement to a major settlement with the EPA cost the company millions of dollars. EPA has alleged violations at some ExxonMobil refineries but has not reached a settlement with the company. If the Bush administration takes a more lenient approach and ExxonMobil gets off the hook, it could appear that the U.S. government played favorites among the Big Oil companies and rewarded those that stonewalled.

A BP official recently denounced "rule-making by enforcement," but said the government shouldn't penalize companies that have settled in favor of those that have been more recalcitrant.

"To stop now and exempt the remaining part of the industry from these interpretations would send the wrong signal as to our industry's and the government's commitment for improved environmental performance from the refining sector," BP's Ric Glaser told an EPA public meeting in Ohio. "In the name of equity, the same rules should apply to all."

But Bob Slaughter, general counsel for the National Petrochemical and Refiners Association in Washington, said some companies think "some of the changes exceed what is required by law, and that they shouldn't be forced to make the same agreement."

BP and others are banking that even if Bush loosens the regulations for now,

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the change would be reversed in a few years, Rice's Jaffe said.

"Times are changing so that Fortune 500 companies which don't take socially responsible positions will be punished if they have a retail product and if they trade in the stock market," she said.

. . . . .

John Biers can be reached at [jbiers@timespicayune.com](mailto:jbiers@timespicayune.com) or (504) 826-3494.

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August 18, 2001 Saturday ALL EDITIONS

SECTION: EDITORIAL; Pg. 014

LENGTH: 289 words

HEADLINE: Editorial; It's a job for Congress

BODY:

The Environmental Protection Agency has delayed a report on what it intends to do about a headache it inherited from the Clinton administration, namely, "new source review" of old power plants.

If it's shrewd, EPA will ask Congress to change the Clean Air Act. A decision of Congress more than 30 years ago brought about the present mess.

When the act was overhauled in 1970, new power plants were subject to strict pollution controls. Old ones weren't. Congress figured that the old plants would be retired someday.

The exemption, though, was a large incentive to keep old plants running, perhaps completely rebuild them with new boilers, turbines and generators that didn't have to meet new-plant standards. EPA soon adopted rules by which a change that increased output qualified an old plant as "new" and everybody was mostly satisfied.

Bill Clinton's EPA, however, claimed in essence that utilities were cheating and sued many of them, notably in the Midwest. The utilities say the rules were changed in the middle of the game.

Vice President Dick Cheney's energy task force weighed in with the observation that the new policy would keep utilities from increasing efficiency

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in old plants.

This is true, and throws the spotlight on just the kind of conflict between two good things - increased efficiency and lower electricity prices on the one hand and more reductions in smokestack pollution (already a lot less than it used to be) on the other - that bureaucracies are not good at resolving.

These conflicts are exactly what Congress is paid to resolve. Instead of trying to decide which turbine blades are replaceable, the Bush administration should make members earn their salaries and be real lawmakers.

LOAD-DATE: August 18, 2001

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THE INDIANAPOLIS STAR

August 18, 2001, Saturday, CITY FINAL EDITION

SECTION: BUSINESS; Pg. C02

LENGTH: 773 words

HEADLINE: Report looks to future of energy in Indiana  
Study suggests use of energy conservation, clean technologies and renewable resources.

BYLINE: BY GARGI CHAKRABARTY STAFF WRITER

BODY:

Energy experts, economists, environmental groups and attorneys have joined forces to develop a blueprint for sustainable energy development in the Midwest.

The report, called Repowering the Midwest -- The Clean Energy Development Plan for the Heartland, calls for various initiatives to conserve energy, adopt clean technologies and use renewable resources to ensure better quality and stability of the energy supply.

State regulators received the report this week.

"The aim of this report is to modernize the electric industry instead of continuing to depend on 1950s technology," said Howard E. Learner, executive director of the Environmental Law & Policy Center, one of the partners that developed the report. "We are in the 21st century. We need to take advantage of efficient energy and clean technology that is available. Development of sustainable energy makes good economic sense."

The report compares two models, "Business As Usual" and "Clean Energy Development" for the period between now and 2020.

While the first model considers the regional electric system as it exists, the second takes into account renewable resources of energy and clean technologies.

For example, Indiana depends almost completely on coal for power, with 98 percent generated by coal-fired electric plants.

The second model allocates 20 percent of state power generation to alternative sources of energy such as biomass, fuel cells or photovoltaic systems. Biomass includes various types of crops that can be combined with coal and used as fuel in existing coal-fired plants.

The model also promotes the use of cleaner technologies, such as combined heat and power systems that capture waste heat and use it to heat or cool buildings.

The report says electricity generation would be more than twice as efficient under the second model, and be more environmentally friendly.

Implementing these clean technologies and using renewable sources of energy would cost only 3 percent more than the current cost of electricity, said Bruce Weiwald of Synapse, the Cambridge, Mass.-based consultants that prepared the report.

For all its appeal, the study has drawbacks. Mike Mullet, a utility counsel for Citizens Action Coalition who was involved with the study, said it is impossible to construct a perfect model.

"When one is modeling a system as large and complicated as the regional electric system, it is not easy to simplify everything," he said. "No model is perfect, but we have done as well as could be expected."

One of the main drawbacks, environmental experts say, is that the report does not adequately address environmental barriers to switching to different fuels or to clean technologies.

"If utilities switch to a different fuel or highly efficient technologies, (the permit process) is very difficult," said Arthur E. Smith Jr., senior vice president and environmental counsel for NiSource Inc.

NiSource is concerned with the existing permit program for such new and modified energy sources, called the New Source Review program. The Environmental Protection Agency is reviewing this program and how it affects new power generation, including use of clean technologies and renewable sources.

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The utility believes the NSR currently discourages companies from taking actions that would reduce airborne emissions and improve the efficiency of energy generation, Smith said. He said a lack of incentives and regulatory hassles are barriers to adopting clean technologies in the future.

"Sadly, the environmental regulators give little credit to utilities for using renewable sources of power, although renewables have promising attributes," Smith said. "Similarly, there is little credit for using energy-efficient systems either."

For instance, a highly efficient plant capturing 75 percent of the fuel value and a less efficient one capturing only 30 percent of the fuel value get the same treatment.

"This has major ramifications on utilities adopting efficient technologies or renewables," he said. "The report fails to consider these issues."

Contact Gargi Chakrabarty at 1-317-444-6019 or via e-mail at [gargi.chakrabarty@indystar.com](mailto:gargi.chakrabarty@indystar.com)

INFO BOX:

Here's what the energy study recommends

The policy recommendations to encourage energy efficiency in Indiana are:

- \* Create a fund to support energy efficiency initiatives by charging ratepayers 0.3 cent per kilowatt hour.
- \* Have third-party administrators manage the fund.
- \* Update Indiana's efficiency standards and building codes.
- \* Create a fund to support technology that harnesses renewable energy sources by charging ratepayers 0.1 cent per kilowatt hour.

LOAD-DATE: August 19, 2001

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The Plain Dealer

August 18, 2001 Saturday, Sports Final / All

SECTION: NATIONAL; Pg. A1

LENGTH: 1407 words

HEADLINE: A bitter debate looms over how to regulate power plant emissions

BYLINE: Stephen Koff and Tom Diemer, Plain Dealer Bureau

DATELINE: Washington

BODY:



A possible overhaul this fall of the nation's air pollution laws has utilities, environmentalists, Congress and the White House staking positions for what could be an important, but bitter, debate over clean air and energy.

Coal-burning utilities in Ohio like FirstEnergy of Akron, Cinergy of Cincinnati, and American Electric Power of Columbus are hoping they will find simpler alternatives to numerous, complex clean-air regulations that affect how they produce electricity.

But in exchange for revamping the Clean Air Act - a law credited with cleaning up billions of tons of pollution in the last three decades - some utilities worry they could wind up facing rules that have even stiffer requirements for the fumes emitted from their smokestacks.

Environmentalists meantime are gearing up to fight what they say could be an opposite result: weaker clean-air rules that lead to more smog, haze and respiratory problems.

The coming debate, expected to begin in earnest in September, will be about more than clean air. It will involve President Bush's priorities and promises, the role of energy companies in lobbying and making campaign contributions, and criticism of former President Clinton's zeal in enforcing what some say were overly broad environmental policies.

"The utilities have a lot to gain by this, and I think the Bush administration knows they've got a limited window to get this job done because they're banking on the fact that everyone's going to forget about this by the 2004 elections," said John Stanton, a lawyer for the National Environmental Trust.

Stanton was an air quality specialist in the Clinton administration.

Sen. George Voinovich, a member of the Senate Environment and Public Works Committee, has a different viewpoint. "Some clarification has to be made or we are not going to see the environment improved and emissions reduced," he said.

"At the same time, I have to be candid: In the process of doing that, we have to use clean coal technology and coal."

Two regulatory approaches are at the heart of the issue. One involves an Environmental Protection Agency regulation called New Source Review.

It allows power plants built before 1977 to continue operating under old, more lenient rules, as long as the facilities are not modified to increase generating capacity or emissions.

For instance, routine maintenance is permitted at FirstEnergy's W.H.

Sammis

Station, which was built along the Ohio River in 1959 before much anti-pollution technology existed.

But when "new sources" of power generation are added to a plant - alterations going beyond maintenance - modern pollution controls must also be installed.

The New Source Review argument, which intensified during the closing years of the Clinton administration, is over what constitutes maintenance versus what amounts to plant expansion or modernization.

"Maintenance has to be done on a regular basis at a coal-fired plant," said Ralph DiNicola, spokesman for FirstEnergy.

"You have high temperatures with hot steam running through metal, and that metal is going to corrode."

Yet the EPA, he says, went so far as to challenge repairs on tubes used to take hot steam from power plant boilers.

The EPA "has lowered the bar so much that a power plant can do almost nothing without being possibly liable for violating the New Source Review," said Dan Riedinger, spokesman for the Edison Electric Institute, a utility trade group.

"And the thing that has been more alarming over the long term from our industry's perspective is that, if you look at a map of where these lawsuits are focused, they're all focused on the Midwest and the Southeast, where there is some older, coal-based production."

Clinton's aggressiveness in enforcing this New Source Review culminated in a 1999 Justice Department lawsuit accusing FirstEnergy and other utilities of extending the life of aging, coal-burning plants by modifying them without adding required control equipment.

The battle has had little direct impact on consumers thus far. The older plants keep producing electricity and pollution, while FirstEnergy's customers continue to enjoy a rate freeze on their monthly bills as a result of statewide deregulation of the power industry. In the long haul, however, changes in the clean-air law could have a direct bearing on air quality, energy supply and the price of electric power.

President Bush sought to approach the New Source Review program from a broad perspective, asking: Does New Source Review, with its costs and delays,

stand in  
the way of the nation's need to produce more energy?

Christie Whitman, EPA administrator, said Tuesday that she would provide an answer in September, and that's where the second regulatory approach comes in. Sources in the utility industry and environmental community say Whitman and Bush might propose legislation scrapping or scaling back the New Source Review program - as well as several other programs under the Clean Air Act, some arguably duplicative.

They include a program to cut haze at national parks, a still-developing program to curtail the movement of ozone from Midwest utilities to the Northeast, and a program to reduce acid rain.

"We've got about 15 different regulatory regimes affecting coal plants, and trying to deal with these things piecemeal just gets in the way of each other," said Dave Woodburn, spokesman for Cincinnati-based Cinergy Corp., a utility holding company.

But Whitman is expected to seek a tradeoff for that simplification: a broad requirement for significant cuts in three pollutants by the utilities.

The pollutants are nitrogen oxide, sulfur dioxide - components of acid rain and smog - and mercury, which blends with ash to form a sooty emission from smokestacks.

A bill introduced by Sen. James Jeffords, the Vermont independent whose Republican defection threw the Senate into Democratic control, would add a fourth substance for heavy regulation: carbon dioxide, cited by scientists as one of the greenhouse gases that cause global warming.

In his campaign, Bush said he would regulate carbon dioxide but backed off that commitment after the election.

Scope unknown

The key issue for this fall is how far the restrictions on all four substances go. Dale Heydlauff, senior vice president for environmental affairs at American Electric Power, predicts Jeffords' legislation won't get enough support in Congress unless the senator drops the carbon dioxide requirements.

Separately, the Bush administration will need a sponsor for its three-pollutant bill, but observers say the Republican-led House Energy and Commerce Committee might pick up the cause if the emission cuts are not too deep.

Environmentalists are waiting to see what emerges.

"There is a lot of ambiguity here," said Ed Hopkins, director of the Sierra Club's clean-air program. "It depends on the scope of the changes they want."

Stanton, of the National Environmental Trust, already is calling the probable Bush plan a "dodge."

If only the government would strictly enforce the existing Clean Air Act and all its amendments, it could dramatically cut nitrogen oxide, sulfur dioxide and mercury emissions without changing the law, he says.

The environmentalists, still a strong voice on Capitol Hill, have their work cut out for them, as lobbying on the other side is intense.

Lobbyists for utilities and refineries have enlisted former Republican National Committee Chairman Haley Barbour and former White House Counsel Boyden Gray as spearheads of a group called the Electric Reliability Coordinating Council.

Barbour was senior adviser to Bush during the presidential campaign.

"The president is president today because he won in the eastern coal-producing states," said American Electric Power's Heydlauff, laying out the "blatant politics" he says will be at play.

"They were the difference, and he knows it."

Rep. Dennis Kucinich, a Cleveland Democrat, said it would be a mistake to tamper with the clean-air law, which he calls "one of the most important pieces of legislation to protect public health in the 20th century."

"At a time when we are starting to see sharp increases in respiratory problems, particularly asthma in urban areas, it is going in the wrong direction to give these older power plants more leeway," Kucinich said.

"I am going to be very active in this debate."

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LOAD-DATE: August 19, 2001

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Las Vegas Review-Journal (Las Vegas, NV)

August 16, 2001 Thursday FINAL EDITION

SECTION: B; Pg. 6B

Page 34

LENGTH: 437 words

HEADLINE: EDITORIAL: Clean air and common sense

BODY:

Environmentalists consider enforcement of the measure a 'life or death' matter.

Utility officials think it would have 'a chilling effect' on their ability to provide new generating capacity.

What has attracted such apocalyptic language? It's an obscure federal regulation called 'new source review,' and the Bush administration has not yet

decided how it will be enforced. The outcome may determine whether common sense

or zealotry governs environmental policy.

Part of the 1970 Clean Air Act, the regulation requires companies that 'significantly' increase the air pollution they produce to use the newest, most-expensive form of pollution-reduction technologies.

Early on, the rule was triggered only when a company built a new factory or

expanded an existing one. But by the 1980s, the Environmental Protection Agency

expanded its scope -- particularly as it applies to power plants.

EPA regulators interpreted the rule so that any time a plant made 'any physical

or operational change,' 'new source review' was triggered, meaning that the

entire facility may have to be retooled or shut down. In the early 1990s, for

example, the agency attempted to fine a Wisconsin utility when it replaced a

faulty boiler. The EPA lost that battle in federal court, and for nearly a decade, the rule was again applied only to new or expanded facilities. In its

final years, the Clinton administration attempted to resurrect the earlier, more stringent guidelines for enforcement. But the Bush

administration

is reviewing the matter, and is expected to come to a decision in September.

EPA Administrator Christie Whitman has warned that earlier, 'literal' interpretations of the law could be 'hindering environmental progress.'

She's

right. As currently enforced, it pays to pollute. Utility companies are better

off operating outdated, smoke-belching factories, because any attempt to modernize them could lead to reviews, fines and lawsuits from

environmentalists.

By any measure, pollution from factories and power plants has dropped dramatically. But that's not good enough for environmental zealots, who

claim

that any attempt to submit regulations to common-sense limits will lead to a

public-health catastrophe, causing children and the elderly to drop dead by the

thousands.

That's nonsense, of course. And with at least 1,300 new power generating facilities scheduled to open over the next decade, and power supplies

tenuous

throughout the West, Ms. Whitman hints that the White House may try to modify or

replace the 'new source review' requirement. The best move would be to scrap it

entirely.

LOAD-DATE: August 17, 2001

15 of 47 DOCUMENTS

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Megawatt Daily

August 16, 2001

SECTION: Vol. 6, No. 158

LENGTH: 361 words

HEADLINE: EPA puts off emissions reduction proposal

BODY:

The Environmental Protection Agency will postpone until September its final report to the white House on new source review regulations, which mandate strict pollution controls on generating facilities and refineries, and their impact on generation capacity, energy efficiency and environmental protection, the agency said this week.

The national energy policy report, issued in May, recruited the EPA to review NSR regulations, which fall under the Clean Air Act. The report gave the EPA 90 days to analyze the effect NSR requirements have on investment in expansions of existing generation capacity; investment in new utility and refinery generation; and energy production and efficiency. The report also tasked the EPA with determining whether NSR requirements have affected the ability of existing generating sources to undertake pollution prevention or energy efficiency projects; to switch to less polluting fuels; to maintain the reliability of production facilities; and to effectively utilize and improve existing capacity, the EPA said in a June white paper.

"We are in the final stages of developing a comprehensive strategy that will allow us to take the next step forward into a new generation of air pollution controls for the 21st century," EPA Administrator Christie Whitman said Tuesday.

"This fall, we will put forward an ambitious proposal that will reduce air pollution from power plants significantly more than the existing system."

The EPA's review of NSR will evaluate how NSR regulations are operating and will recommend any necessary changes to the NSR requirements in light of the evolving energy market. The recommendations will be folded into a

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Legislative

proposal that will set strict limits on utility emissions - such as nitrogen oxides, sulfur dioxide and mercury - through the use of a market-based approach.

The EPA's final report will support stringent health-based standards for pollution control. In addition, the agency will establish mandatory price caps on levels of pollution, while providing industry with the flexibility to find the most cost-effective means of meeting those standards, the EPA said.

MCM

LOAD-DATE: August 16, 2001

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Chemical Week

August 15, 2001

SECTION: NEWS; United States/Americas; Pg. 10

LENGTH: 344 words

HEADLINE: Green Groups Step Up NSR Support;  
Regulation

BYLINE: NEIL FRANZ in Washington

BODY:

ENVIRONMENTAL GROUPS LAUNCHED a national advertising campaign last week urging the Bush Administration not to scale back enforcement of EPA's controversial New Source Review (NSR) permitting program. NSR, set up by the Clean Air Act, requires older facilities that were exempt from emissions restrictions to install state-of-the-art pollution controls when they make significant structural changes. Industries often ignore NSR mandates, which are needed to prevent emissions of sulfur dioxide, nitrogen oxides, and fine particles, say the groups.

Chemical and other industries have criticized the former Clinton Administration's interpretation of how facilities must comply with the program, and are pressuring EPA to revamp its NSR policies (CW, July 25, p. 34). President Bush's energy strategy proposal released earlier this year directs EPA to review NSR and its impact on energy costs.

EPA says it plans to release a report as early as this week on its findings, including a set of recommendations on how to improve the NSR process. The agency plans to "pardon" companies that have been charged with NSR violations, says Frank Donnell, executive director at the Clean Air Trust (Washington). EPA officials, however, say they have not decided whether enforcement changes are

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needed. Facilities that have been issued violation notices include sites owned by Ashland, Dow Chemical, Eastman Kodak, ExxonMobil, and Shell, says EPA. Several companies, including BP and Koch Industries, have settled NSR lawsuits.

Electric utilities have been the main focus of NSR, and manufacturing groups are lobbying EPA to recommend program changes that affect all industry sectors. "The NSR regulations block energy efficiency improvements and have a negative impact on price and supply of natural gas, electricity, coal, and oil in regional and national markets," says an August 3 letter to EPA from ACC and other business groups, including the National Association of Manufacturers (Washington) and the Alliance of Automobile Manufacturers (Washington).

LOAD-DATE: August 21, 2001

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Energy Daily

August 15, 2001

SECTION: Volume 29, Number 157

LENGTH: 427 words

HEADLINE: EPA Delays NSR Recommendations

BODY:

Environmental Protection Agency Administrator Christine Whitman announced Tuesday that instead of issuing recommendations on a controversial Clean Air Act program by Friday, as promised, she will include them in a power plant emissions reductions package set to be unveiled next month.

EPA had been working on a 90-day review of the new source review (NSR) program, which has drawn industry ire due to an aggressive enforcement campaign by the Clinton administration. Clinton officials slapped lawsuits on owners of certain coal-fired power plants for making modifications to their plants that boosted output while not making concomitant improvements in emissions reductions.

"This fall we will put forward an ambitious proposal that will reduce air pollution from power plants significantly more than the existing system. Subsequently, we will release the NSR report called for by the National Energy Policy," Whitman said in a statement.

Whitman further explained that the NSR review "is part of our larger effort



to craft a new, comprehensive strategy to combat air pollution, and I am not prepared to come to any conclusions about one isolated issue before we finish work on our entire proposal."

She also pointed to recent action by the National Governors Association, which called for NSR reform aimed at improving the environment and increasing energy production capacity.

"We are developing a comprehensive approach to improving our effort to control air pollution, to achieve significant reductions in air pollution while simultaneously streamlining the regulatory process so it works better, achieving real reductions and full industry compliance at far less cost," said Whitman.

Plant owners argue that stringent enforcement of NSR would prevent them from performing routine maintenance, therefore jeopardizing their ability to produce power from existing facilities.

Environmentalists, however, were skeptical of the announcement, worried that changes weakening NSR would be buried in the larger legislative proposal.

"The administration should not expect that it can hide the roll-back of these important clean air protections in an emissions reduction package. That would be as obvious as putting a cheap frame on an ugly picture," said Angela Ledford, director of Clear the Air.

The multi-pollutant legislation will cover power plant emissions of nitrogen oxides, sulfur dioxide and mercury. President Bush earlier this year backed away from a campaign pledge to include carbon dioxide in emissions reduction legislation.

LOAD-DATE: August 15, 2001

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Foster Electric Report

August 15, 2001

SECTION: Report No. 224; Pg. 17

LENGTH: 1548 words

HEADLINE: MCCAIN, LIEBERMAN CALL FOR GREENHOUSE EMISSIONS CAP AND TRADE APPROACH TO CLIMATE CHANGE; EPA LIMITS SCOPE OF POLLUTION REVIEW TO ENERGY INDUSTRY

BODY:

Sens. John McCain (R-Ariz.) and Joe Lieberman (D-Conn.) joined forces on the Senate floor to call for limiting U.S. greenhouse gas emissions and setting up a trading system to cut costs for industry. The senators also questioned President George W. Bush's decision to pull the U.S. out of the Kyoto Protocol climate change accord.

The Kyoto Protocol is an agreement intended to negotiate binding limits on greenhouse gas emissions by developed nations. An agreement was recently struck by 178 nations in Bonn, Germany to approve rules for the climate change treaty, but without U.S. backing (see REPORT No.223, pg.23). President Bush's refusal to back the "fatally flawed" deal has positioned him against international and domestic supporters of the deal, including McCain and Lieberman.

In remarks made on the Senate floor on 8/3/01, the senators questioned Bush's decision and expressed concern that the move would put U.S. industry at risk. "The current situation demands leadership from the United States," said McCain. "In accordance with the agreement reached last week, there is going to be a world marketplace for carbon reductions, a marketplace that rewards improvements in energy efficiency, advances in energy technologies, and improvements in land-use practices -- and we are running the risk that America is not going to be part of it."

In brief, the latest protocol calls for industrial nations to reduce their emissions to an average of 5.2 percent less than 1990 levels during an accounting period that runs from 2008 to 2012 (see REPORT No.223, pg.24). Companies and countries that cut emissions below their assigned target level will have extra credits to sell. Countries that miss their targets for 2012 will have to make deeper cuts in the next accounting period as a penalty. Even if the U.S. makes no attempt to join the international efforts to limit global warming, U.S. multinational corporations would still be affected because their operations could be held to more stringent emissions requirements in nations that approved the Kyoto accord.

The senators alluded to a Wall Street Journal editorial which discussed a cap-and-trade program as one of the incentive-based market strategies that have been developed as an alternative to traditional fiat-based regulation. The editorial stated, "A cap and trade program will result in more abatement from those firms who can do it at relatively lower costs and less abatement

from those firms who can only do it at relatively higher costs. The net will be the same amount of overall pollution reduction, but achieved at lower cost than would obtain under traditional regulation."

Lieberman and McCain said that establishing a standardized domestic cap-and-trade system for greenhouse gases that paralleled the Kyoto Protocol would enable the U.S. to remain in tune with the rest of the world and also give it a stronger negotiating position to reach a more acceptable agreement when it comes back to the table. "If we adopt and cap and trade system, we will create a market by which corporations will receive valuable credits for efficient investments," said Lieberman. "We also will create a market by which corporations can receive credit for the laudable investments they have made to date. And we will unleash the power of the market to drive the United States back into its top leadership position in the international effort to avoid the worst effects of one of the most serious environmental problems the world community has ever faced."

McCain added, "Given this developing international market, it also makes sense to ensure that what we do domestically can be integrated and recognized on the international level. Ultimately, we need to make sure that the emissions reductions our companies, our farmers and our foresters produce are fully recognized and fully tradable in the emerging global greenhouse gas marketplace."

The senators said that when Congress returns from summer recess in September, they plan to meet with various environmentalists and representatives of industries that generate greenhouse emissions to work toward establishing a cap and trade system. However, they also acknowledged it will be difficult to convince other nations of the world to reopen the negotiations to U.S. participation.

The debate over the Kyoto Protocol has moved into national legislatures in the countries which voted to approve the agreement.

While the bipartisan efforts of Lieberman and McCain urge regulatory actions to lower greenhouse gas emissions, elsewhere in the Senate, three Republicans -- Senators Chuck Hagel (R-Neb.), Frank Murkowski (R-Alaska) and Larry Craig (R-Idaho) -- introduced legislation to require a long-term, global, technology-based approach to reducing emissions and meeting the nation's future energy needs. The bill would accelerate development and deployment of energy technologies that reduce, avoid, or sequester greenhouse gas emissions.

"Because the Kyoto Protocol has been driven so far off the track -- and even

further at the recent Bonn meetings -- we need to take matters into our own hands," said Murkowski.

The legislation provides "an incentive-based, market oriented framework that will produce results. It focuses on developing advanced technologies to reduce, sequester or avoid greenhouse gas emissions. These technologies are the long term answer to this challenge. And it focuses our scientific research in this area," said Hagel.

Specifically, the Climate Change Risk Management Act of 2001 provides for:

- (1) a national climate change strategy; (2) \$ 2 billion in funding over 10 years to advance the research, development and deployment of new technologies to reduce, avoid or sequester greenhouse gas emissions; (3) the creation of a national registry of voluntary actions that have been taken to reduce, avoid or sequester greenhouse gas emissions; (4) \$ 1 billion over 10 years to support a pilot loan program to assist in the exports of advanced technology to developing countries; (5) better coordination of federal scientific research; and (6) an office in the Dept. of Energy to coordinate the R&D efforts for new technologies.

In other emissions news, the Environmental Protection Agency (EPA) recently

closed the period to comment on its program for controlling new industrial and utility sources of air pollution. The program, called New Source Review (NSR),

requires that an air pollution source install the best pollution control equipment available when it builds a new facility or when it makes a major modification that increases emissions from an existing facility. The NSR was

designed to ensure that new and modified sources do not impede progress toward cleaner air. The final report, due for submission to President Bush on Aug. 17,

is expected to include recommendations on how to improve the NSR process.

Since the white House announced the review, trade associations have been lobbying the agency to expand the review to the manufacturing sector.

While a 7/25/01 letter from EPA Administrator Christine Todd Whitman to Sen.

Harry Reid (D-Nev.) seemed to indicate the agency would be restricting its limited focus to

the energy sector, agency officials recently announced that they may consider a move to include industrial boilers at manufacturing facilities in upcoming legislation to reduce emissions from electric utilities, in exchange for significant regulatory relief from NSR and other Clean Air Act programs.

At an Aug. 3 meeting of the CAAAC , EPA Office of Air Quality Planning and

Standards Director John Seitz said, "There may be a narrow focus this time but

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that doesn't mean we won't go and formalize something else later." EPA officials also remarked that they might be willing to adopt a broad definition of the term "energy sector" when considering changes to Clean Air Act rules.

The American Chemistry Council (ACC) and other trade groups, such as the National Association of Manufacturers (NAM) and the American Forest & Paper Association, have been urging the government to expand the review to include the manufacturing sector because, as major producers and consumers of energy, they feel the problems created by the current administration and interpretation of the NSR are experienced by all industrial sectors.

"EPA's cumbersome [NSR] program, though aimed at producing environmental improvements, is in fact a significant impediment and disincentive to the chemical industry's ability to increase energy-efficiency, expand energy generation and improve air quality," an ACC official said in a press release.

In addition to broadening the review of the program, NAM also called for other changes including limiting the scope of the program to construction of new sources and proposing a "more realistic" emissions test to determine whether a non-routine activity constitutes a "major modification."

While manufacturers have been arguing that the current focus on the utility industry in the administration's energy review could leave their sector without reforms, environmentalists contend that manufacturers are being misleading in their claims that the program is unclear or overly burdensome. They also believe the program is appropriately designed to minimize emissions increases.

LOAD-DATE: August 27, 2001

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THE HARTFORD COURANT

August 15, 2001 Wednesday, 7 SPORTS FINAL

SECTION: MAIN; Pg. A2

LENGTH: 639 words

HEADLINE: WHITE HOUSE DELAYING NEW AIR POLLUTION RULES;  
PLANT EMISSIONS GET ANOTHER LOOK;  
THE EPA HAD BEEN EXPECTED TO ANNOUNCE MORE FLEXIBLE EMISSION RULES FOR  
COAL-BURNING POWER PLANTS.

BYLINE: LIZ HALLORAN; Courant Staff Writer

DATELINE: WASHINGTON --

BODY:

The Bush administration Tuesday abruptly decided to delay until fall a plan for overhauling the way the government controls air pollution from old coal-burning power plants.

Christie Whitman, head of the Environmental Protection Agency, said in a statement the administration will deal with the controversial issue of power plant emissions in a comprehensive air pollution and public health legislative proposal to be submitted to Congress in the coming months.

"As we develop a new strategy to combat air pollution, we will also evaluate the extent to which existing regulations may need to be modernized," said Whitman, who had been expected to announce Friday that she would jettison current plant-by-plant enforcement in favor of a national cap on pollutants.

"I am not now prepared to come to any conclusions about one isolated issue before we finish work on our entire proposal," she said.

A review of the power plant rule had been ordered by Vice President Dick Cheney and aggressively sought by energy companies. It has been just as vehemently fought by environmentalists and officials in Connecticut and the other states most affected by wind-borne pollution from old coal-burning plants. The plants produce 55 percent of the nation's electricity.

Connecticut is among a number of states, predominantly in the Northeast, that have used the existing rule -- called New Source Review -- as the basis for lawsuits filed in the past few years against energy companies. The pending lawsuits seek to force companies to upgrade coal-burning plants in the Midwest and South with modern air pollution devices that would cut down harmful emissions that travel to the Northeast.

"The administration has been hearing and feeling the outpouring of opposition to a very misguided possible change, a disastrous abandonment of a well-established environmental standard that protects clean air," Connecticut Attorney General Richard Blumenthal said, upon learning of Whitman's decision.

"But there's still no guarantee that the administration will stay the course with necessary clean air protections," said Blumenthal, who noted that settlement negotiations with energy companies sued by Connecticut have been suspended since the Bush administration announced earlier this year that it would review the plant emissions regulation.

"This gives the companies a ready-made excuse to further delay any settlement discussions, but I prefer the delay to the executioner's noose,"

Blumenthal  
said.

Energy companies have argued that the high cost of upgrading plants, which can run in the billions of dollars, hampers the energy industry's ability to expand production capacity. Many of those companies were among the biggest donors to the Bush-Cheney campaign.

The industry favors having the government set a national cap on emissions and give companies emissions "credits" that they may trade with other companies. The so-called cap-and-trade program has been used effectively to combat pollutants that cause acid rain, Whitman argued.

Blumenthal does not support the cap-and-trade scenario. If plants whose pollution comes to the Northeast could simply buy emissions credits, they would continue to pollute, he said.

But some environmentalists are not adverse to the plan.

Jason Grumet, who heads an organization of the heads of air pollution control programs in eight Northeastern states, said they generally favor an effective, multi-pollutant cap that would require less regulation yet still reduce overall emissions.

Scott Stoermer of the League of Conservation Voters was cynical about the administration's timing.

"Right now, there are too many media people with too little to do," Stoermer said, suggesting that the situation would result in more media coverage than the Bush administration would want on the issue.

LOAD-DATE: August 15, 2001

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United Press International

August 15, 2001, Wednesday

SECTION: GENERAL NEWS

LENGTH: 479 words

HEADLINE: Report: EPA stalls on anti-pollution plan

DATELINE: WASHINGTON, Aug. 15

BODY:

The Bush administration has postponed a decision on an anti-pollution program for the energy industry because officials can't come up with a strategy that eases the regulatory burden without being seen as an environmental rollback, The New York Times reported Wednesday.

The Environmental Protection Agency said Tuesday that it would not issue a review of the air pollution rule by Aug. 17, although President Bush had asked it to do so.

The reassessment will be postponed until September, the EPA said. At that time the administration was expected to propose a more flexible plan to control pollution.

Bush announced the plan in May, but his administration has since been criticized by Democrats and environmental groups for being, in their perception, pro-industry.

Jeffrey Holmstead, the EPA's assistant administrator for air and radiation, told the Times the review was delayed because the administration wanted to present a more acceptable pollution-control strategy.

"It has quickly become apparent that environmental groups will portray any changes in this program as changes that will kill people," Holmstead told the Times. "We want to lay out our vision for a multipollutants strategy and show that we will achieve better environmental protection at lower cost."

The Times quoted other EPA officials as saying the delay was also because that agency and Department of Energy officials disagreed if the program under review -- new source review -- inhibited energy production. They also did not agree on how much it needs to be changed.

The review mandates the installation of the latest pollution-control equipment when new power plants, refineries and industrial facilities are built or upgraded. It was set up by the Clean Air Act of 1970 to cut smokestack emissions.

Energy Secretary Spencer Abraham has backed a thorough overhaul, which would reduce the burden on utilities and oil companies and potentially end some existing enforcement actions, the Times quoted the sources as saying. EPA chief Christie Todd Whitman proposed more modest revisions, however. Her proposal would make the program more flexible, but preserve existing lawsuits and enforcement actions.

Spokesmen for both agencies denied a significant split.



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According to the Times, critics of the new source review, mainly utilities, say the Clinton administration used it as a backdoor way to force coal-fired power plants to install expensive technology or face closure. Industry sources told the Times the delay was unexpected because they had hoped for at least a general commitment to fix perceived flaws in the new source review program.

"Better to have a clear and complete set of facts on which to base this decision than to adhere to a 90-day deadline and risk a rush to judgment," said Dan Riedinger of the Edison Electric Institute, a utility industry group.

LOAD-DATE: August 16, 2001

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U.S. Newswire

August 14, 2001 Tuesday

SECTION: National Desk

LENGTH: 519 words

HEADLINE: Earthjustice: Administration Continues to Plan Energy Policy Behind Closed Doors; EPA Report Withheld from Public

DATELINE: WASHINGTON, Aug. 14

BODY:

Earthjustice called the Environmental Protection Agency's decision not to release their final New Source Review report to the public the latest attempt by the Bush administration to shroud the energy policy process in secrecy. The agency was ordered to review the New Source Review program and its impact on energy investments as part of President Bush's national energy plan. The report on that review was scheduled for release this Friday. EPA announced today that the report will not be released to the public until after it has been used to create a legislative strategy, expected sometime in September.

"EPA's decision not to release this report should raise a lot of eyebrows," said Nathalie Walker, managing attorney for Earthjustice's New Orleans office. "If this report were based on the facts instead of political motives, then the administration would have nothing to hide."

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New Source Review is the Clean Air Act program that protects Americans from excessive pollution from power plants and refineries. NSR, which applies to new facilities as well as existing facilities planning major modifications that result in significant pollution increases, requires power plants and refineries to apply for a permit that requires installation of modern pollution control equipment. This program is crucial for preventing further deterioration of air quality.

"Modern pollution controls have been an important part of the Clean Air Act since it was enacted in 1970," said Sandra Schubert, legislative counsel for Earthjustice. "EPA's NSR background report showed that there is no factual support for rolling back the program. The public was poised to hear if the final report would maintain that message, or if the Bush administration would once again cave to political pressure from its industry contributors. Instead, the American people are being kept out of the loop."

The pollution emitted by these facilities contains known human carcinogens like dioxin and benzene and respiratory irritants like sulfur dioxide. EPA has estimated that 80 percent of oil refineries are in violation of New Source Review and that increased enforcement could prevent thousands of deaths each year. Communities near these facilities, whose residents are predominately African American and Latino, bear a disproportionate burden of toxic pollution. The Bush administration is still considering rolling back the NSR program despite the high public health costs that communities situated next to refineries pay. Concerned citizens already have submitted over 130,000 public comments and spoken at four public hearings in support of NSR.

"There are a lot of unheard voices in this debate," said walker. "The national energy policy was designed behind closed doors and was filled with handouts to industry. The NSR review process was designed to be public and to respond to community concerns. But now this 'public' process is being taken hostage by the administration. The people living in the shadows of refineries are fighting for their lives while the bureaucrats in Washington are ignoring public health."

CONTACT: Sandra Schubert, 202-667-4500, ext. 216, or 202-329-1554 (cell); or Suzanne Carrier, 202-667-4500, ext. 213, both of Earthjustice

LOAD-DATE: August 14, 2001

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The Denver Post

August 14, 2001 Tuesday 2D EDITION

SECTION: DENVER & THE WEST; Pg. B-01

LENGTH: 563 words

HEADLINE: Seeking balance for the planet

BYLINE: Diane Carman,

BODY:

The Los Angeles Times says President Bush this week will announce a plan to roll back a key provision of the Clean Air Act.

The 'new source review' requires companies to use state-of-the-art technology to reduce pollution before they expand or put new facilities into production. Enforcement of the law was a priority in the Clinton administration. But Bush administration officials say new energy generation is being hindered by the requirements.

So don't expect Bush to look too closely when he visits Rocky Mountain National Park today. There are some things he probably doesn't want to see.

In the park, damage from air pollution is everywhere.

'We have one of the highest nitrogen deposition rates in the U.S.,' said Terry Terrell, research administrator for Rocky Mountain National Park.

While it may not be apparent to your average president or tourist, the problem is unmistakable to scientists.

It seems when you generate electricity, drive a car, run a factory hog farm or engage in a whole variety of other widely accepted activities, you release a lot of nitrogen along the way.

It hangs around in the atmosphere, just waiting for that moment when it can become one with moisture molecules and fall to the ground in the form of precipitation.

Since the uplift from the mountains encourages that natural process in the park area, nitrates are found in high concentrations in that fragile ecosystem.

For example, Terrell said, 'There are no pristine lakes left in Rocky Mountain National Park. Every one of them is affected by nitrates.'

That means excess algae growth, higher acid levels and threatened aquatic life.

But there's more.

Every tree, every bug, every part of the ecosystem is affected by nitrates.

The endangered greenback cutthroat trout whose eggs were plucked from park streams to stock other parts of the state are now threatened by the higher acid levels.

'It's not exactly the same as the problem in Adirondack State Park, where there are many lakes without any fish at all, but it's a serious concern here,' she said.

Terrell said research projects are underway to collect data and evaluate the impacts on the park. Only then will management officials be able to develop proposals to address the problem.

'We all still have to survive in this world. I realize that. But the question is, where's the balance?'

Terrell said some solutions may be fairly painless.

'Society has to make some decisions. We all like our cars, our electricity, our bacon. But do we want to live in a lonely world where we have wiped out everything but crows and magpies and coyotes and cockroaches?'

'There might be choices we all are willing to make when we recognize what we're giving up,' she said.

Maybe, she said, the answer is as simple as an individual choosing to drive a smaller truck or to recycle to conserve electricity in production of aluminum cans. Or maybe we'd all be willing to support development of new technologies that would curb pollution.

At the very least with all that's at stake it seems that requiring polluters to use the best technology available is not too much to ask.

Diane Carman's commentaries appear here Tuesday, Thursday and Sunday.

E-mail: dcarman@denverpost.com

LOAD-DATE: August 14, 2001

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Chemical Market Reporter

August 13, 2001

SECTION: No. 7, Vol. 260; Pg. 1 ; ISSN: 1092-0110

IAC-ACC-NO: 77335340

LENGTH: 931 words

HEADLINE: ACC Urges EPA to Expand Review of NSR Program; American Chemistry Council, Environmental Protection Agency, New Source Review; Brief Article

BYLINE: Hess, Glenn

BODY:

THE AMERICAN Chemistry Council (ACC) and other industry groups are asking the Environmental Protection Agency (EPA) to expand its review of a controversial air pollution control program to include all affected industrial facilities.

"We urge you to ensure that the administration's review of the New Source Review (NSR) program addressed the impact on energy production, efficiency and environmental protection at the 22,000 industrial facilities affected by NSR," an industry coalition said in a letter to EPA administrator Christie Whitman.

The letter was signed by 10 groups representing the chemical, iron and steel, pulp and paper, and automobile industries.

As part of its national energy policy, which was released on May 17, the Bush administration launched a 90 day review of NSR regulations for their impact on investment in new utility and petroleum refining capacity, energy efficiency, and environmental protection.

In a letter last month to Sen. Harry Reid (D-Nev.), Mrs. Whitman affirmed that the scope of EPA's final report on NSR would be limited to the energy sector.

But according to the industry coalition, NSR-related problems are not limited to electric utilities and refineries.

"The NSR program makes it more difficult for US industries to remain competitive in world markets, contrary to the intent of Section 811 of the 1990 Clean Air Act Amendments to reduce or eliminate any competitive disadvantage domestic manufacturers face," the group's letter says.

The NSR program calls for the installation of strict pollution-control

equipment by new stationary sources of air pollution, as well as existing sources that undertake major modifications.

But chemical manufacturers and other industries have long complained that the NSR program makes it difficult to expand capacity or install technological improvements to enhance production or efficiency.

"New Source Review regulations block energy efficiency improvements and have a negative impact on price and supply of natural gas, electricity, coal and oil in regional and national markets," the coalition charges.

"The NSR program also discourages process improvements and modernizing production-essentially getting more product for less feedstock, energy and raw material," the letter adds.

"The manufacturing industries urge you to support EPA reforms that target the core NSR program, enabling industries to improve efficiency of existing equipment and providing clear and consistent rules regarding NSR applicability," the coalition told Ms. Whitman.

However, environmentalists charge that EPA's ongoing examination of the NSR program amounts to "an unprecedented assault" on a core program of the Clean Air Act.

At a Washington, D.C. news conference last week, activists said EPA is considering a plan favored by the electric utility industry to scrap the existing NSR pollution control program in favor of a less costly system.

"Now a coalition of industries is seeking a similar easing of enforcement," says Frank O'Donnell, executive director of the Clean Air Trust, an umbrella group of environmental organizations. "By encouraging outlaw electric power companies to believe they can get a break, Whitman has set off a polluter feeding frenzy," he charges.

But industry officials maintain the NSR program creates problems for many business sectors, and EPA should examine its impact on all US industries, including manufacturing.

Ted Cromwell, coleader of the ACC's air team, says the NSR program is a "significant impediment and disincentive" to the chemical industry's ability to increase energy efficiency, expand energy generation and improve air quality.

"We strongly encourage the administration and EPA to take a hard look at comprehensively fixing the NSR program to make it more reasonable," says Mr. Cromwell. "We feel that it would be extremely shortsighted to only fix

some  
problems with NSR, while failing to address the concerns of industry  
sectors  
like ours that contribute to energy efficiency and conservation."

Chemical plants, he points out, perform ongoing maintenance and process  
improvements to keep their equipment operating safely, reliably and  
efficiently.

Modifications are also made to regain lost capacity, produce and use  
energy more  
efficiently, reduce emissions and provide competitive flexibility.

"But according to recent EPA interpretations, these improvements are  
subject  
to this exhaustive NSR process," says Mr. Cromwell. "Consequently,  
companies are  
abandoning necessary improvement projects, many of which offer real  
environmental and energy-related benefits."

EPA should apply a "reasonable interpretation of the routine  
maintenance,  
repair and replacement exclusion that allows NSR exemption for those  
activities  
that are typically performed at similar facilities," according to the ACC  
official.

The agency should also focus NSR applicability "on those modifications  
that  
result in real emissions increases," he adds. "These changes would result  
in a  
streamlined regulatory permitting program that encourages beneficial  
projects  
that promote conservation and investment in the development of cleaner  
and more  
energy-efficient technologies."

Environmentalists dismiss industry assertions that NSR prevents them  
from  
improving energy efficiency, and insist the program is triggered only if a  
facility increases emissions of pollutants.

"If they don't increase pollution, they don't get new source review,"  
says  
John Walke, an attorney with the Natural Resources Defense Council.

IAC-CREATE-DATE: August 21, 2001

LOAD-DATE: August 22, 2001

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Coal Outlook

August 13, 2001

SECTION: Vol. 28, No. 33

LENGTH: 309 words

HEADLINE: EPA said poised to modify NSR from Clinton years

BODY:

The Environmental Protection Agency will reportedly urge President Bush to soften the hard line that the Clinton administration took against coal-fired power plants when it issues its findings from a 90-day analysis of the federal New Source Review policy. The findings are due Aug. 17.

Both the New York Times and Washington Post recently reported that the administration would look to relax Clinton's aggressive NSR action, which sought emissions cuts from new or modified power plants. It was in the name of NSR that EPA and the Justice Dept. sued dozens of coal plants in the South and Midwest in late 1999, alleging the plants had hiked their megawatt output without installing required pollution controls (CO 5/14).

But President Bush's national energy policy -- which triggered this 90-day review -- hinted that the administration might drop the litigation and look for settlement (CO 5/21).

An Edison Electric Institute spokesman said the administration has listened to utility concerns that overzealous NSR enforcement can actually discourage important efficiency upgrades, but has made no promises.

Although easing NSR enforcement would not necessarily mean the administration will drop its litigation, it would give the power plants a stronger legal hand if the Bush administration "ultimately finds the lawsuits were based on a misinterpretation of the Clean Air Act," a source noted.

Ironically, EPA Administrator Christie Whitman approved New Jersey joining in the EPA suit against the power plants when she served as governor there.

An EPA spokeswoman in Washington, D.C. denied that her organization, and other participating federal entities, have made up their minds on the power plant rules. The NSR study has not been completed, no conclusions have been made, "and anything else is speculation," the spokeswoman said.

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Coal Outlook

August 13, 2001

SECTION: Vol. 28, No. 33

LENGTH: 220 words

Page 54



HEADLINE: KFx applauds NSR decision

BODY:

On Aug. 9, KFx Inc. said it backs the U.S. Environmental Protection Agency's pending decision to scale back New Source Review regulations from the Clinton era (see story above).

"EPA's conclusion allows existing coal-fired utilities to continue operating the 600-800 affected plants without being forced to install expensive scrubbers or shutting down," said KFx, a Colorado-based marketer of an upgraded coal technology and systems to make power-plant boilers more efficient.

"This is what KFx is all about," said Ted Venners, Chairman, President and CEO of KFx. "Our product, K-Fuel(R) Plus, exceeds existing standards for SO2 and NOx emissions as well as most proposed mercury regulations. Combined with our Pegasus neural network software to optimize boiler performance, K-Fuel(R) Plus is the logical solution for these older boilers."

KFx said that numerous utilities have expressed interest in pre-combustion fuels solutions, but have been reluctant to make the commitment without some certainty and direction from EPA.

"Let's solve the problem before it becomes a problem," said Venners. "Once you combust coal, you get nasty gases that need to be cleaned up. We believe that it's cheaper, smarter, and healthier to process the coal before it's burned, then burn it efficiently using modern software."

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OCTANE WEEK

August 13, 2001

SECTION: Vol. 16, No. 33 >TK

LENGTH: 870 words

HEADLINE: EPA'S NSR STUDY DUE THIS WEEK; AGENCY WINS FIRST NSR TRIAL

BODY:

The U.S. EPA is set to release its 90-day review of the New Source Review (NSR) program Aug. 17, a little more than two weeks after the agency won the first NSR case it tried rather than

settled. The U.S. District Court in Wisconsin found Murphy Oil made major modifications to the sulfur recovery plant at its Superior, Wis., refinery without obtaining permits required by the Clean Air Act and withheld relevant information about the project from regulators.

A spokesperson for the U.S. Department of Justice (DOJ) said the government tried to reach a settlement with Murphy Oil but that "a settlement could not be reached." DOJ

declined to comment on the terms that were discussed.

"This is the first case brought under NSR-CAA that went to trial," said

DOJ's Christine Romano. "The U.S. has reached several settlements under NSR." Settlements have been reached

with BP, MAP, Motiva, Equilon, Deer Park Refining Co. and Premcor, but controversy over NSR and the settlements are increasing ahead of EPA's study release date this week

(see related story, this issue).

DOJ's trial against Murphy resumes Oct. 10 to consider "the amount of

civil penalties to impose and the pollution-control measures that Murphy must undertake,"

Romano told Octane Week.

There was no comment from Murphy or its attorneys by Octane Week's press time.

DOJ's first claim alleged Murphy made major modifications to the sulfur

recovery unit at its Superior, Wis., refinery in 1987-1988 and in 1991-1993 and that each project

resulted in a net emissions increase of sulfur dioxide of more than 40 tons a year, obligating the

refiner to obtain a Prevention of Significant Deterioration (PSD) permit.

The government's third claim said Murphy did not provide all the relevant

information needed to determine whether the modifications it proposed to make in 1993 -

routing its No. 2 distillate unifier into the sulfur recovery unit - would result in a significant increase

in emissions from the sulfur recovery unit. Murphy admitted that it withheld certain consultant reports but denied

anything in the reports was relevant in the sense that it would have affected the permitting

authority's decision-making.

DOJ's fourth claim alleged that the modifications to the sulfur recovery

unit gave it the

capacity to process more than 20 long tons a day of sulfur--that is, its "throughput" capacity has exceeded 20 long tons a day of sulfur, making it subject to New Source Performance Standards (NSPS).

Judge Barbara Crabb concluded that Murphy failed to submit to the Wisconsin Department of Natural Resources relevant information on the proposed modifications of the

No. 2 distillate unifier. Had Murphy submitted the information, the department would have

known that defendant did not qualify for a synthetic minor permit but needed a PDS permit

and was required to comply with the NSPS and Best Available Control Technology (BACT), she said.

"I conclude also that defendant knew that the withheld information would have been relevant to the department's permitting decision and should have been disclosed," Crabb wrote in the Aug. 1 decision.

#### NSR Issues Addressed

In writing about NSR, Crabb noted that NSPS apply to any modification to a plant that results in any increase in emissions but not to any Claus sulfur recovery plant

of 20 long tons/day or less. Murphy and the EPA disagreed whether the 20 long tons/day

limit refers to the amount of sulfur produced or to the amount of feed coming into the plant, with feed consisting of the streams of sour water stripper off-gas and amine acid gas.

"Defendant is not credible when it takes the position that it would not have known in 1990 or 1991 that the 20 long-tons-a-day limitation referred to input," the judge said,

finding that "the design capacity of defendant's sulfur recovery unit exceeded 20 long tons/day.

It is true that defendant did not run it at this level on a frequent basis but the determining point is that defendant could operate the unit at this level if it wanted to or if the acid

feed loads required it. Moreover, the evidence is that, on occasion, defendant did operate the unit at more than 20 long tons/day.

The judge ordered that Murphy is in violation of federal and state laws for making

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modifications to its sulfur recovery unit in 1987-88 and 1991-93 without securing a PSD permit (Count 1); for failing to apply BACT in the 1987-88 and 1991-93 modifications to the unit; for failing to turn over relevant information that would have affected the decision making in connection with the modifications it made to the No. 2 distillate unifier in 1992-93 (Count 3); and for failing to operate its sulfur recovery unit in conformance with the applicable NSPS (Count 4).  
Judge Crabb found Murphy liable for Clean Water Act violations but dismissed allegations of violations of the Resource Conservation and Recovery Act.  
-Carol Cole

>TK

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OCTANE WEEK

August 13, 2001

SECTION: Vol. 16, No. 33 >TK

LENGTH: 455 words

HEADLINE: MORE THAN HALF OF U.S. REFINERIES VIOLATE NSR, GREEN GROUP'S TV AD SAYS

BODY:

Environmental groups are taking to the airwaves with television ads aimed at building grassroots support for the Clean Air Act's New Source Review (NSR) program. One television ad that began running in Georgia last week claims that EPA estimates 50% - 80% of refineries violate NSR.

That ad, paid for by Save Our Environment and Georgia AirKeepers Campaign, aired in Atlanta. Others will air Tallahassee, Fla., Philadelphia, Washington, D.C. and Manchester, NH. Sponsors seek to shine the spotlight on the Bush administration-ordered, multi-agency review of NSR. Environmentalists call the review an effort to undermine a successful program that has resulted in numerous settlements of alleged violations and substantial reductions in air

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CEQ 000212

emissions.

"We will explain why the lobbyists are wrong - why the polluters should not be pardoned - and why Whitman should not try to weaken the Clean Air Act," said the Clean Air Trust's Executive Director Frank O'Donnell.

The ad airing in Georgia features alternating pictures of drinking water, the Alaska coast and electric power plants. "First it was arsenic in the water we drink," the announcer begins. "Then it was oil drilling on protected lands. Now it's more smog in the air we breathe."

The spot continues quoting a Wall Street Journal article that said more than 100 companies are under investigation by the EPA.

The announcer encourages viewers to contact Georgia Sens. Zell Miller (D) and Max Cleland (D). "Miller and Cleland can urge President Bush to abandon efforts to weaken New Source Review in order to protect Georgians from more air pollution," the ad says.

#### EPA Claims No Decision Yet on NSR

A spokesperson for the U.S. EPA denied press reports that agency has determined the New Source Review (NSR) process should be changed. The agency will issue a report to the White House on Friday, Aug. 17, as called for by the National Energy Policy Development group. Reports this week in the New York Times and the Washington Post indicated EPA had decided NSR should be scaled back.

"That made it sound like it has been signed, sealed and delivered," EPA's Prudence Goforth said. "That's ridiculous. No decision has been made on the report's content."

EPA held public meetings last month in Cincinnati, Ohio, Sacramento, Calif., Boston, Mass., and Baton Rouge, La., at which industry testified about the complexities of the program and its adverse impact on energy supply. EPA's final report is expected to include recommendations on how to improve NSR.

-Carol Cole

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The Plain Dealer

August 12, 2001 Sunday, Final / All

SECTION: FORUM (SUNDAY) - EDITORIALS; Pg. G2

LENGTH: 378 words

HEADLINE: Cleaning up the Clean Air Act

BYLINE: Plain Dealer

BODY:

Utility companies love the U.S. Environmental Protection Agency's suggestion that it might eliminate several air pollution regulations and replace them with a pollution credits program.

Environmental groups detest it, fearing that rich power companies would just buy their way out of the Clean Air Act.

But U.S. EPA Commissioner Christine Todd Whitman's broad plan to reduce three major pollutants - nitrogen oxide, sulfur dioxide and mercury - by credit-trading is a good idea: There must be a simpler way to clean up power plants without the bickering, delays and lawsuits employed by all sides.

Meanwhile, it wouldn't hurt if the administration found some way to decrease carbon dioxide emissions, which some scientists believe contributed to global warming.

A cap-and-trade program may be the answer to all of this. But it should include some kind of mechanism to make sure that people living downwind of polluting plants don't suffer.

That means Whitman should maintain the "new source review" regulation, which requires the installation of advanced pollution controls when power plants are expanded or modified.

New source review helps decrease pollution nationally and in the plants' own back yards, often close to cities and suburbs.

Utility companies oppose the requirement because they say it can be costly, arbitrary (energy companies and the EPA have been fighting in court over the definition of maintenance and expansion) and in some cases, nearly impossible to meet.

Ralph DiNicola, a spokesman for FirstEnergy Corp., points to one of its

coal-burning plants near Steubenville that has no place for a gigantic scrubber and other pollution controls.

But he also acknowledged that it is the only one of FirstEnergy's 16 plants that would struggle to meet new source review standards. Exemptions can be made for the relatively few such plants.

As a rule, plants undergoing expansion, which should be clearly defined, should get new scrubbers and other pollution controls, not just a paint job and a little tinkering under the hood.

The Clean Air Act should be tweaked in both directions, giving the energy industry the certainty and consistency that it craves and assuring citizens that streamlining the act doesn't mean strangling it.

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St. Petersburg Times

August 12, 2001, Sunday, 0 South Pinellas Edition

SECTION: BUSINESS; COLUMN; Pg. 1H

LENGTH: 1083 words

HEADLINE: Under Bush, tough regulation of power industry is over

BYLINE: ROBERT TRIGAUX

BODY:

When the Environmental Protection Agency cracked down on air pollution by power companies, TECO Energy's coal-guzzling Tampa Electric Co. thought it best to jump ahead of the pack.

So in March 2000, one of Florida's worst air polluters agreed to pay a \$ 3.5-million fine while spending \$ 1-billion to fix its coal-fired plants and make up for past environmental damage.

But by choosing to be the early bird, TECO did not get the worm. It got the shaft.

The EPA already had sued nearly a dozen other heavy-polluting power companies targeted for similar fines and pollution clean-ups. Still other utilities were under investigation.

Now many of these companies look well positioned to escape the EPA's wrath.

Among those likely to be rescued: St. Petersburg's Florida Power, whose maintenance work at its Crystal River coal plants is under review by the EPA.

What changed? Certainly not the quality of air in America or the growing evidence of global warming.

Last year, the EPA says, Florida ranked fourth in the nation in total tons of utility-related pollution. TECO and Florida Power (now owned by Progress Energy of Raleigh, N.C.) both ranked among the top 25 polluting power companies in the nation.

The key difference is that TECO's deal was cut with the EPA during the Clinton administration.

After George W. Bush took office in January, a flurry of powerful lobbying by the electric power industry began in earnest. Now the EPA's war on aging and dirty coal-driven power plants has been effectively emasculated.

Buried in the fine print of the White House's National Energy Policy, a task force initiative led by Vice President Dick Cheney to relax controls on and expand the U.S. energy market, is a directive to the Justice Department to review existing government lawsuits against polluters. Now some agreed-upon settlements with power companies, plus others that had been in the works, are in doubt.

The message: In a Bush administration keen on keeping U.S. electricity cheap and plentiful, the tough EPA crackdown is over.

The power industry's dispute with the EPA lies in how to interpret federal rules on power plant maintenance. Any utility that makes major modifications to its power plants must submit its plans to the EPA for a "new source review" -- part of the Clean Air Act.

The electric power industry says the EPA is overreaching when routine or low-level maintenance at older, coal-fired plants is considered modifications that require expensive new scrubbers and other antipollution equipment.

The EPA has argued utilities and oil refineries downplayed the extent of their plant overhauls. That way, they avoided EPA triggers for new anti-pollution controls.

That's why the EPA started suing TECO,

Ohio's Cinergy, Virginia Electric and other midwestern and southern power



companies laden with older and heavy-polluting coal plants.

Under pressure from Bush officials, the EPA faces a Friday deadline on how it will interpret rules requiring reduced emissions from power plants that are upgraded or expanded. Experts expect a new Bush initiative to relax enforcement of the Clean Air Act, which administration officials consider an impediment to growth in electricity generation.

On June 28, the Wall Street Journal reported that Virginia utility Dominion Resources Inc. was about to sign a consent decree with the Justice Department promising to comply with a \$ 1.2-billion pollution-control upgrade. But government negotiators intervened and advised Dominion to wait for the outcome of the EPA review on Aug. 17.

(As recently as Thursday, the Justice Department disputed claims it has intentionally slowed action against refineries and aging power plants.)

If only TECO had not been such a Johnny on the spot last year to comply with the old EPA's demands!

Odds look pretty good it could have whittled down or even avoided the \$ 3.5-million fine and probably had more time to upgrade its coal plants.

TECO's trying to put a positive spin on the fact that most other power companies in the EPA's sights may avoid a big financial hit.

TECO's already paid the EPA-imposed \$ 3.5-million fine. But the Tampa company says it's busy converting its six coal-fired plants to natural gas at its Gannon power facility. The Gannon site, where an explosion killed three workers and injured dozens in April 1999, generates about 40 percent of the utility's electricity.

TECO, company spokesman Ross Bannister said Friday, has no plans to try to renegotiate its EPA settlement.

Settling with the EPA last year was the "right thing to do" at the time, he said. "We felt over the long run that environmental regulations will continue to tighten, so resolving this situation early was the most responsible thing to do."

Others in the power industry obviously disagree.

Atlanta's Southern Co., which owns Gulf Power on Florida's Panhandle, hired former Republican National Committee chairman Haley Barbour to push the power company's case with senior Bush aides.

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The well-financed Edison Electric Institute and lobbyist C. Boyden Gray, who served as counsel to Vice President George Bush in the Reagan administration, also have pressed the cause of utilities and refineries.

For the Tampa Bay area and Florida, TECO's decision to switch many of its dirty, coal-fired power plants to natural gas is a welcome, if belated, environmental decision. In the 1980s and most of the 1990s, TECO's spokesman took remarkable pride in bragging how TECO's heavy dependence on coal assured the company of a low-cost and secure source of power to generate electricity.

Don't be surprised if the switch to gas later drives up electric rates for Tampa Electric customers.

Sharp demand in natural gas is outstripping supply -- hence the new push to drill near Florida in the Gulf of Mexico -- and sent prices soaring last year. And alternative sources of energy, including solar and wind power, still receive little support from the federal government.

The result? For all its pollution problems, coal is rapidly regaining popularity as a fuel -- just as the country wrestles with rising demand for power and threats of regional blackouts.

Last week in the nation's capital, the heat index routinely topped 100 degrees. Electricity demand strained regional capacities. There's probably a political lesson here: Never debate a long-term, national energy policy during a heat wave.

-- Robert Trigaux can be reached at [trigaux@sptimes.com](mailto:trigaux@sptimes.com) or (727) 893-8405.

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The Guardian (London)

August 9, 2001

SECTION: Guardian Foreign Pages, Pg. 12

LENGTH: 584 words

HEADLINE: US lets fight against smog disappear into thin air: Power industry wins weaker enforcement on air pollution

BYLINE: Julian Borger in Washington

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CEQ 000218

BODY:

President Bush plans to relax the enforcement of smog regulations by the Environmental Protection Agency (EPA) after intensive lobbying from the power generating industry, it was reported yesterday.

Under the Clinton administration, the EPA sued more than 50 power plants for trying to exploit loopholes in the Clean Air Act and avoid installing equipment to cut emissions.

But, after a three-month policy review by the Bush administration, the EPA has decided on a far less aggressive approach, suspending or toning down its legal enforcement. Dozens of lawsuits have now been put on hold.

Since assuming office in January, President Bush has sided with industry on a number of key environmental issues, rejecting the Kyoto treaty on global warming and compulsory limits on carbon dioxide emissions.

Environmental groups described this latest move as a monumental setback for efforts to control air pollution. Frank O'Donnell, the executive director of the Clean Air Trust, said yesterday that it could cost the lives of thousands of people vulnerable to poor air quality, including the elderly and sufferers from asthma.

Mr O'Donnell also warned that weaker EPA enforcement would trigger "a polluter feeding frenzy", as other industries lobbied the administration for exemptions.

According to the Washington Post, the EPA is due to deliver its proposals to the white House next week. They involve the "grandfather clause" in the Clean Air Act, which exempts old coal-burning power stations from the environmental standards demanded of new plants.

Under the act, the old plants are allowed to carry out routine repairs and maintenance, but EPA lawyers in the Clinton era accused many energy companies of expanding and rebuilding their own plants under the guise of ordinary repairs. The agency took the companies to court under a scheme called New Source Review.

In at least two cases, according to the Clean Air Trust, power companies were ready to concede and install environmental upgrades but were persuaded by

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EPA officials to wait until the new regulations were developed.

In their drive to win exemptions from the Clean Air Act, electricity generating companies banded together to form the Electric Reliability Coordinating Council, a lobby group which employs a string of well-known Republican veterans, including the former head of the party's national committee, Haley Barbour, and a former White House counsel, C Boyden Gray.

Scott Segal, a lawyer for the group, told the Washington Post: "New Source Review discourages companies from performing routine maintenance and therefore ultimately increases pollution."

Mr O'Donnell said that the power industries had failed to provide documented proof that they were being unfairly targeted and dismissed their complaints as rhetoric.

Power stations were the country's largest source of carbon dioxide, he said, and were responsible for about a quarter of the emissions responsible for smog. If the EPA's lawsuits had been successful, he argued, they would have reduced harmful emissions by over a million tonnes a year.

The Washington Post also reported yesterday that plans to launch Triana, a Dollars 100m (pounds 70m) space observatory designed to monitor global warming, have been suspended following Republican opposition in Congress and budget pressures within Nasa.

Triana, a project linked to former vice-president Al Gore, no longer has a space reserved on any shuttle mission.

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Charleston Daily Mail

August 08, 2001, Wednesday

SECTION: News; Pg. P6C

LENGTH: 501 words

HEADLINE: Official says rule changes OK Callaghan says programs should be more flexible

BYLINE: BRIAN BOWLING

BODY:

DAILY MAIL STAFF

The state's environmental chief said this morning that news of a possible overhaul of federal air pollution regulations doesn't upset state officials.

"They change them so often, certainly it doesn't cause us heartburn. We'll adjust to them," said Environmental Protection Secretary Mike Callaghan.

According to a story in the Washington Post, the U.S. Environmental Protection Agency has concluded that the Clinton administration was too aggressive in trying to reduce emissions from older coal-fired power plants.

Callaghan said he hadn't seen the EPA report, but the administration generally agrees that the clean air programs could be more flexible.

"The governor stands for a common-sense approach to the implementation of the Clean Air Act," he said.

Called the New Source Review program, the regulation requires any new plant or any existing plant undergoing a major modification to meet new air pollution standards. The Clean Air Act originally exempted older plants from the new standards under the rationale that the aging plants would be eventually decommissioned.

When utility companies began renovating the older plants to extend their lives, however, environmental groups and northeast governors protested and even sued, including former New Jersey governor Christie Todd Whitman, who is now the director of EPA.

In the Washington Post story, Whitman says the administration is considering a proposal that would consolidate "several contentious air pollution control programs" into a single program proposed by the electric industry.

Callaghan said he's not likely to endorse the utility plan, but he does like the idea of putting the myriad air regulations into one enforceable package.

"I think this administration is for taking a look at the big package and figuring out what's the most reasonable way to regulate the utilities," he said.

A good example is the EPA's nitrogen oxide emission budget, which limits the growth of new power plants in West Virginia.

"There's an inherent deterrent to bringing in new power companies. That doesn't make much sense to me because if you bring in new power plants you're going to bring in the better ones, with more efficiency," Callaghan said.

Another example is the federal government's haze regulation that attempts to regulate haze generated by power plants from their effects on federally owned property. In West Virginia, that means the EPA is using the Eastern Panhandle to regulate Putnam County.

"Why look clear to Dolly Sods to figure out what haze is blowing from Nitro. That makes no sense to me," Callaghan said.

The state recently pulled out of the regional haze lawsuit because he decided it was a waste of public money to pursue litigation that isn't going to result in a comprehensive air regulation, Callaghan said.

"I just kind of figured it wasn't worth the fight," he said.

Writer Brian Bowling can be reached at 348-4842 or by e-mail at brianbowling@dailymail.com.

LOAD-DATE: August 09, 2001

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The Atlanta Journal and Constitution  
August 7, 2001 Tuesday, Home Edition

SECTION: Editorial; Pg. 8A

LENGTH: 560 words

HEADLINE: OUR OPINION: Bush, power companies assuring air stays dirty

SOURCE: AJC

BODY:

We Georgians can be proud. We have two of the dirtiest coal-fired power plants in the nation, and our own Atlanta-based Southern Co. is leading a national campaign to make sure they stay that way.

And by all appearances, it's soon to get a major boost in that effort from the Bush administration, courtesy of its proposed rewrite of the Clean Air Act. The losers in all this are likely to be the residents in communities that are struggling to achieve healthful air, such as metro Atlanta and at least three other Georgia cities.

The first indications of the Bush administration approach emerged from Vice President Dick Cheney's energy report last May. That document directed the U.S. Environmental Protection Agency to suspend enforcement efforts while it

"reviewed" regulations requiring old coal plants to upgrade pollution controls when their emissions expand.

Since then, the administration has sought to portray the law, known as New Source Review, as a key obstacle to meeting the nation's growing electricity needs. At the urging of the Southern Co. and other utilities, the administration appears to be building a case for repeal.

The law has been on the books since 1977, when power companies fought to exempt their old coal plants from upgrading to more-stringent pollution controls, arguing that the plants would be retired in a matter of years. But because it was so much cheaper to extend the life of the old plants than to build new, cleaner plants, utilities instead have been squeezing more out of their existing plants.

The administration's own assessment of the effects of New Source fails to establish it as a serious hindrance to new generation capacity. Last year, more than 10,000 megawatts of new capacity came online, and as much as 400,000 megawatts have been permitted or are under construction. Georgia, for its part, is a net exporter of electricity.

By the mid-1990s, officials at the Environmental Protection Agency had begun to suspect the utilities were abusing the New Source provision by gradually revamping coal plants without modernizing pollution controls. Such actions, they said, clearly subverted the Clean Air Act's aim of making each power plant cleaner and cleaner over time. The EPA in 1999 filed a sweeping lawsuit against 11 utilities in the coal-dependent South and Midwest, including the Southern Co.

Two companies had settled with the EPA --- Virginia Electric and Tampa Electric --- and others were negotiating to do so when Cheney and company put the entire effort on hold. The settlements had called for the utilities to spend billions in plant overhauls that would have removed millions of tons of pollutants from the air.

There may well be a simpler, less heavy-handed way to accomplish the goals of achieving air that is safe for kids, the elderly, asthmatics and everyone else who breathes.

Don't look for that from the Bush administration, however. It's taking its advice from a parade of GOP big names hired by a lobbying group in which the Southern Co. has a lead role: Remember Haley Barbour, former chairman of the

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Republican National Committee; or Marc Racicot, the former Montana governor who served as a Bush spokesman during the Florida recount; or C. Boyden Gray, white House counsel in former President Bush's administration?

If only our lungs had as much clout.

GRAPHIC: Graphic:

Illustration of scientists ignoring pollution. / BARBARA CUMMINGS / Los Angeles Times Syndicate

LOAD-DATE: August 07, 2001

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Sacramento Bee

August 5, 2001, Sunday METRO FINAL EDITION

SECTION: MAIN NEWS; Pg. A1; POWER CRUNCH

LENGTH: 1380 words

HEADLINE: More power, cleaner skies To build generators, companies must cut pollution elsewhere.

BYLINE: Carrie Peyton and Chris Bowman Bee Staff Writers

BODY:

Take a region with air so bad it flunks federal standards. Add a demand for electricity that nearly has outpaced local power plants. Mix in a forecast for furious growth.

The resulting brew has produced the Sacramento region's latest power struggle: Can the smoggy metropolis open its doors to three proposed electricity-generating plants projected to pump 1,000 tons of pollutants into the air every year?

Air quality regulators say yes, provided energy companies can ensure emissions from other area businesses will be cut by more than 1,000 tons a year.

That way, the region's air overall actually would become cleaner as the high-polluting electricity generators go online. So goes the theory of "pollution trading."

"Making the air dirtier ... that is an absolute nonstarter in California," said David Parquet, Enron Corp.'s vice president for project development in the West. To get cleaner air and more power plants, "we have to start thinking a little more out of the box."

To that end, Enron, FPL Energy and the Sacramento Municipal Utility District



have been offering record-high payments to businesses willing to go further than laws require in cleaning up their operations.

In exchange, the energy companies would receive "emission reduction credits" they can use to offset pollution from three power plants proposed for communities ringing Sacramento.

Together, the natural gas-burning generators proposed for Roseville, Rio Linda and the south Sacramento County town of Herald would bring an estimated 1,700 to 2,400 megawatts online between 2004 and 2005.

The projects must undergo public hearings and environmental reviews by the state Energy Commission. They each also need a permit from the Sacramento Metropolitan Air Quality Management District.

Powered by natural gas and steam, and equipped with the best available pollution controls, the plants would produce only a fraction of the pollution of older generators. Yet they still are major polluters subject to the "new source review" provisions of the federal Clean Air Act.

Under the law, developers of power plants, refineries and other high-polluting industrial operations cannot get a building permit in areas that fail to meet federal clean-air standards unless they can more than offset the amount of additional smog that would be generated.

In federally designated "severe non-attainment areas" such as the six-county Sacramento region, major polluting businesses seeking to start or expand operations must eliminate at least 1.3 tons of pollutant for every ton they expect to release.

Ironically, companies have a hard time finding pollution to buy and sell in the Sacramento area, one of the nation's 10 smoggiest urban areas. That's because most smog-causing emissions come from vehicles, and because smog rules have left businesses little room for improvement.

The energy companies said they have made considerable headway, nevertheless, by turning to operations that previously have not been tapped for purchase of pollution credits, such as agricultural burning, unregulated sources such as diesel-powered irrigation pumps, and lightly controlled wheels of commerce such as locomotives.

With energy companies trying to build plants throughout the state, market-driven prices are at an all-time high for the right to spew air pollution.

Air credits now account for close to 10 percent of the cost of a new power

plant in California, Enron officials say. In the past four years, the top credit price in the Sacramento region has quadrupled to \$40,000 per ton of pollutant, according to energy consultants and producers.

"To a degree, no amount of money will get you where you want to be (in the Sacramento area)," said Kelly Brodbeck, an Enron project developer. "And if we don't have cooperation from the regulatory authorities, plants aren't going to get built."

California smog regulators, however, are in an especially cooperative mood these energy-short days. They're under orders from Gov. Gray Davis to accommodate power plant construction as much as they legally can.

The Sacramento region generates less than half its own power, so little that the local grid has approached collapse, utility experts say. They agree that either additional power generation or upgraded transmission is critical to the region's growth.

Statewide, officials are entertaining pioneering proposals to eliminate smog and grit from sources that have been off-limits to credit buyers because the emissions reductions are difficult to track and maintain.

San Diego County regulators last year approved a unique proposal by Calpine to offset pollution from the Otay Mesa power plant by outfitting diesel garbage trucks, street sweepers and sightseeing boats in the region with low-emission, natural gas engines. Such creation of "mobile emissions offsets" set a precedent for other industrial projects.

Energy producers now are eyeing high-polluting tugboats in Long Beach, diesel-belching ferries in San Francisco Bay, and dirt roads that could be paved to cut dust in the Southern California desert community of Victorville, according to Mike Tollstrup, a state Air Resources Board official reviewing power plant development.

In the Sacramento area, Enron is looking at offsetting pollution from its planned 750-megawatt plant in Roseville by paying Union Pacific Corp. to install clean-burning engines in its diesel locomotives at the Roseville switchyard.

Neighbors have complained of increased diesel fumes and rail traffic - dozens of trains daily - following Union Pacific's merger with Southern Pacific Rail Corp. in 1996. Locomotives emit six to seven times as much cancer-causing

soot  
as big-rig trucks, according to state officials.

SMUD, one of the nation's largest municipal utilities, has an agreement pending with an undisclosed owner of 1,600 acres of rice in southern Sutter County to plow under straw waste rather than burn it after harvest, said Mahesh Talwar, an environmental consultant who arranged the deal for the landowner.

Talwar would not divulge exact terms of the deal, but he said the utility would provide the landowner a one-time payment ranging from \$20 to \$70 above the \$35 to \$80 per acre it costs to till the fields. The utility's board of directors Thursday authorized its staff to execute the agreement for purchase of 63 tons per year of emission reduction credits.

FPL Energy, an affiliate of Florida Power & Light, that state's largest utility, has lined up agreements with growers to electrify their diesel-burning irrigation pumps that run without pollution controls, state and local smog officials said.

An FPL representative said the company has secured nearly 90 percent of the pollution offsets needed to build its proposed 560-megawatt plant in Rio Linda, but she would not identify the sources of the credits.

"The more public attention that comes to this, the more difficult it is to obtain these credits at a reasonable price," said spokeswoman Carol Clawson.

Other polluting businesses are paying close attention. They want to make sure some credits are left for them to expand.

Aerojet officials, for example, are scrambling to acquire credits to compensate for the pollution to be released in three test firings of its Atlas V rocket motors.

"It's kind of a double-edged sword," said Carolyn Craig, an environmental specialist for the Rancho Cordova defense contractor. "We're concerned about blackouts here, so we want to support everything that can bring power to the area. But on the other side, the power plants obviously are scooping up what little credits are available."

People living near the proposed plants also have concerns. While air quality may improve in the region as a whole, it may worsen in neighborhoods surrounding the plants.

Emissions posing the greatest health risk to neighbors would be

"particulate matter," microscopic contaminants produced in the natural gas combustion that can lodge in the lungs and spur respiratory and heart problems.

"What kind of stuff is going to be raining down on us?" said Rio Linda resident John Vierria, who lives near the site of FPL's proposed plant.

\* \* \*

The Bee's Carrie Peyton can be reached at (916) 321-1086 or cpeyton@sacbee.com.

GRAPHIC: Sacramento Bee / Scott Flodin How pollution credits work Pollution trading allows growing businesses flexibility in meeting Clean Air Act limits.

Instead of investing in emission controls, companies can pay to have comparable amounts of pollution reduced at other businesses in the area, for less cost. For example:

1. ACME, licensed to emit 100 tons of air pollutants per year, wishes to add operations that will release 50 unpermitted tons of pollutants.
2. A nearby company is willing to reduce emissions.
3. ACME pays the company to install equipment cutting emissions at least 65 tons per year.\*
4. ACME pays for the upgrade and earns 50 pollution credits, enough to obtain a permit for its expansion.\*\*

\*To earn credits, reductions must be 130% of any new-source emissions, and the upgrades must go beyond what is already required by law.

\*\*The balance of 15 pollution credits results in a net gain in regional air quality.

How SMUD is using credits Three power plants are proposed for the Sacramento

area, including one for the Sacramento Municipal Utility District. Together,

they must ensure other businesses will cut pollutants by more than the 1,000 tons per year they will emit.

1. SMUD wants to build a natural gas-burning power plant at Rancho Seco that will emit 230 tons of air pollutants per year. To obtain a construction permit,

SMUD must acquire 299 pollution credits.\*

2. In one of its deals, SMUD agrees to pay a Sutter County rice grower to cease post-harvest burning of crop waste.

3. The Sacramento Metropolitan Air Quality Management District must approve the deal, and the grower must record the prohibition of agricultural burning on property deeds.

4. SMUD banks 63 pollution credits toward the 299 it needs.

\*230 of the credits are needed to offset the power plant pollution. The remaining 69 achieve the required net gain in regional air quality.

1. Proposed SMUD power plant
  2. Rice farmer who signed deal with SMUD
- \* Proposed Enron power plant

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\* Proposed FPL Energy power plant  
Sources: SMUD, OceanAir Environmental, Feather River Air Quality  
Management  
District.

LOAD-DATE: August 6, 2001

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The Baltimore Sun

August 1, 2001 Wednesday FINAL EDITION

SECTION: TELEGRAPH, Pg. 1A

LENGTH: 1591 words

HEADLINE: Bush policy energizes W.Va. coal industry;  
Years of layoffs, mine closings give way to new hope

BYLINE: David L. Greene

SOURCE: SUN NATIONAL STAFF

DATELINE: MOUNDSVILLE, W.VA.

BODY:

MOUNDSVILLE, W.Va. - Coal miners in West Virginia have felt frustrated and helpless for some time.

Removing coal from the ground is the only job many of them know, and they are tantalized by the vast supply that lies buried beneath the tree-clad mountains.

And yet, mines have been shutting down, miners have been losing jobs for the better part of the past two decades, and the industry has been portrayed as dirty and polluting. The federal government has seemed determined to leave much of the coal where it is and to begin relying more on cleaner sources of energy.

Then came President Bush, who says the nation can't turn its back on an inexpensive and plentiful resource that provides 52 percent of the nation's power, especially when the demand for electricity is rising and places such as California have experienced brownouts.

Today, the House will begin debating a slew of his proposals to preserve and enhance coal's central role in energy production while offering \$2 billion in tax breaks to help power plants develop "clean coal" technology. A vote could come as early as tomorrow.

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"The public policy debate, and the direction the Bush administration wants to go, is certainly helpful to us," said Thomas F. Hoffman, a vice president at Consol Energy, a Pittsburgh-based mining company that operates the McElroy Mine here and has just signed an eight-year deal to supply millions of tons of coal a year to power plants owned by American Electric Power, one of the nation's largest utilities.

For the first time in years, the McElroy Mine is expanding. There is a now a second "longwall," the machine that shears coal underground and drops it on a conveyor belt to take it to the surface. That will enable the mine to increase its annual coal production from 7 million to 12.5 million tons. Nearly 300 new miners will be hired soon, and a new parking lot and bathhouse are under construction.

'He's gonna use coal'

Around the state, veteran miners like as Carl "Sonny" Palmer have their jobs back after suffering layoffs. Sipping a beer at Undo's, a bar in Benwood that serves as a hangout for local miners, Palmer says Bush has people like him feeling much more confident these days.

"He's gonna use the coal," Palmer said. "He's told the environmental agencies that we need it. You can do all you want with fans and windmills, but coal is the most efficient and cheapest source of power. There's an abundance of it. When are we going to wake up like the Arabs did with oil?"

While Democrats and Republican moderates have scaled back the Bush energy proposal, environmentalists say the plan still amounts to subsidizing the burning of coal.

"The Bush administration is taking us back to the days when the coal industry was able to pollute without having the costs of the pollution recognized," said John Walke, director of clean air programs at the Natural Resources Defense Council, an organization that has several lawsuits pending against power plants that burn West Virginia coal.

He said his organization plans to fight many of Bush's proposals on energy, but acknowledged that with the new administration, the coal industry is likely headed for a resurgence.

"The climate is so ripe for them," Walke said.

Coal industry officials, who strongly backed Bush during the campaign, celebrated when Bush reversed a campaign pledge in March and came out against tougher federal limits on carbon dioxide. And they have been pleased that the president has continued to oppose the Kyoto Protocol, a global warming treaty favored by many European leaders that would force industrial nations to curb carbon dioxide emissions.

For several years, the coal industry has been asking that federal emissions standards be relaxed, arguing that if the government provides incentives, the industry can be trusted to find cleaner ways to burn coal on its own.

Environmental groups say Bush is determined to pay back his contributors. The coal mining industry poured \$3.7 million into the 2000 election, nearly three times what it contributed in 1996, according to the nonpartisan Center for Responsive Politics. The industry gave 88 cents of each dollar it contributed to Republicans.

While other states, including Wyoming, mine more coal than West Virginia, the industry has a special place in this state's history and has helped fuel its economy for more than a century.

It was not a complete surprise, then, when this Democratic stronghold handed its five electoral votes to Bush in November, enough to tip the election. While many voters in this heavy-industry state liked Democrat Al Gore's commitment to labor, their fear of his environmental record outweighed that.

Almost all electric power in West Virginia comes from coal. Coal companies pay \$160 million in coal severance taxes annually to the state - money that is distributed to every county and used for local health, education and other services. Here in the industrial panhandle, about an hour west of Pittsburgh, public officials often warn environment-minded citizens that they may have to co-exist with coal if their communities are to keep money in their budgets.

"Without noise and dirt, you don't have the tax base," said Larry Ferrera Jr., the mayor of Benwood, five miles south of Wheeling. "Unless you're in the software industry, and we're not."

The lean years

Bush's election came as many in West Virginia were bracing for coal's demise.

Last year, newspapers and television stations ran a public awareness

campaign,  
called "West Virginia After Coal," to help prepare residents for when the  
local  
economy would have to diversify.

From 1970 to 1997, the number of mining jobs in the state fell by 45  
percent.  
Coal mines replaced picks and axes with large machines, eliminating the  
need for  
many employees. The steel industry, a primary market for West Virginia  
coal, was  
in decline.

Mines also were forced to close because they lost big clients -  
coal-burning  
plants that were unable to meet clean-air standards. And as  
environmentalists continued to push for stricter standards, miners became  
more  
insecure about their future.

In the panhandle, a landscape of small towns with smokestacks nestled  
along  
the Ohio River, the memories of 1993 are clear. That year, the Shoemaker  
Mine -  
an underground world that stretches eight miles from the Ohio River to the  
Pennsylvania border - was forced to close for part of the year because  
its parent company could find no market for the coal coming out of the ground.

More than 300 miners were laid off. Many, like Sonny Palmer, having done  
nothing else their entire adult lives, were encouraged by the United  
Mineworkers  
of America union to enroll in college classes under a federal retraining  
program.

"What a treat that was," said Palmer, 53, rolling his eyes. "It was  
easier to  
work than go to school. We had homework. They were teaching us algebra,  
trigonometry."

While the Clinton administration actively sought cleaner forms of  
energy,  
Bush has said the nation is decades away from being able to depend on  
sources  
such as solar or wind power and must rely on bedrock fuels such as coal.

The Bush reprieve

In his energy policy, Bush calls for the construction of at least 1,300  
new  
power plants by 2020. Already, applications have been pouring in from  
utility  
and other companies interested in building new plants and burning a cheap  
resource, coal.

Bush directed the Energy Department and the Environmental Protection  
Agency  
to examine whether the Clean Air Act, which was rigorously enforced under  
President Bill Clinton, has requirements too stringent for coal-burning  
plants  
to meet.

His primary target is a process called "New Source Review," which  
requires



that older plants that were exempted from the Clean Air Act be upgraded to meet its stricter emissions standards when the facility is renovated. A report from the EPA on how the Clean Air Act could be revised is due Aug. 17.

Bush told the Justice Department to consider dropping many of the lawsuits the Clinton administration had filed against 51 power plants that had not reduced emissions as required by New Source Review.

The Bush administration's decision to reconsider the policy stunned environmentalists. Several groups, including the Clean Air Task Force and National Environmental Trust, asserted in a recent report that pollution from the 51 power plants targeted in the Clinton administration lawsuits causes 5,500 to 9,000 premature deaths each year and 107,000 to 170,000 asthma attacks.

Cindy Rank is the chair of mining at the West Virginia Highlands Conservancy, a conservation group that has been fighting surface mining, a method common in the southern part of the state that involves blasting off the tops of mountains to reach coal without venturing underground. She said many West Virginia residents have become so dependent on coal that they don't even see the environmental consequences of mining.

"People in other parts of the country see other options," she said. "But for people in the coal fields, who have grown up with coal, and for whom it has meant food on their tables, it's tough to see the other options."

At the McElroy Mine, now that coal is again an option for power companies, miners and managers feel a new confidence that many thought they would never know again. And they credit Bush.

"It just feels good to know someone is willing to say that what this industry is doing is important to us," said Hoffman, "that it's not just mining coal to make a profit."

LOAD-DATE: August 1, 2001

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Inter Press Service

August 1, 2001, Wednesday

LENGTH: 983 words

HEADLINE: ENVIRONMENT-U.S.: CRITICS CONDEMN REVIEW OF CLEAN AIR ACT

BYLINE: By Danielle Knight

DATELINE: WASHINGTON, Aug. 1

BODY:

President George W. Bush's request to review the Clean Air Act -- considered one of the most important U.S. environmental laws -- could halt government efforts to stop some of the world's largest energy companies from polluting, warn health and environmental advocates.

When the White House unveiled its National Energy Policy in May, Bush directed the Environmental Protection Agency (EPA) and Department of Energy to conduct a 90-day review of the impact of the Act's regulations on coal, gas and oil power plants.

At issue is a section of the law called New Source Review, which prohibits power-plant operators from expanding old plants without also installing state-of-the-art pollution control devices.

Utility companies are lobbying heavily to dismantle this part of the law because if the regulations are upheld and enforced, it could cost the industry tens of billions of dollars to upgrade their facilities.

The EPA is suing many of the companies for violating the Act. Bush is also calling on the Department of Justice to review these lawsuits.

Environmental and health advocates describe the New Source Review as the Act's heart and lungs. Recommendations stemming from the Bush review are expected Aug. 17.

"The Bush plan would gut the Clean Air Act as well as create more pollution," says Peter Altman, coordinator of the Sustainable Energy and Economic Development Coalition based in Houston, Texas.

Altman was among environmental activists from the heavily industrialized states of Texas and Louisiana, who descended on the capital this week to urge lawmakers to halt Bush's proposed review.

Many, like Altman, came from Houston, site of numerous oil refineries including the country's largest, operated by ExxonMobil. The average refinery, they say, releases about 250 tons of toxic emissions, including sulfur dioxide, nitrogen oxides, and small particles that hinder proper breathing.

LaNell Anderson, an activist with the Texas Bucket Brigade, an environmental community organization named after the bucket devices it uses to test the state's air quality, lives near several refineries and chemical facilities. She blames air pollution for the cancer that killed her mother and the immune system diseases that she, her sisters, and her husband have suffered.

"We are being asked to sacrifice our children and our families to corporate

profits," says Anderson. "We cannot stand any more from these lawless refineries."

The roots of the conflict over the Act stretch back to 1977, when energy companies won an exemption for their older power plants. Industry argued that these aging facilities would soon be retired and pollution controls for these plants would be too costly. To date, few have been closed.

According to the EPA, several older refineries have expanded in recent years without installing modern pollution controls -- a violation of the New Source Review requirements.

"Polluters have broken the law for years and are trying to get their tickets fixed," says Arlene Polewarczyk with the Clean Air Clear Lake group, also based in Houston. "It's our health that's getting run over in the process."

In response, the Department of Justice on behalf of the EPA, filed suit in 1999 and 2000 against dozens of old power plants for violating the Act.

Several state governments and environmental organizations have joined the government in suing the industry. For example, eight states and 17 groups have joined the EPA's suit against industry titan American Electric Power.

Janet Henry, assistant general counsel for American Electric Power, says the company has complied with the Act and that power plants listed in the lawsuit were not expanded but underwent routine maintenance, replacement of degraded equipment or failed components, and other repairs that are exempt from New Source Review requirements.

"American Electric Power believes firmly that these complaints are without merit," says Henry.

Defendants in the lawsuits have banded together to form a new lobbying group called the National Electric Reliability Coordinating Council. The Council has hired Haley Barbour, the former chairman of the Republican National Committee, to help fight the government lawsuits.

Activists contend that the companies have used litigation to weaken other provisions of the Clean Air Act and to stymie the EPA's efforts to update air quality guidelines.

In 1997, regulators issued new rules intending to strengthen national air quality standards for soot and smog because of mounting evidence that prior

standards were inadequate to protect the public's health. The government agency estimated that as many as 15,000 deaths and tens of thousands of respiratory illnesses would be prevented by the new standards for air particles.

Paul Billings of the American Lung Association says the EPA's 1997 conclusions have stood the test of time. "In fact, recent scientific evidence has given even greater cause for concern about these pollutants, linking particles to infant mortality and other serious health effects," he says.

Immediately after the EPA issued the new standards, industry and several states -- Ohio, Michigan, and West Virginia -- filed suit against the regulations, arguing that air quality standards should not be based only on public health data but on a cost-benefit analysis.

Eventually, the case made its way to the U.S. Supreme Court, which unanimously upheld the constitutionality of the Act last February. But the Supreme Court sent the case back to a lower court to rule on the specific 1997 standards.

"After four years of litigation, it's time for industry's scorched-earth battle against public health to stop," says Howard Fox, an attorney with Earthjustice, an environmental law group representing the American Lung Association in the suit.

LOAD-DATE: August 2, 2001

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CHEMICAL BUSINESS NEWSBASE

July 30, 2001

LENGTH: 111 words

HEADLINE: CHEMICAL MARKET REPORTER: Oil companies split on EPA's pollution control measures

BODY:

Sums of \$500 M and \$400 M have been allocated by BP and Shell respectively to upgrade pollution controls at their US refineries.

The spending is in response to alleged violations of EPA rules developed under the Clinton Administration.

However, ExxonMobil is refusing to pay on the grounds that it did not break the law.

It wants the Bush Administration to reverse the EPA policies in

question.

The EPA says it violated federal New Source Review requirements in 1988 and 1989, and could sue if ExxonMobil does not settle.

The parties are arguing over the interpretation of the New Source regulations.

Website: <http://www.chemexpo.com/cmronline>

LOAD-DATE: July 30, 2001

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THE ELECTRICITY DAILY

July 30, 2001, Monday

SECTION: Vol. 17, No. 20

LENGTH: 1440 words

HEADLINE: Commentary: Good First Steps on Clean Air Act

BODY:

Complicated. Duplicative. Burdensome. Costly. Those words all describe the regulation of power plant air emissions under the Clean Air Act. So it is good news indeed that the Bush administration has proposed to straighten out the regulatory rat's nest that has grown up over the years as EPA has administered the act, coming at utility air pollution in half a dozen different directions at once.

Last week, EPA Administrator Christie Whitman gave the Senate Environment and Public Works Committee a look at what the regulatory future might look like, if Congress has the wit and guts to pay attention. That qualifier, however, is crucial and certainly not guaranteed.

Whitman gave the committee a concise description of the problem: "a complex web of existing regulations which currently confront the industry. Over the years, EPA and the state have responded to specific environmental and public health problems by developing separate regulatory programs for utilities to address the specific problems. Each individual program uses its own approach to serve its own purpose."

Here's a partial list of what she was talking about: National Ambient Air

Quality Standards, section 126 and the SIP Call rules, new source review and new source performance standards, regional haze rules, hazardous air pollutant rules. And so it goes.

The administration wants to start largely with a blank slate and write pollution law that simplifies, combines, and uses market forces to reduce air emissions. "If we have new legislation that significantly reduces emissions of SO<sub>2</sub>, NO<sub>x</sub>, and mercury," Whitman told the committee, "we can eliminate many of the individual programs that apply to the power generation sector and replace them with a system that will reduce the administrative burden on industry and governments, use market-based incentives to keep compliance costs low, and provide the industry with more certainty about its future regulatory obligations." Precisely. And the SO<sub>2</sub> trading regime in the 1990 amendments is the model for the new approach.

Questioned by Sen. George Voinovich (R-Ohio), Whitman agreed that "new source review is certainly one of those regulatory aspects that would no longer be necessary. All of those [programs] could be aligned into one regulatory process."

Whitman concluded her testimony by stating that "our current regulatory programs are not the most efficient way to achieve the goal of ensuring a reliable energy supply in an environmentally responsible manner. Rather than take a pollutant-by-pollutant, problem-by-problem approach, we have the opportunity to examine the sector as a whole. Doing so provides us with the opportunity for cost-effective reductions and significant public health and environmental gains."

But the argument is not going to be easily won by Whitman and the power industry. Environmentalists will dig in their green heels, preferring a command-and-control approach that keeps them in the game. The Los Angeles Times quoted Frank O'Donnell of the Clean Air Trust, "She has raised an appalling prospect of junking virtually every rule and strategy to deal with emissions of electric companies in return for some vague industry-sought plan for an emissions trading scheme. If they go forward with this, it means a wholesale fight over the Clean Air Act in Congress."

Those with long memories will recall that most of the enviros were opposed to emissions trading in 1990, and still don't like or understand the idea of market-based approaches. It was only the presence of the Environmental Defense Fund, now renamed Environmental Defense, lobbying in favor of trading that won enough Democratic votes to get trading in the bill, which otherwise was a triumph of old-style, pollutant-by-pollutant regulation.

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In the current Congress, a lot of the political heat is likely to be generated by the issue of regulating CO[2], not with a new regulatory paradigm.

As the solons ponder a multi-pollutant strategy, the greens will push to get CO[2] into the pollution soup. The administration will resist, and somehow or other Congress will sort it out. The betting here is that carbon dioxide will get into the act.

The Bush administration approach to clean air is a good first step. But there are plenty of ways to stumble in the months ahead.

-- Kennedy Maize

LOAD-DATE: July 27, 2001

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The New York Times

July 28, 2001, Saturday, Late Edition - Final

SECTION: Section A; Page 8; Column 1; National Desk

LENGTH: 847 words

HEADLINE: Whitman Begins to Consider Streamlining Pollution Checks

BYLINE: By JOSEPH KAHN

DATELINE: WASHINGTON, July 27

BODY:

The Bush administration wants Congress to collapse several of the most contentious air pollution control programs into a more flexible and less intrusive system strongly favored by leading electric utilities.

The proposal is the clearest indication to date that the administration favors overhauling the Clean Air Act in ways that would answer the complaints of utilities that the agency's rules tie them up in paperwork and make them reluctant to invest in new power plants needed to provide electricity to consumers and businesses.

In trying to revise one of the core environmental statutes, last revised in 1990, the administration would set in motion a protracted and politically charged battle in Congress. Unlike some of the Bush administration's moves to reverse environmental regulations adopted by the Clinton administration, any changes to the Clean Air Act would require legislative approval.

Environmental groups say they fear that the plan to simplify regulations and

enforcement procedures could undercut measures intended to reduce haze in national parks, cut down on interstate transmission of smog-causing pollutants and minimize health risks to people who live close to power plants.

Christie Whitman, administrator of the Environmental Protection Agency, said today that her staff was drafting a new approach to controlling emissions that would set nationwide caps on three major pollutants and allow utilities to trade pollution credits, much as they already do for sulfur dioxide emissions that produce acid rain. She said the trading system could replace five separate enforcement programs that regulate emissions on a plant-by-plant basis.

One of those enforcement programs, known as new source review, compels utilities to install modern pollution controls when they build a new power plant or significantly expand or upgrade one already in use. Utilities have lobbied aggressively to have new source review scaled back or eliminated, and Mrs. Whitman's comments were the first indication that, at least for utilities, the administration would prefer to end the program altogether.

Mrs. Whitman's new plan would also replace established programs that seek to improve visibility in national parks and to force individual utilities to reduce nitrogen oxide emissions that cross state lines.

"We think we can produce a system that will result in cleaner air, but also make enforcement much more efficient," Mrs. Whitman said in an interview today.

"I think people will be surprised at what we can get done."

Mrs. Whitman first outlined the new plan when responding to questions at a Congressional hearing on Thursday. She has offered only a sketch of the plan, saying it will be presented formally in September.

The proposal raised a number of questions among lawmakers, environmentalists and industry groups. The idea of replacing plant-by-plant enforcement with a national trading system is popular among industry groups and acceptable to some environmentalists, though people on both sides argue about which pollutants should be capped and at what level, debates that could take months or years to resolve.

Senator James M. Jeffords, a Vermont independent, has introduced legislation that would set relatively stringent national caps on four major pollutants: nitrogen oxide, the main component of smog; sulfur dioxide; mercury, a toxic health hazard; and carbon dioxide, which many scientists say causes global warming.



Mrs. Whitman favors a plan that would cap three pollutants, excluding carbon dioxide. The Bush administration has rejected the Kyoto Protocol to control global warming and backtracked on a campaign commitment to impose limits on carbon dioxide emissions.

Environmentalists say that the new plan raises concerns because it would end successful enforcement programs without any guarantee that the new trading scheme would have the same effectiveness in cleaning up the air.

"We have a real fear that they will try to spin this as a major step forward when it's really a step backward," said Frank O'Donnell of the Clean Air Trust, an environmental group.

For utilities, especially those that own heavily polluting coal-fired power plants, the plan could amount to a major victory. Coal-using utilities were among the most generous donors to Republicans and Democrats in the last election, and they have pushed hard to shape elements of the Bush administration's approach to energy and the environment.

"The notion of providing a new framework that would replace the command and control permitting nightmare would be an enormous step forward," said C. Boyden Gray, a White House official in the administration of Mr. Bush's father who now represents several major utilities. "It sounds like the E.P.A. is trending in the right direction."

Eliminating new source review on utilities would not exempt other polluting industries from its requirements, Mrs. Whitman said today. Refineries, paper plants and chemical companies also must install new pollution controls when they significantly modify their plants.

<http://www.nytimes.com>

LOAD-DATE: July 28, 2001

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Greenwire

July 27, 2001

SECTION: AIR, WATER & CLIMATE; Vol. 10, No. 9

LENGTH: 1257 words

HEADLINE: CLEAN AIR: AMID FOUR-POLLUTANT DEBATE, WHITMAN FLOATS REVISIONS

Page 87

BODY:

Darren Samuelsohn, Greenwire staff writer

(This story original appeared in today's Environment & Energy Daily.)

Offering a glimpse into the Bush administration's plans to address air pollution, Environmental Protection Agency Administrator Christie Whitman said on Thursday that work is underway on a three-pollutant legislative proposal that would negate a number of Clean Air Act regulatory and enforcement programs that were most recently tweaked under the Clinton administration.

Questioned during a Senate Environment and Public Works Committee hearing by ranking member Robert Smith (R-N.H) over what kind of regulatory relief EPA could provide electric utilities should a trade and exchange system be included in legislation to regulate power plant emissions of nitrogen oxide (NOx), sulfur dioxide (SO2) and mercury, Whitman responded that some of the most contentious air pollution regulations in place today would "no longer be necessary" thanks to the "overarching" legislation the Bush administration soon plans to propose.

Included in Whitman's list of possible cuts are a pair of programs aimed at interstate pollution controls, the Section 126 permit program, the recently finalized national park and wilderness area "haze" rule, the NOx State Implementation Plan rule, New Source Review permitting process and mercury emissions cleanup targets set for 2004.

Utility industry groups have long kicked around cutting the programs which Whitman mentioned, said Jayne Brady, a spokesperson for the Edison Electric Institute, explaining that such a change would allow utilities "more flexibility" when it comes to addressing emission controls while also allowing for additional time before older and dirtier power plants are to be phased out.

Whitman said she was not ready to discuss specifics concerning the Bush administration's three-pollutant bill, leading Brady to add that "we might be a little ahead of ourselves" in debating the pros and cons of such a streamlining proposal.

Environmentalists attending the hearing, however, immediately pounced on Whitman's remarks. Frank O'Donnell, executive director of the Clean Air Task Force, described the proposal as both "off the wall" and "as if the New York Yankees traded away Derek Jeter, Roger Clemens, Paul O'Neill, Andy Pettite and Bernie Williams in return for an unknown slugger from Sweden."

Patricio Silva, midwest activities coordinator at the Natural Resources Defense Council, said Whitman's approach would have numerous detrimental effects on states' abilities to address their own air quality issues, noting that the removal of Section 126 would take away a state's right to protest a neighboring state with power plant emissions that cross a border. Silva said the proposal has the potential to create interregional air pollution wars similar to the heated one existing between Midwestern states and their downwind,

Northeastern neighbors.

Whitman's comments came amid an already tangled debate over the regulation of carbon dioxide, no doubt the stickiest point among lawmakers, interest groups and the Bush administration. Legislation introduced by the committee's chairman, Sen. James Jeffords (I-Vt.), mimics the Kyoto Protocol in capping CO<sub>2</sub>, a known greenhouse gas, at 1990 levels. Whitman reiterated the Bush administration's position in avoiding both mandatory CO<sub>2</sub> caps and the Kyoto Protocol because of the level of uncertainty surrounding such emission control technologies, achievable targets and the potential impacts on the U.S. economy.

Lawmakers and the Bush administration are close to consensus when it comes to SO<sub>2</sub> and NO<sub>x</sub> emission controls, Whitman added, explaining that CO<sub>2</sub> could potentially serve as a stumbling block to the successful passage of any three- or four-pollutant legislation. "It would be a shame to delay implementation of a three-pollutant bill while we await consensus on carbon dioxide legislation," Whitman said.

Looking ahead, Jeffords announced that there will be both committee staff meetings and legislative hearings in September to hammer out the details of a power plant emissions bill.

Smith, who for some 18 months has been working on his own three-pollutant bill, said he was concerned that a debate over CO<sub>2</sub> may not be necessary in another decade or so considering the improving technology that will clean up emissions from the transportation sector. Smith also threw his support behind increased nuclear power generation, which produces no CO<sub>2</sub> emissions.

Dale Heydlauff, senior vice president of environmental affairs at American Electric Power, said CO<sub>2</sub> emission controls, as required under the Jeffords bill, would end up being implemented overseas because of cheaper infrastructure costs. Once foreign resources were tapped, Heydlauff said U.S. coal-fired power plants would be shut down and likely replaced by natural gas power plants, which are less of, but nonetheless still, a CO<sub>2</sub> emitter.

C. Boyden Gray, general counsel at the White House during former President George H.W. Bush's administration, testified that the Jeffords bill would be difficult to implement because technology is not yet available to reduce CO<sub>2</sub> and mercury emissions. Heydlauff, meantime, added that switching to natural gas power plants would also eliminate the need for mercury controls.

Smith said power plant emissions should be addressed by calling for a specific level of cuts while allowing the free-market to find the best way of achieving the federal goals. "I don't think that any of us, regardless of where we are on the political spectrum, believe that the federal government is more innovative, efficient or technically competent than the private sector," he said.

Whitman's streamlining suggestion comes in the wake of several recent actions on the same components that her proposal would strike. Late last month, for example, Whitman finalized a Clinton-era rule requiring industry to use the "best available retrofit technology" to eliminate haze in national parks and

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wilderness areas. Industry groups including EEI protested the "BART" rule charging it would provide many of the same air quality benefits set to be enacted by other EPA rules.

As for New Source Review, both EPA and the Justice Department are currently reviewing the definition and interpretation of the contentious enforcement permitting program that industry groups contend was unfairly used by the Clinton administration. EPA held four public meetings on its NSR review over the last month and its public comment period closes Friday. A report is due to President Bush by August 10. The Justice Department, meanwhile, is reviewing the lawsuits and settlement negotiations initiated against a host of power plants, refiners and other industry sources by Clinton-era lawyers. The DOJ review has no deadline.

Both the DOJ and EPA reviews have sparked protests from environmental groups and congressional Democrats. In a letter sent last week to Attorney General John Ashcroft, Senate Governmental Affairs Committee Chairman Joe Lieberman (D-Conn.) requested more detailed information about the DOJ review, specifically a timeline, standards for the review and any outside consultants. Lieberman said he was concerned that the NSR review may cut Clean Air Act enforcement activities even as Ashcroft and his staff have made repeated statements in recent months applauding its own NSR enforcement actions.

LOAD-DATE: July 27, 2001

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Copyright 2001 Investor's Business Daily, Inc.

Investor's Business Daily

July 27, 2001

SECTION: A; Pg. 4

LENGTH: 1573 words

HEADLINE: EXCLUSIVE INTERVIEW Abraham Is Pumped Up Over President's Plan

BYLINE: By Douglas Austin, Investor's Daily

BODY:

Investor's Business Daily President Bush has offered a long-term national review to address America's growing appetite for energy. Investor's Business Daily spoke recently with Energy Secretary Spencer Abraham about the administration's plans to meet U.S. energy needs. IBD: The Federal Energy Regulatory Commission imposed price mitigation limiting the price of power in 11 Western states. Bush is firmly against price caps. How exactly do price caps and price mitigation differ? Don't both keep power from the market? Abraham: I'm concerned that any price caps that actually reduce the price below the market rate will make blackouts occur more frequently and send a signal to markets that

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will be a disincentive for new generation to be built in the West. It's my impression that the goal of FERC was to not accomplish that objective, but rather to prevent unjust and unreasonable rates from being charged, which

in fact are illegal. Right now, FERC has already ordered refunds and is considering additional refunds for charges that constituted unjust and excessive amounts in previous months. My impression is that was the goal of this price

approach. And that it wasn't to try and artificially suppress prices.

But to

the extent it does drive price below what would be market rates, it has the very

serious risk of accomplishing the undesirable outcomes of more blackouts and discouragement of more energy generation being brought on line in the future.

IBD: When the price mitigation went into effect, there were some blackouts in

Nevada. One of the reasons given was that power suppliers were confused as to

their reimbursement. Obviously that leads to a shortage and ultimately to blackouts. Is anyone clearing up the confusion? Abraham: Unfortunately, the DOE

doesn't have authority to act in this area. Only FERC does, and so we can't

impose a different . IBD: But you could pick up the phone to FERC Chairman

Curtis Hebert and say this isn't working and try something new? Abraham: My

impression is that FERC is attempting to clarify it. But the real issue here is

whether this type of system is going to in fact lead to additional hours of

shortages and blackouts. Not just those brought about by confusion, but those

brought about because the price wouldn't keep certain suppliers on line.

IBD:

Your National Energy Policy recommends easing environmental rules. For example,

in 1998 alone refiners paid \$ 8.5 billion that was passed along to consumers. Do

you favor requiring rules to be cost-efficient or survive a risk-benefit analysis? Abraham: The Environmental Protection Agency has 90 days to review the

so-called new source review process. We play a consultative role with them, and

it's our hope we can come up with a system that not only allows us to maintain

the environmental objectives of the Clean Air Act, but allows for us to act with

respect to additions to refineries, expansion of refineries and other energy-

producing entities in a more efficient fashion. IBD: But are you going to take

an active role? Boutique gasoline rules, for instance, order at least 11 different kinds of gas in different regions. Are you going to fight hard to at

least streamline the process? Abraham: The question is really whether that can

be accomplished in a fashion that in fact increases market liquidity. We believe

it can. Again, this is an area where the EPA has been given the lead

responsibility, but we'll be very aggressive in working with the EPA to try to address it. Congress is likewise inclined to do something. I would expect to see

legislation offered very soon in the House and Senate along those lines.

IBD:

We have been told that rather than pass one big energy bill, the House is going

to debate several smaller bills, the first one being conservation. Is that the

proper approach? Abraham: I think the House knows better than anybody what makes

sense from their standpoint. I'm confident that working together we can get the

key goals we have legislatively through the House. And if it happens in several

stages, that's probably consistent with the way the House leadership wants to

proceed. IBD: The Senate's quite a different story though, isn't it?

Abraham:

No, not necessarily. But because of the nature of the Senate, any bill brought

to the floor can be amended. And any energy bill certainly can be broadly amended to add or delete components. A bill that starts as a small bill

in the

Senate can turn into a big one or vice versa. In the House, there are far more

constraints. IBD: What of the difference in the political makeup between the

two? Abraham: The Senate rules allow for amendments of even a nongermane sort to

be added to bills. So even if the bill that comes to the floor isn't perhaps

what would be my first choice, the potential exists for amendments to broaden or

change that bill no matter what the circumstance. In the House, you don't have

that flexibility. IBD: A number of Senate Democrats say Bush's proposals on the

Arctic National wildlife Refuge, offshore drilling and expanding energy supplies

by opening up western lands are basically dead on arrival. How do you intend to

fight that kind of intransigence? Abraham: As a broad public policy matter, we

expect there to be a significant increase in energy demand over the next 20

years beyond what conservation can offset. And those who are voting time after

time against any new source of energy supply without providing any alternative

ideas with respect to how we meet energy demand are acting in a way that's inconsistent with the best interests of this country. I hope we have a

full

debate. Because the critics of our energy plan have offered virtually no new

insights into where or how we will generate the energy supply we need in the

next 20 years. And their failure to offer real alternatives is consistent with

the policies of the last eight years where there hasn't been a national energy

plan. It's pretty easy to criticize, but it's obviously difficult for everybody

else to come up with any concrete alternative. The absence of alternatives from

those who criticize our plan will soon be well known to the American people.

IBD: To be a little pointed, you're not saying you wouldn't mind a few blackouts

here and there to help press your case, are you? Abraham: No, what I'm saying is

I'd like to have a chance, and I'd like to see the media have a chance to scrutinize an alternative to the plan we're offering. The plan we're offering

has received plenty of healthy criticism from both sides of the political aisle.

But at least we've been willing to put a plan out there that's substantive,

comprehensive and balanced. Those who have criticized us have almost to a person failed to offer any alternative way of meeting America's energy challenges. What we need is a debate between alternative viewpoints. We don't

even have an alternative to our approach. In fact, those who criticize and say

they will vote against our supply proposals have a responsibility to explain how

they would meet the energy supply needs of the country. IBD: Democrats Harry

Reid from Nevada and Majority Leader Tom Daschle have declared the Yucca Mountain nuclear waste facility "dead." Bush wants to expand nuclear power. How

is that possible without a long-term solution to nuclear waste disposal? Abraham: We have to have a long-term solution. And the decision with respect to

Yucca Mountain should be made on the basis of sound science and a determination

on whether the site can be built and used in a safe fashion. It shouldn't be

based on whether various members of the Senate have personal interests or declared, for reasons that are not science-based, that they are opposed to it.

IBD: How will you expand domestic oil and natural gas production? Forty percent

of natural gas reserves in the West are on government land. Will Bush increase

access? Abraham: We will review those areas that are currently off-limits where

that decision isn't a matter of law. For example, when you are talking about

national parks and wildernesses, we are not going to re-examine those areas. But

the Interior Department was already engaged in an extensive review of possible

reserves on federal land. Our energy plan wants the review completed quickly.

IBD: You talk about the EPA, the Interior Department and FERC having all these

responsibilities you're not the lead agency on. That leads to the question: Do

we need an Energy Department? Abraham: Well, you only asked about the areas that

other people have responsibility for. Our department has a very vital role to

play and is playing the lead role in many areas. We've taken the lead with respect to developing electricity restructuring legislation, which we

will soon

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be presenting. We're responsible for developing a system by which we will update and modernize our national transmission grid system. We're in the process of developing what I think will be a very effective way of addressing some of the frontier areas of energy research, such as in the area of superconductivity. We also have a lot of the energy-related duties in the international arena. We've already begun moving to open discussions with Canada and Mexico about a North American energy framework. And with our friends in Europe with respect to a greater activity level between some of the new possibilities in the Caspian and other areas of Eastern Europe.

LOAD-DATE: July 27, 2001

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Los Angeles Times

July 27, 2001 Friday Home Edition

SECTION: Part A; Part 1; Page 1; National Desk

LENGTH: 1296 words

HEADLINE: THE NATION;

; Smog Rules May Be Eased;  
Power plants: EPA proposes a sweeping change in how utilities' emissions are curbed, a flexible approach favored by the industry.

BYLINE: GARY POLAKOVIC, ELIZABETH SHOGREN, TIMES STAFF WRITERS

DATELINE: WASHINGTON

BODY:

U.S. Environmental Protection Agency Administrator Christie Whitman proposed sweeping changes Thursday in the regulation of power plant pollution that would replace five of the government's toughest programs with a single, flexible approach favored by utilities.

Whitman outlined a plan for cleaning up major components of power plant smog that represents a significant departure from the EPA's traditional regulatory dictums. She called for a major expansion of pollution credit trading, which, up to now, has had varying success.

Under the new plan, the EPA would scrap some of the most stringent measures devised by the agency to deal with power plant emissions. One provision to be set aside aims to cut harmful mercury emissions; another is meant to reduce emissions from Midwestern power plants by 85%; another is designed to restore

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visibility at national parks.

Especially unpopular with industry, one measure, known as new source review, requires the installation of advanced pollution controls whenever power plants are expanded or modified. It too would be phased out.

"New source review is certainly one of those regulatory aspects that would no longer be necessary," Whitman told Sen. Bob Smith (R-N.H.) at the hearing by the Environment and Public Works Committee. "All of those [programs] could be aligned into one regulatory process" that she said would work better than existing rules.

Whitman's comments offer the first peek into the administration's plans for cleaning some of the dirtiest polluters left in the nation. Debate over the administration's clean-air approach has shifted to Congress as it considers whether to revise the national Clean Air Act.

The magnitude of the proposed revisions caught environmentalists by surprise but buoyed industry representatives who say existing controls are costly and inefficient.

"She has raised an appalling prospect of junking virtually every rule and strategy to deal with emissions of electric companies in return for some vague industry-sought plan for an emissions trading scheme," said Frank O'Donnell, executive director of the Clean Air Trust, an environmental advocacy group. "If they go forward with this, it means a wholesale fight over the Clean Air Act in Congress."

After the hearing, Whitman stressed that the overall goal is to clean the air more efficiently than current rules do. Although the administration has not yet released a so-called multipollutant cleanup strategy, Whitman contended that collapsing several regulations into one far-reaching approach would be easier for regulators and industry to manage.

"What we're looking for is targets under this legislation that significantly clean up the air beyond what our current regulatory, statutory requirements would do," Whitman said. She added that new source review, for example, "could potentially be no longer necessary if you have the right kind of targets set in a multi-emissions bill. We have to wait and see where the targets are set."

Utilities have lobbied Vice President Dick Cheney's energy task force to prevent the EPA from aggressively enforcing the new source review regulation.

Industry and administration officials say the provision is onerous and prevents plant upgrades, although EPA officials say it is a key tool for forcing dirty, old plants to cut emissions by up to 95%.

During the Clinton administration, federal officials charged that 32 coal-fired power plants in several Southern and Midwestern states ignored a requirement that companies install advanced emission controls when their plants were upgraded. The government reached settlement with three utilities, but a provision in the Bush administration's energy plan stalled those enforcement actions pending a review of power plant controls.

C. Boyden Gray, attorney for the Electric Reliability Coordinating Council and former white House counsel for the first President Bush in the 1980s, praised the administration's proposal. He said major utility companies he represents, including Southern Co., Duke Energy Co. and the Tennessee Valley Authority, could clean up with greater flexibility and less cost under the plan outlined by Whitman.

"To put everything in a market-incentives basis is a great step. It would be a real breakthrough and a plus for the business community," Gray said.

For example, Gray said EPA has four separate measures to control nitrogen oxides from power plant combustion, including programs to cut acid rain, ozone and haze. Another program scheduled to take effect in May 2004 requires power plants in 19 states to cut summer emissions by 1 million tons annually. He said those programs can be confusing and costly and could easily be replaced by a credit-trading program run largely by power companies.

Under the program being considered by the Bush administration, an emission limit could be established at hundreds of power plants followed by annual reductions in mercury, a toxic metal, as well as smog-forming nitrogen and sulfur oxides.

However, a provision to reduce carbon dioxide, a gas implicated in global warming, was dropped under industry pressure.

Power companies that reduce beyond their limits could sell emission credits, which represent a pound of pollution, to companies that exceed their limits.

Although industry and free-market advocates favor such programs, they are not

without controversy. The record of market-driven programs is mixed. On the one hand, the nation's acid rain program uses marketable permits and is widely credited with cutting sulfur oxides at less cost. On the other hand, the world's first market-driven program to tackle urban smog has not worked in Los Angeles, where nearly 400 power companies and manufacturers failed to achieve significant cleanup for the nearly eight years the program has been in effect.

Further, many environmental groups are wary of market-driven programs because by design they preclude active government intervention. Critics say such programs could potentially limit public review of power plant operations, allow emissions to concentrate in poor communities and slow efforts to cut haze in national parks downwind from plants that elect to buy pollution credits instead of cleaning up.

The Bush administration's power plant strategy was aired before the Senate Environment and Public Works Committee, which is chaired by Sen. James M. Jeffords (I-Vt.), whose dramatic departure from the GOP threw control of the Senate to the Democrats. Jeffords is proposing legislation, different from the administration's approach, that would control four power plant pollutants, including the greenhouse gas carbon dioxide, an approach rejected by the Bush administration.

Prospects appear to be increasing that Congress will pass one or more measures designed to reduce carbon dioxide emissions, a belated response to this week's decision by more than 180 countries to deal with the problem without the involvement of the United States.

Indeed, in recent weeks several members in the GOP-led House and Democratic Senate have voted on bills with the intention of disassociating themselves from President Bush's environmental policies before the next election.

Among the votes, the House struck down a provision supported by the Bush administration that could hinder progress on global climate change policy.

The Senate banned new coal mining and oil and gas drilling in national monuments. Other recent rebuffs included rejections of administration initiatives on such issues as the Endangered Species Act, hard-rock mining regulations and offshore drilling for oil and gas.

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MORE INSIDE

Power costs: A federal cap imposed in late June did little to rein in wholesale electricity prices. B1

GRAPHIC: PHOTO: EPA Administrator Christie Whitman testifies on the health  
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effects of power plant emissions. PHOTOGRAPHER: Associated Press

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The Boston Herald

July 18, 2001 Wednesday ALL EDITIONS

SECTION: NEWS; Pg. 026

LENGTH: 322 words

HEADLINE: Bush review of EPA regs is disputed

BYLINE: By JULES CRITTENDEN

BODY:

Power and industry advocates faced off against environmental groups and the Northeast's attorneys general as EPA administrators heard public comment on the nation's clean-air rules.

Environmentalists say a Bush administration plan to review the EPA's New Source Review regulations is an effort to let factories and power plants skirt costly clean-air requirements.

New Source Review rules allow the EPA to apply tough standards to old plants whenever modifications are made. But industry advocates say they are prevented from doing maintenance jobs and replacing equipment by an overreaching EPA enforcement program.

"It is way past time for the large, coal-burning plants in the Midwest and South to start doing their share," Attorney General Tom Reilly testified yesterday. "The problem is not that these plants are potentially subject to New Source Review, but rather that in one way or another these plants have escaped New Source Review for far too long."

Rob Sargent of MassPIRG slammed the Bush administration review. "The timing of it is outrageous. It is clearly intended to pull the rug out from under the EPA and Justice Department (efforts) to get some of the oldest and dirtiest plants to clean up their act," said Sargent.

C. Boyden Gray of the Electric Reliability Coordinating Council, representing power suppliers, warned, the "EPA is now retroactively challenging routine repair, replacement and maintenance activities at all existing sources, thus causing major disruption in routine maintenance schedules (and) curtailing power

output."

Gray called the aggressive NSR enforcement a "fundamental unfairness of retroactively penalizing utilities through enforcement actions for behavior that has increased efficiency, done no harm to the environment, and in many ways improved the status quo."

The Bush administration is expected to decide this fall whether to revise the clean-air regulations.

LOAD-DATE: July 18, 2001

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The Boston Globe

July 18, 2001, Wednesday ,THIRD EDITION

SECTION: METRO/REGION; Pg. B5

LENGTH: 733 words

HEADLINE: IN BOSTON, ENVIRONMENTALISTS FAULT BUSH'S ENERGY STRATEGY

BYLINE: By Mac Daniel, GLOBE STAFF

BODY:

Environmentalists - backed by the attorneys general of four states - ripped a key part of President Bush's national energy strategy at a hearing in Boston yesterday, accusing the administration of sacrificing the air to speed construction of power plants.

The hearing was part of Vice President Dick Cheney's proposal to build hundreds of new power plants around the country to avoid what administration officials call an energy crisis. The Environmental Protection Agency is holding four hearings around the country to determine whether federal air pollution rules are hampering energy production.

Polls show that most Americans disapprove of the new administration's handling of energy and environmental issues so far, but Massachusetts may be particularly hostile. Under Acting Governor Jane Swift, Massachusetts has become the first state in the country to require existing power plants to reduce their pollution levels.

"Strong environmental standards are the solution," said Massachusetts Attorney General Thomas Reilly, in opposing any weakening of the 24-year-old Clean Air Act. "They are not part of the problem."

But energy companies say their ability to produce power has been

severely hurt by increasingly stringent environmental rules for power plants, citing California's rolling power outages as a possible sign of things to come nationwide. They say federal rules have been enforced so zealously that it interferes with even routine maintenance.

Sally V. Allen, vice president of a small Denver-based fuel refinery, said her company's cost of complying with the government's air toxics laws could be \$80 million this year, more than three times what the company paid for its largest refinery in Oklahoma six years ago.

"We're gravely concerned," she said.

In May, Bush ordered the EPA to review how the Clean Air Act's "New Source Review" regulations impact the construction of power plants and refineries, as well as energy efficiency and environmental protection.

The regulations are intended to require industry to install state of the art pollution controls on new or significantly renovated power plants and refineries - something existing power plants are not required to do.

But utility officials say the regulations are often applied to even minor changes at power plants. As a result, owners of existing power plants sometimes delay routine maintenance for fear of triggering a costly repair.

As a result, they said, power plants don't run as efficiently and pollute the air more. In addition, energy producers say that if all new source review standards are fully enacted, it could cause the loss of between 6,000 and 12,000 megawatts of energy capacity - enough energy to light up to 3 million homes.

"The EPA's . . . enforcement program is turning this statutory scheme and the past 30 years of regulatory enforcement completely upside down," said C. Boyden Gray, the former legal adviser to President George Bush. Gray spoke for some of the country's leading energy companies. They want a clearer, narrower definition of what triggers the tougher standards.

But, in environmentally conscious Boston, energy company sympathy was in short supply.

"This is supposed to be the hearing that was dominated by the public," said Cindy Luppi, organizing director for Clean Water Action. "This is the capital of public support for reduced pollution from power plants."

Yesterday's speakers list was dominated by environmental activists from Connecticut to New Hampshire.

The attorneys general from Massachusetts and Connecticut showed up to talk down the change, with the attorneys general from Rhode Island and New York sending designated speakers.

By midday, the all-day hearing was extended to 9 p.m. to accommodate speakers, including representatives from General Motors and Texas Natural Resources Commission.

"When the Bush administration talks about 'reconsideration' of the [new source review] enforcement cases, it's talking about letting known lawbreakers off the hook with impunity," said Peter Lehner, an assistant attorney general from New York, who was speaking for Attorney General Eliot Spitzer. "This review . . . must not result in rewarding years of illegal actions."

The final public hearing on the issue will be held in Baton Rouge, La., on Friday. The final report is expected to be sent to President Bush next month.

LOAD-DATE: July 18, 2001

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The Bulletin's Frontrunner

July 18, 2001

LENGTH: 393 words

HEADLINE: EPA Asks To Review Rule Concerning Nonpoint Sources Of Pollution.

BODY:

The wall Street Journal (7/18, Fialka) reports, "The Bush administration has found allies among state regulators, governors, farmers and members of Congress in seeking to rewrite a Clinton administration rule for cleaning up thousands of polluted lakes, rivers and streams." The Journal continues, "The regulation...relies on a relatively nonspecific section of the 1972 federal Clean water Act that deals with so-called nonpoint sources of pollution, such as fertilizer-laden runoff from farmland and sediment from construction and timber projects. It would require states to develop plans and start cleanup and water-quality restoration programs to attack nonpoint pollution within eight to 13 years." The Journal adds, "EPA Administrator Christine Todd Whitman asked a federal appeals court here for a stay of the case to give her agency 18 months to review the rule, with an eye toward rewriting it. . Environmental groups attacked Ms. Whitman's move as another industry-backed step by the Bush

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administration to thwart a regulation. But the move was applauded by state agencies, which would have had to apply the federal rule to about 20,000 rivers, lakes and streams it would define as polluted. State officials argue they don't have the expertise or the billions of dollars they say it would take to comply."

The Boston Herald (7/18, Crittenden) reports, "Power and industry advocates faced off against environmental groups and the Northeast's attorneys general as

EPA administrators heard public comment on the nation's clean-air rules. Environmentalists say a Bush administration plan to review the EPA's New Source

Review regulations is an effort to let factories and power plants skirt costly clean-air requirements." The Herald continues, "Rob Sargent of MassPIRG slammed

the Bush administration review. 'The timing of it is outrageous. It is clearly intended to pull the rug out from under the EPA and Justice Department (efforts)

to get some of the oldest and dirtiest plants to clean up their act,'" said

Sargent. C. Boyden Gray of the Electric Reliability Coordinating Council, representing power suppliers, warned, the 'EPA is now retroactively challenging

routine repair, replacement and maintenance activities at all existing sources,

thus causing major disruption in routine maintenance schedules (and curtailing power output.'"

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Environment and Energy Daily

July 18, 2001

SECTION: ENVIRONMENTAL POLICY; Vol. 10, No. 9

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HEADLINE: JEFFORDS MAKES AIR, CLIMATE ISSUES PRIORITIES FOR EPW

BYLINE: Colleen Luccioli

BODY:

In laying out his agenda for the Environment and Public Works Committee, Sen. Jim Jeffords (I-Vt.), the new chairman of the panel, indicated his top priority is to move quickly on a four-pollutant bill to regulate emissions from power plants. In fact, the panel intends to hold a hearing next week to look at the environmental and public health impacts of utility emissions, an aide to Jeffords indicated.

"I plan to move ahead with the legislation in the committee, holding hearings in the coming weeks and months

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ahead, with a goal of moving a bill out of committee by the year's end," Jeffords said.

The legislation would require reductions of sulfur dioxide, nitrogen oxide, mercury and carbon dioxide (CO<sub>2</sub>) emissions from power plants.

The real point of contention on the four-pollutant bill lies with CO<sub>2</sub> regulations. The Bush administration -- not to mention the power plant industry -- remains staunchly opposed to regulations on CO<sub>2</sub>, despite a campaign pledge to control the emissions.

Jeffords acceded that obstacles confront a four-pollutant bill. "I'm not overly confident we will succeed," he said. "I understand the problems with it, but no progress will be made unless we try."

On a related note, an aide to Jeffords said a joint briefing between EPW and the Senate Judiciary Committee would occur soon to get an update on the administration's review of the New Source Review program, a controversial program under the Clean Air Act that requires pollution-control upgrades for facilities that were grandfathered under the Clean Air Act if certain changes were made to the sites. Currently, a host of utilities are involved in litigation due to Clinton administration-initiated suits charging the facilities were modified, should have installed pollution-control upgrades and contributed to smog problems. Given the Bush administration's review, it is unclear what will happen to those cases, but the staffer said, "we'd be just as happy if they disband" the review.

Jeffords also stressed his interest in addressing climate change issues and reducing greenhouse gases to at least 1990 levels. "I am deeply disappointed in the Bush administration's positions in the current round of negotiations on the climate treaty underway in Bonn right now. I urge the Bush administration to commit to the Kyoto treaty, then work with Congress to show leadership and start to implement programs that will achieve its targets," Jeffords said.

Given the Bush administration and Republican Party's resistance to the Kyoto treaty, Jeffords acknowledged that getting far with global warming legislation would be difficult, but said, "I'll work with them the best I can to press upon them the importance of global warming."

One of the reasons Bush and other Republicans cite in explaining their opposition to the Kyoto program is that it would pose economic difficulties to the United States. Jeffords downplayed those concerns by saying, "we always overdramatize economic impact on these issues."

#### WATER INFRASTRUCTURE

Touching on one of the panel's priorities when it was under Republican control, Jeffords vowed to pursue legislation to help water infrastructure needs.

"I will also focus on improving the water infrastructure of our nation. We plan to write and consider legislation to help rebuild and meet drinking water and wastewater treatment needs,"

Jeffords said.

He added, "Water infrastructure is in dire need of repair and will be a high priority."

#### BROWNFIELDS

Jeffords outlined an ambitious goal for brownfields: getting the Senate-passed brownfields bill signed this summer.

Jeffords was referring to S. 350, a bill that passed the Senate in April by a 99-0 vote. The legislation, which purports to increase cleanups of brownfields sites by limiting the Environmental Protection Agency's ability to require additional cleanup work after the site has been certified clean by a state agency, has not advanced in the House because of dispute over EPA's authority to intervene in cleanups.

Despite the controversy, Jeffords said he intends to make every effort to get the legislation enacted. He said, "I look forward to working with the House to complete legislative action on the bill by the August recess and see it signed into law this summer."

#### TRANSPORTATION

Congress must reauthorize transportation legislation by 2003, and Jeffords said he's putting his panel on an "aggressive hearing schedule" to meet that deadline.

"I will work to marry our environmental goals with our transportation needs," he said.

#### EPA NOMINATIONS

Jeffords also vowed to move as many EPA nominations "as possible in the weeks ahead." The committee will hold a hearing on the nominations next week.

Among the EPA nominations still awaiting confirmation by the Senate are: Jeffrey Holmstead, to be assistant administrator for air and radiation; Tracy Meeham, to be assistant administrator for water; Donald Schregardus, to be assistant administrator for enforcement and compliance assurance; Judith Ayres, to be assistant administrator for international activities; and Robert Fabricant, to be general counsel.

So far, the most controversial candidate is Holmstead, whose nomination is not expected to be discussed next week and who worked in former President Bush's office of general counsel. Senate Majority Whip Harry Reid (D-Nev.) has put a hold on the nomination because he wants access to all information dealing with air and radiation within the 411 Holmstead files at the George Bush Presidential Library in College Station, Texas. Earlier this week, the White House said it would not open up the files due to attorney-client privilege, a Jeffords staffer said.

When asked what position he would take on the nomination, Jeffords said, "I'll look into it." A staffer to Jeffords later said the committee would seek follow-up reviews with the White House on the attorney-client privilege issue.

#### SMITH'S REMARKS

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On a different note, Sen. Bob Smith (R-N.H.), formerly the chairman of the committee and now the ranking member, made clear he has two pieces of legislation he would like to see acted on by the committee in the near future. The first measure he would like to see action on is S. 950, a bill he introduced with Reid to phase out the use of methyl tertiary butyl ether (MTBE) and clean up any contamination resulting from its use. According to Smith, "This bill will also reduce the patchwork of boutique fuels around the nation."

The second bill Smith seeks quick action on is S. 990, which purports to help increase wildlife conservation efforts by promoting local control and state partnerships through flexible, incentive-driven conservation programs and increased partnerships with private owners.

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COMMITTEE: SENATE GOVERNMENTAL AFFAIRS

HEADLINE: ECONOMICALLY FRIENDLY ENVIRONMENTAL CONTROLS

TESTIMONY-BY: MARGO THORNING, PH.D., SENIOR VICE PRESIDENT & CHIEF ECONOMIST

AFFILIATION: AMERICAN COUNCIL FOR CAPITAL INFORMATION

BODY:

Tax Policy and Technological Innovation: Key Partners in Productive Climate Change Policy

Margo Thorning, Ph.D. ACCF Senior Vice President and Chief Economist Before the Senate Governmental Affairs Committee

The mission of the American Council for Capital Formation is to promote economic growth through sound tax, trade, and environmental policies. For more

information about the Council or for copies of this testimony please contact the

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EXECUTIVE SUMMARY

Macroeconomic Effects of Caps on CO<sub>2</sub> Emissions Are Significant. A wide range of economic models predict that capping U.S. carbon dioxide (CO<sub>2</sub>) emissions at the Kyoto target (7 percent below 1990 levels) would reduce U.S. GDP and slow wage growth significantly, worsen the distribution of income, and reduce growth in living standards. Proposed future reductions of 60 percent below 1990 levels by 2050 have not been modeled, but would have extremely serious consequences for all economies dependent on fossil fuels.

U.S. Budget Surplus Is Reduced Sharply. Slower economic growth means that federal tax receipts would be reduced. If implementation of the Kyoto Protocol reduces annual GDP by 3 percent per year, for example, the projected budget surplus in 2010 falls from \$471 billion to only \$315 billion.

International Emissions Trading Issues Are Major. Major obstacles to trading include securing developing country participation, allocating CO<sub>2</sub> emission rights, and distributing the resulting revenue.

European Union Unable to Meet Targets. Even though several EU members continue to support ratification of the Kyoto Protocol, a number of recent studies document that the EU will not be able to achieve its targets; in fact by 2010 the EU countries will be 10 to 25 percent above their targets.

Science of Climate Change Needs to Be Better Understood Before Costly Policies Are Implement-ed. Despite the United States' intensive investment in climate change science, numerous gaps remain in our knowledge, including conflict between global atmospheric and "surface" temperature measurement, and uncertainty about the amount of carbon sequestered in the oceans and soil and about the feedbacks in the climate system that determine the magnitude and rate of temperature increase.

Conclusion. A U.S. strategy for a productive climate policy providing energy security should include: fixing the U.S. tax code; expanding nuclear energy; expanding bilateral cooperation with developing countries; expanding incentives for use of landfill methane and biomass including ethanol from cellulose; implementing a multi-year plan for improvement of coal technology; removing regulatory barriers; avoiding caps on CO<sub>2</sub> emissions by U.S. industry; and avoiding setting targets for global CO<sub>2</sub> concentrations in the range of 550 ppm in the next 75- 100 years.

INTRODUCTION My name is Margo Thorning and I am pleased to present this testimony to the Senate Governmental Affairs Committee.

The American Council for Capital Formation represents a broad cross-section of the American business community, including the manufacturing and financial sectors, Fortune 500 companies and smaller firms, investors, and associations from all sectors of the economy. Our distinguished board of directors includes cabinet members of prior Republican and Democratic administrations, former members of Congress, prominent business leaders, and public finance and environmental policy experts.

The ACCF is now celebrating its 28th year of leadership in advocating tax, regulatory, environmental, and trade policies to increase U.S. economic growth and environmental quality.

We commend Chairman Lieberman, Senators Byrd and Stevens and the Senate Governmental Affairs Committee for their focus on the role of technology in addressing climate mitigation. In our view, tax incentives should be a key component in the push to develop new technology. Given the ACCF's extensive studies on the impact of tax policy on investment, my testimony will develop an aspect of what should become the foundation for an integrated approach to climate change policy. We believe that progress on technology proposals such as those in S. 1008, the Climate Change Strategy and Technology Act of 2001, is vitally important.

My testimony begins with a review of the macro-economic consequences of near-term CO<sub>2</sub> emission caps. It includes information from a number of analyses sponsored by the ACCF Center for Policy Research, the public policy research affiliate of the American Council for Capital Formation. These studies describe the economic costs of near-term caps on U.S. carbon emissions and the impact of emissions limits on the growth of the capital stock, as well as suggest tax incentives to encourage voluntary efforts such as the purchase of energy-efficient equipment and sequestration initiatives to reduce CO<sub>2</sub> emissions both in the United States and abroad. (Summaries of the Center's climate policy studies are available on our web site, <http://www.accf.org>.) I also discuss issues related to long-term options for reducing CO<sub>2</sub> concentrations. Finally, strategies for a cost-effective, long-term approach to CO<sub>2</sub> stabilization are presented.

#### MACROECONOMICS EFFECTS OF CAPPING CO<sub>2</sub> EMISSIONS

The Kyoto Protocol to the United Nations Framework Convention on Climate Change, which was negotiated in December 1997, calls for industrial economies such as the United States, Canada, Europe, and Japan (termed Annex B countries) to reduce their collective emissions of six greenhouse gases by an average of

5.2 percent from 1990 levels by 2008-2012. The U.S. target under the Protocol, which was rejected by the Bush Administration in March, is a 7 percent reduction from 1990 levels (or 1,251 million metric tons); this amounts to a projected 536 million metric ton cutback in carbon emissions relative to the projected amount in 2010, growing to a 728 million metric ton cutback by 2020 (see Figure 1). In 1999, U.S. emissions were 1,527 million metric tons, or 22 per-cent above the Kyoto target. By 2010; the U.S. Department of Energy's Energy Information Administration (EIA) projects that emissions will be 43 percent above the target, and the gap will grow to 58 percent by 2020. (In 2010, carbon emissions from the transportation and utility sectors alone are projected to be 1,300 million metric tons (see Figure 1). It is also worth noting that Mr. Tim Wirth, the former Clinton Administration climate policy negotiator, testified in 1997 that carbon emissions would need to be cut by up to 10 times the Kyoto targets (a 70 percent reduction). The United Kingdom has assumed it must reduce its emissions by 60 percent by 2050.

The emissions cap would, in effect, ration the use of energy in the United States and require very large taxes, either directly or indirectly through the purchase of "permits," to restrain the demand for energy. The "multi-pollutant" approach would have the same effect. Research conducted over the past decade for the ACCF Center for Policy Research by top climate policy scholars concludes that the cost of reducing carbon emissions in the near term would impose a heavy burden on U.S. households, industry, and agriculture by reducing economic growth.

#### IMPACT ON GDP

Many climate policy experts believe that the emission reductions called for in the Kyoto agreement have potentially serious consequences for all Americans. Predicting the economic impact of reducing carbon emissions depends upon how an economic forecasting model handles several factors, including how rapidly industry and consumers respond to higher energy prices by substituting less carbon-intensive production methods and reducing the consumption of carbon-intensive goods and services. Other factors that can affect a model's results are the rate of technological change, the projected base-line greenhouse gas emissions, the amount of emissions trading, and use of carbon sinks and sequestration.

The rate of technological improvement for energy production and consumption assumed by most models under their baseline forecasts is fairly rapid. For example, the EIA's reference case assumes continued improvements in new and existing buildings, transportation, coal production, exploration for oil and gas, and electricity generation technologies. In fact, total energy intensity (defined as the ratio of primary energy consumption per dollar of GDP) declines at an average rate of 1.1 percent annually between 1998 and 2020. The faster the rate of economic growth, the faster energy intensity declines in the EIA reference cases due to the more rapid turnover of the capital stock.

Recent model results show that as carbon emissions are capped or constrained, economic growth slows due to lost output as new energy taxes are imposed and prices rise for carbon-intensive goods- goods that must be produced using less carbon and/or more expensive processes. In addition, the capital stock accumulates more slowly, reflecting the premature obsolescence of capital equipment due to the sharp energy price increases required to meet the carbon emission reductions mandated under the Protocol. It takes from 20 to 30 years to "turn over" or replace the entire U.S. capital stock. Thus, meeting the Protocol's 2008-2012 timetable for emission reductions would mean either continuing to utilize plant and equipment designed to use much lower-cost (pre-Kyoto) fuels, or replacing the capital stock much more rapidly than its owners had planned.

#### ECONOMIC IMPACT OF ADDITIONAL REDUCTIONS BEYOND THE KYOTO TARGET

The economic costs of the Kyoto Protocol described above do not reflect the additional economic impact of emission reductions beyond the Kyoto target. Kyoto supporters contemplate substantial future carbon emission reductions well below 1990 levels. At least one model has analyzed this scenario. A study using the Charles River Associates model (MS-MRT) shows that the cost of going beyond the carbon emission reductions required by the Kyoto Protocol is high. For example, a target of 21 percent below 1990 emission levels (or three times the Kyoto target) would reduce U.S. GDP by 2.4 percent annually in 2020 with Annex B emission trading and by 3.0 percent with domestic abatement alone.

#### IMPACT ON THE FEDERAL BUDGET SURPLUS

One way of assessing the impact of the Kyoto Protocol is to examine how slower economic growth would affect projected U.S. federal tax receipts and federal budget surpluses. Policymakers need to consider the potentially large negative impact of the Protocol on GDP growth and federal budget receipts,

particularly since both the Administration and Congress are already chipping away at the federal budget surpluses to finance spending initiatives and tax cuts for fiscal year 2001 and beyond. Using a simple calculation based on the relationship of increases in GDP to federal tax receipts, if GDP is 3 percent lower annually, the on-budget surplus in 2010 would decline by \$156 billion dollars, from \$471 billion to \$315 billion (see Figure 3). If, as the EIA model predicts, the Kyoto Protocol reduces GDP by 4 percent in 2010, the budget surplus drops to only \$261 billion dollars.

#### IMPORTANCE OF INTERNATIONAL EMISSIONS TRADING

Numerous studies show that a major determinant of the cost of curbing emissions is whether the United States can purchase permits from abroad where emissions can be reduced at a lower cost than in the United States. In the absence of an unfettered international trading system, the United States would be forced to curb its own carbon emissions by about 30 percent within 10 years. Due to population growth and increases in output, the gap between projected emissions and the Kyoto target will continue to grow (see Figure 1). Neither this growing gap nor the impact of additional reductions beyond the Kyoto targets have been addressed by Kyoto advocates.

#### IMPACT ON WAGE GROWTH AND CONSUMERS

U.S. consumers suffer declines in wage growth and the distribution of income worsens under carbon stabilization policies. Wesleyan University Professor Gary Yohe estimates that reducing emissions to 1990 levels (the Clinton Administration's pre-Kyoto target) would reduce wage growth by 5 percent to 10 percent per year, and the lowest quintile of the population would see its share of the economic "pie" shrink by about 10 percent. Texas A&M University Professor John Moroney estimates that U.S. living standards would fall by 15 percent under the Kyoto Protocol compared to the base case energy forecast. U.S. households also face much higher prices for energy under near-term reductions. A range of estimates by various experts concludes that gasoline prices would rise from almost 30 percent to over 50 percent and that electricity prices would go up by anywhere from 50 percent over 80 percent (see Figure 4). Predictions by the Clinton Administration Council of Economic Advisers (a 2.7 percent increase in gasoline prices and 3.4 percent rise in prices for electricity) are far below those of widely respected climate policy modelers.

#### U.S. COMPETITIVENESS IN ENERGY-INTENSIVE SECTORS AND AGRICULTURE



Several studies, including those by Dr. Brian Fisher and his colleagues at ABARE, University of Colorado's Professor Thomas Rutherford, DRI's Dr. Brinner, and WEFA's Ms. Novak, have concluded that near-term emission reductions would result in the migration of energy-intensive industry from the United States to non-Annex B countries (sometimes called "carbon leakage").

The 1999 study by Professor Manne of Stanford University and Dr. Richels of EPRI also analyzed this question. The Manne-Richels model results suggest that the Kyoto Protocol could lead to serious competitive problems for energy-intensive sector (EIS) producers in the United States, Japan, and OECD Europe. Meeting the emission targets in the Protocol would lead to significant reductions in output and employment among EIS producers, and there would be offsetting increases in countries with low energy costs. U.S. out-put of energy-intensive products such as autos, steel, paper, and chemicals could be 15 percent less than under the reference case by 2020. In contrast, countries such as China, India, and Mexico would increase their output of energy-intensive products. In its present form, the Protocol could lead to acrimonious conflicts between those who advocate free international trade and those who advocate a low-carbon environment, Professor Manne and Dr. Richels conclude.

U.S. agriculture would also lose competitiveness if the United States complied with the Kyoto Protocol. A study based on the DRI model by Terry Francl of the American Farm Bureau Federation, Richard Nadler of K.C. Jones Monthly, and Joseph Bast of the Heartland Institute (FNB) predicts that implementation of the Protocol would cause higher fuel oil, motor oil, fertilizer, and other farm operating costs. This would mean higher consumer food prices and greater demand for public assistance with higher costs. In addition, by increasing the energy costs of farm production in America while leaving them unchanged in developing countries, the Kyoto Protocol would cause U.S. food exports to decline and imports to rise. Reduced efficiency of the world food system could add to a political backlash against free trade policies at home and abroad.

The FNB analysis, which concludes that U.S. agriculture would be adversely affected by the Kyoto Protocol, stands in sharp contrast with the May 1999 report by the U.S. Department of Agriculture (USDA), which finds that the Kyoto Protocol would have "relatively modest" impacts on U.S. agriculture. The USDA report is seriously flawed for two reasons, according to a recent analysis by

Mr. Francl. First, the USDA report relies on the unrealistic assumptions about the impact of the Kyoto Protocol on energy prices contained in the Administration's 1998 CEA analysis. Second, the USDA report makes the heroic assumption that U.S. farmers will have unrestricted access to carbon credit trading.

#### FLAWS IN THE CLINTON ADMINISTRATION CEA ANALYSIS

The Clinton Administration Council of Economic Advisers' July 1998 economic analysis of the impact of reducing carbon emissions to 7 percent below 1990 levels, mentioned earlier, is seriously flawed for three reasons.

First, CEA cost estimates assume full global trading in tradable emission permits (including trading with China and India). Most top climate policy experts conclude that this assumption is extremely unrealistic, because the Protocol does not require developing nations—who will be responsible for most of the growth in future carbon emissions—to reduce their emissions, and many have stated that they will not do so.

Second, the CEA's cost estimates assume that an international carbon emissions trading system can be developed and operating by 2008–2012. This assumption is unrealistic, according to analysis by Massachusetts Institute of Technology's Professor A. Denny Ellerman.

Third, the cost estimates are based on the Second Generation Model (SGM) developed by Battelle Memorial Institute. The SGM appears to assume cost-less, instantaneous adjustments in all markets; the model is not appropriate for analyzing the Protocol's near-term economic impacts, according to CRA's Dr. Montgomery. As Massachusetts Institute of Technology Professor Henry Jacoby observes, there are no short-term technical changes that would significantly lower U.S. carbon emissions.

Finally, a former Clinton Administration official acknowledged that the CEA estimates understated the cost of the Kyoto Protocol by a factor of ten in a USA Today article (June 12, 2001).

#### EUROPEAN UNION UNABLE TO MEET TARGETS

Even though several EU members continue to support ratification of the Kyoto Protocol, a number of recent studies document that the EU will not be able to achieve its Kyoto CO<sub>2</sub> emission reduction targets by 2008–2012 (see Figure 5). These studies include:

European Commission, "Towards a European Strategy for the Security of

Energy

Supply"(November 28, 2000). The EU's own report shows that their CO 2 emissions will be 15 percent above their Kyoto target by 2010, rising to almost 20 percent above by 2020. While stressing the need to reduce CO 2 emissions, the EU report cautions that climate change policy should not be allowed to "endanger economic development."

The Pew Center on Global Climate Change, "The European Union & Global Climate Change"(June 2000). In an analysis of five major EU member states (Germany, United Kingdom, Netherlands, Austria, and Spain) responsible for 60 percent of CO 2 emissions in 1990, Pew concludes that only the United Kingdom has a good chance of meeting its targets and Germany will find it "difficult." The other three countries are "not on track"; emissions in the Netherlands currently exceed 1990 levels by 17 percent; Austria has no plans in place to meet its target; and Spain is already close to reaching its allowed growth in CO 2 emissions (a concession to its relative poverty), meaning that Spain is likely to be well above its emission target by 2010.

MIT Joint Program on the Science and Policy of Global Change, "Carbon Emissions and the Kyoto Commitment in the European Union"(February 2001). According to the results of the MIT Emissions Prediction and Policy Analysis model, CO 2 emissions in the EU will rise by 14 percent above the 1990 levels in 2010 instead of decreasing by 8 percent as required by the Kyoto Protocol.

The Australian Bureau of Agricultural and Resource Economics, "Climate Change Policy and the European Union"(September 2000). ABARE's report concludes CO 2 emissions in the EU will increase by an average of 0.3 percent per year from 1990 to 2010 unless stringent new measures are undertaken. (In other words, emissions will rise by about 10 percent rather than fall to 8 percent below 1990 levels).

U.S. Department of Energy, Energy Information Administration, International Energy Outlook (March 2001). The EIA analysis predicts that by 2010, emissions in Western Europe will be almost 25 percent higher than they were in 1990, falling far short of their Kyoto targets.

WEFA, "The Kyoto Protocol: Can Annex B Countries Meet Their Commitments?"(October 1999). WEFA surveys five other government reports, including an EU study (as well as its own analysis), and concludes that western Europe is unlikely to meet its targets. Emissions would need to fall by 15 percent to 30 percent, which would constrain economic growth in politically

unacceptable terms. While a new European Commission report from the European Climate Change Programme (June 2001) analyzed measures affecting all sectors of their economy and concluded that "the potential of cost-effective options is twice the size of the EU's required emission reductions," the EU's new report is flawed for several reasons, including:

"Cost-effective" is defined as policies that cost no more than 20 euros per metric ton of avoided CO<sub>2</sub> emissions, or \$62 per metric ton of carbon in U.S. dollars. Most experts consider \$62 per metric ton of carbon "expensive." (Some of the suggested policies cost up to \$312 per metric ton of carbon to put in place.)

The policy yielding the largest impact affects buildings. The costs of these policies was calculated with a very low discount rate (4 percent), a rate of return that no private investor would accept. Thus, the new EU study is actually a "wish list" of policies the environmental ministry "wishes" that businesses and households would adopt, but that are not likely to be undertaken voluntarily because of their high costs.

#### SCIENCE OF CLIMATE CHANGE NEEDS TO BE BETTER UNDERSTOOD

Despite the United States' intensive investment in climate change science over the past decade, numerous gaps remain in our understanding of climate change. The National Academy of Sciences' National Research Council identified critical uncertainties about the science of climate change in its white paper, *Climate Change Science: An Analysis of Some Key Questions*:

Conflict between global atmospheric and "surface" temperature measurements (see Figure 6);

Uncertainty about how much carbon is sequestered by oceans and terrestrial sinks and how much remains in the atmosphere;

Uncertainty about feedbacks in the climate system that determine the magnitude and rate of temperature increases;

Uncertainty about the direct and indirect effects of aerosols;

Uncertainty about the details and impacts of regional climate change resulting from global climate change;

Uncertainty about the nature and causes of the natural variability of climate, including the sun, and its interactions with forced changes;

Uncertainty about the emissions and usage of fossil fuels and future emissions of methane. These science questions must be addressed before the

United States and its allies embark on a path as nonproductive as that of the Kyoto Protocol. (For more detail, please see the Appendix to this testimony.)

#### GREENHOUSE GAS EMISSION TARGETS PREMATURE AND UNJUSTIFIED

According to scholars such as Brookings Institution economist Dr. Robert Crandall, setting targets and timetables for U.S. greenhouse gas emissions is premature. He bases this conclusion on:

The uncertainty about whether or the extent to which global warming is occurring (see Figure 6); new data from climatologist and U.N. Intergovernmental Panel on Climate Change author Professor John Christy of the University of Alabama demonstrates that while surface-based measures show warming, satellite data shows little warming; and

The high cost of foregone investment if the United States sacrifices badly needed economic growth to reduce emissions.

In a 1999 report, Dr. Crandall observes that the economic estimates of the costs and benefits of reducing emissions to 1990 levels that are in the literature are not particularly supportive of going ahead immediately with any policy of abatement. For example, as an analysis by Brookings Institution fellows Drs. Warwick McKibben and Peter Wilcoxon points out, the estimates of the costs of capping emissions at 1990 levels generally range from 1 to 2 percent of GDP per year, while the benefits, estimated at most to be 1.3 percent of GDP, will not arise for at least 30 to 50 years. Dr. Crandall notes that "Every dollar dedicated to green-house gas abatement today could be invested to grow into \$150 in the next 50 years at a 10 percent social rate of return, even at a puny 5 percent annual return, each dollar would grow into \$12 in 50 years. Therefore, we need to be sure that the prospective benefits, when realized, are at least 12 to 150 times the current cost of securing them. Otherwise, we should simply not act, but use our scarce resources in other ways." Moreover, the climate models generally forecast that it would require far greater reductions than a return to 1990 emissions to stabilize the climate. Dr. Crandall concludes, "We cannot justify a return to 1990 emissions based on the average estimates in the literature, no matter how efficiently it is done."

It is clear that the marginal costs of abatement in low-income societies such as China and India are substantially below those in developing countries, Dr. Crandall notes. Economists envision a marketable permits program as being global in scope. The United States, France, Japan, and Germany, for example, would buy permits from China, India, or Bangladesh. The latter would, in turn,

reduce their CO<sub>2</sub> or other greenhouse gas emissions by this amount over the levels that would have occurred without the permits policy in all future years. The difficulties involved in such a future program would be immense: measuring emissions from millions of sources from motor scooters to bovine animals; forecasting emission levels for the uncontrolled scenario; and, finally, enforcing the reductions from these myriad sources. If enforcing nuclear nonproliferation treaties is difficult, enforcing a global greenhouse gases trading program would be incomparably more complicated.

Yale University Professor William D. Nordhaus has also analyzed the costs and benefits of CO<sub>2</sub> emission limits. Dr. Nordhaus' research shows that the costs of even an efficiently designed emission reduction program exceed the value of environmental benefits by a ratio of 7 to 1 and that the United States would bear almost two-thirds of the global cost. Targets and timetables for emission reductions would also tend to discourage businesses and households from investing now in new equipment and processes that would reduce greenhouse gas emissions. This unfortunate result stems from the fact that tax depreciation schedules for many types of investments that could reduce CO<sub>2</sub> emissions are very slow. Slow capital cost recovery means that investments that are deemed "risky" because of possible future emission caps face a much higher hurdle rate to gain acceptance than would an investment whose cost could be recouped immediately through expensing (first-year write-off). The prospect of emission constraints in the future will tend to retard the very type of capital expenditures that many believe would facilitate emission reductions without curtailing economic growth.

#### TAX POLICY FOR VOLUNTARY ACTION

Current U.S. tax policy treats capital formation- including investments that increase energy efficiency and reduce pollution- harshly compared with other industrialized countries and with our own recent past. For example, before the 1986 Tax Reform Act (TRA '86), the United States had one of the best capital cost-recovery systems in the world.

Under the strongly pro-investment tax regime in effect during 1981-85, the present value of cost-recovery allowances for wastewater treatment facilities used in pulp and paper production was about 100 percent (meaning that the deductions were the equivalent of an immediate write-off of the entire cost of the equipment), according to an analysis by Arthur Andersen LLP (see Table 1).

Under TRA '86, the present value for wastewater treatment facilities fell to 81 percent for pulp and paper, dropping the U.S. capital cost recovery system to near the bottom ranking of an eight-country inter-national survey. Allowances for scrubbers used in the production of electricity were 90 percent before TRA '86; the present value fell to 55 percent after TRA '86, ranking the United States at the bottom of the survey. As is true in the case of productive equipment, both the loss of the investment tax credit and the lengthening of depreciable lives enacted in TRA '86 raised effective tax rates on new investment in pollution-control and energy-efficient equipment. Slower capital cost recovery means that equipment embodying new technology and energy efficiency will not be put in place as rapidly as it would be under a more-favorable tax code. A variety of tax incentives such as expensing, accelerated depreciation, tax-exempt bond financing, or more-generous loss carrybacks that reduce the cost of capital for voluntary efforts to reduce greenhouse gas emissions, such as those included in S. 1777, the Climate Change Tax Amendment introduced in the 106th Congress by Senator Larry Craig (R-ID), would be more effective than the "credit for early action" regulatory framework proposal or the multi-pollutant approach proposed by some in Congress.

#### CONCLUSIONS: A PARTNERSHIP BETWEEN TAX POLICY AND TECHNOLOGICAL INNOVATION

If, as knowledge of the climate system increases, policy changes to reduce carbon emissions become necessary, these changes should be implemented in a way that minimizes damage to the U.S. economy. Above all, experts agree that voluntary measures clearly and cost-effectively reduce the growth in greenhouse gas emissions, as the U.S. Second National Communication to the Framework Convention on Climate Change noted in 1997.

A U.S. strategy for reducing CO 2 emissions and providing energy security should include:

**Fix the U.S. Tax Code:** Providing expensing (first-year write-off) or faster depreciation for new investments that reduce CO 2 can reduce the cost of capital by 20-30 percent.

**Expand Nuclear Energy:** Nuclear power expansion has a vital role to play in managing CO 2 emissions while strengthening U.S. energy security.

**Expand Bilateral Cooperation with Developing Countries:** Promoting the use of existing and emerging technology in developing countries for clean coal, natural gas, and hydro electricity production could substantially slow the growth of global CO 2 emissions.

Expand Incentives for use of landfill methane and biomass including ethanol from cellulose. The EIA's April 2000 Climate Change Technology Initiative report shows that these programs are the most efficient use of tax incentives to reduce CO 2 emissions.

Implement Multi-Year Plan for Improvement of Coal Technology: In the short term, focus on new clean coal technology, co-firing with biomass, and coal to gas; in the long term, institute a capture target of 50 percent (converts coal emissions to the equivalent of natural gas).

Remove Regulatory Barriers: New Source Review is impeding the retrofiting and expansion of U.S. electricity generating, refining, and manufacturing capacity and making it more difficult to put in place the kinds of changes that would reduce CO 2 for each unit produced.

Avoid Caps on CO 2 Emissions by U.S. industry. Such a policy will have a negative impact on the willingness of industry to invest here in the United States in the new technologies because of the concern that "voluntary" emission cuts will become mandatory. Allowing industry to recover its costs faster will spur the kind of investments that reduce CO 2 and expand output of energy as well as other products and services.

Avoid Setting Targets for Global CO 2 Concentrations in the range of 550 ppm in the next 75-100 years. Such targets would require the developed countries' CO 2 emissions to fall to zero by about 2050 and would likely severely constrain U.S. economic growth. Models which show that their targets can be achieved at low cost, such as the Second Generation Model used by Jae Edmonds at Battelle Memorial Institute, are seriously flawed. The SGM model assumes costless, instantaneous adjustments in all markets and does not specify how the new technology required to move off carbon-based fuels is to be developed.

The consensus of the noted climate policy scholars whose work is discussed in this report is clear. Given the need to maintain strong U.S. economic growth to address such challenges as a growing population, the retirement of the baby boom generation, and a persistent trade deficit, policymakers need to weigh carefully the Kyoto Protocol's negative economic impacts and its failure to engage developing nations in full participation. Adopting a thoughtfully timed climate change policy-based on accurate science, improved climate models, global participation, tax incentives to accelerate investment in energy efficiency and sequestration, and new technology-is essential, both to U.S. and global



economic growth and to eventual stabilization of the carbon concentration in the atmosphere, if growing scientific understanding indicates such a policy is needed.

LOAD-DATE: August 2, 2001

47 of 47 DOCUMENTS

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Los Angeles Times

July 16, 2001 Monday Home Edition

SECTION: Part A; Part 1; Page 1; Metro Desk

LENGTH: 1785 words

HEADLINE: THE NATION;

Smog Feared in Power Buildup;  
Electricity: Bush administration's plan for up to 1,900 plants over 20 years poses a threat to air quality, especially in the Midwest and South, experts say.

BYLINE: GARY POLAKOVIC, TIMES ENVIRONMENTAL WRITER

BODY:

The Bush administration's plans for a massive buildup of power plants nationwide could result in dirtier air in places where smog is already bad and getting worse--particularly in the Midwest and the South, air quality experts fear.

Smog levels have been cut nationwide in the last 20 years, but the 1990s saw deteriorating air quality in places such as Columbus, Ohio, where the number of smoggy days jumped 78% during the decade, and Memphis, Tenn., where they doubled, according to figures from the federal Environmental Protection Agency.

A large part of the deterioration is attributable to power plant emissions--a major contributor to ozone, which is colorless, and haze. Despite cleanup efforts, power plant emissions are up across much of the fast-growing South and in the Plains states.

Meanwhile, generating plants running at peak capacity to produce electricity for California are sullyng western skies too. Smokestack emissions are up from Washington state to Utah and Arizona to Montana, the EPA says.

"The interior west has fantastic visibility, and power plants are one of the

primary causes of visibility degradation," said Bruce Driver, executive director of the Land and Water Fund of the Rockies. "The emissions stand out like pouring red wine on white carpet. We have concerns about building new power plants in the west."

The administration's energy plan calls for building up to 1,900 plants over the next two decades, increasing the nation's electrical generating capacity by at least half. That is equivalent to two new 300-megawatt plants a week--the fastest rate of expansion over such a long period since the end of World War II, according to the Department of Energy.

Republicans at the White House and in Congress say they are confident they can chart a path toward energy stability without harming the environment.

"Whichever way we go, we'll maintain the air quality standards," said Rep. Joe Barton (R-Texas), who chairs the House energy and air quality subcommittee.

In theory, more power plants do not have to mean worse air quality. Even plants burning coal, which is the dirtiest of the fuels in current use, can be made much cleaner. (A separate problem--emission of gases that can contribute to global warming--is worsened by any increase in the number of power plants burning coal, oil or natural gas.)

What most concerns air quality officials is that the administration not only has proposed increasing the number of plants, but it also has stalled efforts initiated by the Clinton administration to force dozens of dirty, older coal-fired plants to install up-to-date pollution control equipment through a rule, known as new source review, that is designed to control emissions from new and modified plants.

Administration officials began a series of public hearings last week on their proposals to replace the new source review rules.

When it comes to air quality, the administration's energy plan offers a fork in the road, said John D. Bachmann, associate director of science policy in the EPA's air quality division.

"The good path is: we can build a lot of new power plants with modern technology that have less emissions and phase out older plants," he said. "Or we can loosen emissions caps and the new source review regulations, burn lots of coal and let the power plants go."

Under that scenario, "you would see a worsening of air quality," he said.

Power plants will be the major factor governing air quality in much of the nation for decades, said William Chameides, a chemist in the School of Earth and Atmospheric Sciences at the Georgia Institute of Technology.

"Extra power plants will put more emissions in the air," he said. "I don't know if people have thought this out very well, and I don't think people are aware of the magnitudes we are talking about."

In the optimistic view, the future could look like the Polk Power Station, now operating in a swamp near Fort Lonesome, Fla. The plant is one of two commercial clean-coal plants, which burn gases emitted from superheated coal. It emits 85% fewer nitrogen oxides than a typical coal-fired plant.

Nitrogen oxides, which contribute to haze and acid rain, are one of the major pollutants produced by power plants. In the air, they are key to forming ozone, a toxic gas that can sear lung tissue and cause shortness of breath, headaches, nausea and long-term loss of lung function.

Nitrogen oxides are also the only major pollutant targeted under the Clean Air Act that is not in decline. Emissions have increased nearly 20% since 1970, according to the EPA, with most growth due to coal-fired power plants and heavy-duty diesel engines.

Nationwide, emissions of all smog-forming pollutants from power plants dropped slightly over the last 10 years. But across the rapidly growing South and parts of the Great Plains and Midwest, emissions during the decade rose--growing as much as one-third in some areas, according to EPA figures.

The administration has committed \$2 billion to clean coal research over the next 10 years. President Bush comes from Texas, which uses more coal-fired power than any other state; Vice President Dick Cheney hails from Wyoming, the largest coal-producing state.

But power plants like the one at Fort Lonesome are only clean relative to conventional coal plants and are expensive to construct. The Florida plant emits 20 times more nitrogen oxides than a comparable plant fired by natural gas and costs three times as much to build. Moreover, a coal-burning plant, even with the cleanest technologies, poses much more of a global warming problem than a plant using natural gas or oil.

The major provision of the Clean Air Act that is aimed at controlling emissions from new power plants is the new source review rule. EPA officials say the rule has typically resulted in emissions cuts at power plants of 70% to 95%.

Air pollution control officials consider new source review to be a key to controlling power plant emissions. Weakening the rules will certainly worsen air quality in many areas of the country, said S. William Becker, executive director of the State and Territorial Air Pollution Program Administrators and the Assn. of Local Air Pollution Control Officials.

Administration officials, by contrast, consider the rule bureaucratic, costly and ineffective. "New source review is a roadblock to clean-burning energy plants," said Cheney's spokeswoman, Julienna Glover-Weiss.

What the administration favors is a market-based program that would cap total emissions from power plants and allow companies to buy and sell credits to reach reduction targets. Companies that reduce more than their pollution allocation can sell to companies that produce over their limit.

Such programs are favored by free-market advocates, industry groups and many economists. Supporters say market-based programs cost less, offer businesses more options for knocking down emissions and rely on the invisible hand of the marketplace rather than the strong arm of regulatory mandate to find the most effective remedies.

Air-quality officials and environmental activists fear that the proposed market-based programs would not work. And they say the administration is already showing signs of backsliding in its enforcement of air quality regulations.

Under intense lobbying pressure from power companies, the White House earlier this year instructed the Justice Department and the EPA to review enforcement actions against companies accused of violating the Clean Air Act.

In 1999, federal officials charged that 32 coal-fired power plants in several Southern and Midwestern states had ignored a requirement that companies install advanced emission controls whenever their plants are upgraded.

The government reached a settlement with Tampa Electric Co. Two other settlements are pending with Cinergy Corp. and Virginia Power Co. But several other cases are being reconsidered, including ones against Duke Power Corp.,

Southern Co. and the Tennessee Valley Authority.

Critics of the administration's plans also say the record of market-based approaches is mixed. On the one hand, the nation's 11-year-old program to reduce acid rain by allowing power plants to trade emissions credits is widely credited with cutting emissions and saving compliance costs. It corrals hundreds of coal-fired power plants into one market-trading block, caps the annual emissions at 9 million tons and then lets power producers swap credits to achieve the goal.

On the other hand, a similar market-based program to cut smog in Los Angeles has not worked. Called RECLAIM, it was the world's first attempt to harness market forces to tackle urban smog. Eight years after its inception, however, polluters have avoided installing controls and the state's power crisis has led to a shortage of pollution credits that has driven up compliance costs. The program has failed to cut emissions as expected, although officials are trying to salvage it.

Many environmentalists oppose market-based strategies to fight pollution. They say they are difficult to enforce, allow too much self-policing by businesses and have the potential to concentrate emissions in poor and minority communities.

A coalition of 20 environmental groups earlier this month urged EPA Administrator Christie Todd Whitman to suspend trading programs being considered by four states. That request came a week after a letter from the EPA's inspector general's office agreed to investigate concerns about market-based programs.

#### Smog U.S.A.

Power plant emissions of nitrogen oxides are down nationwide over the last decade, but the reductions are not uniform. Added emissions in the south and parts of the Midwest contribute to deteriorating air quality.

\*

Days per year exceeding 8-hour ozone limit

Los Angeles

Average of '90-'92: 132

Average of '97-'99: 37

\*

Knoxville, TN

Average of '90-'92: 13

Average of '97-'99: 50

\*

Atlanta

Average of '90-'92: 28

Average of '97-'99: 47

\*

Charlotte, NC

Average of '90-'92: 17

Average of '97-'99: 36

\*

Pittsburgh

Average of '90-'92: 13

Average of '97-'99: 27

\*

Louisville, KY

Average of '90-'92: 9

Average of '97-'99: 27

\*

Raleigh, NC

Average of '90-'92: 7

Average of '97-'99: 20

\*

Youngstown, OH

Average of '90-'92: 9

Average of '97-'99: 15

\*

Indianapolis

Average of '90-'92: 9

0017\_f\_kphh3004\_ceq

Average of '97-'99: 14

\*

New Orleans

Average of '90-'92: 4

Average of '97-'99: 11

\*

Ozone is in decline in Los Angeles and the Northeast, but progress against smog is lacking across much of the nation.

Source: U.S. Environmental Protection Agency

GRAPHIC: GRAPHIC: Smog U.S.A., Los Angeles Times

LOAD-DATE: July 16, 2001







**Jefferson B. Seabright**  
Vice President  
Policy Planning

**Texaco**  
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August 31, 2001

Phil Cooney  
Chief of Staff  
Council on Environmental Quality  
The Eisenhower Executive Office Bldg  
Room 360  
Washington, DC 20503

Dear Phil:

As the Administration continues its review of programs and policies to address global climate change, I want to share a personal recommendation for an inter-agency program I believe has great merit. This program, the Technology Cooperation Agreement Pilot Project (TCAPP), could provide a strong foundation for the Administration's commitment to market-based technology cooperation under the Framework Convention.

TCAPP is an interagency program supported by DOE, EPA, and USAID that is assisting developing countries and the business community in implementing clean energy technologies through removal of market barriers and facilitation of business investment projects.

With very modest funding, TCAPP has had tremendous success in demonstrating U.S. commitment to the UNFCCC, in expanding clean energy markets and exports, and in reducing greenhouse gas emissions in developing countries. Through its market and project development activities, the program has facilitated \$118 million of increased private investment in clean energy technologies in the participating developing countries. Over their lifetime, these projects will reduce 9 million tons of CO<sub>2</sub> emissions. The program is currently advancing an even larger portfolio of clean energy investment projects.

TCAPP has also become widely recognized as the leading international model for implementation of technology transfer under the UNFCCC, creating good-will toward the U.S. in the negotiations and playing a key role in securing developing country support for market-based approaches to technology transfer implementation. Further information on TCAPP is available at <http://www.nrel.gov/tcapp>.

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CEQ 000281

Phil Cooney  
Page Two

I would urge the Administration to consider building on the successes and lessons learned from this pilot program in the development of more comprehensive initiatives for clean energy technology cooperation.

With some retooling and integration with other initiatives currently under consideration (e.g. CETE), the approaches applied in this pilot program could become a central element of new initiatives in this area.

As a first step, the appropriate officials within the Administration may want to request a briefing on this program from its Director, Ron Benioff, at the National Renewable Energy Laboratory, the executive agency for this program. He can be reached at 303 384-7504. I would also be glad to further share my views on this program.

Thanks for your help in passing this along to others in the Administration working on this issue.

With best wishes in your new assignment,

Yours sincerely,



Jeff Seabright

cc: Ron Benioff



CEQ  
319 PC



"McArdle, Paul" <Paul.McArdle@eia.doe.gov>  
08/31/2001 10:30 03 AM

Record Type: Record

To: Phil Cooney/CEQ/EOP@EOP  
cc: "Hutzler, Mary" <MARY.HUTZLER@eia.doe.gov>, "Sitzer, Scott" <Scott.Sitzer@eia.doe.gov>  
Subject: Natural Gas Flaring

---

Phil:

Attached as an additional file that Mary Hutzler was not able to send to you last night (Oil Industry Methane Emissions by Sector).

Our knowledge of this area is somewhat imperfect since the vented and flared natural gas is not a marketed commodity (so all of the estimates are somewhat uncertain)

There seems to be two different areas where we have venting/flaring:

1 At the associated wellhead, where the EIA, based on State estimates, estimates that vented and flared gas is equal to 234 Bcf. Because many states require flaring of natural gas, EIA, in compiling its annual estimates of greenhouse gases, assumes that all gas that is reported under the category "Vented and Flared" is actually flared and therefore is a carbon dioxide rather than a methane emission. This results in about 4.2 MMTCe emissions. We do not, however, know with exact certainty if all the gas is flared. Obviously, if it is not all flared, there are opportunities of reductions in GHGs via flaring (or reinjection), given the fact that employing natural gas flaring in place of venting natural gas reduces GHG emissions by approximately 90% for every unit of natural gas vented. The counterfactual to 100% flaring is 100% venting (which we do not believe is the case) - but if it were the case reduction potential would be about 30 MMTCe.

2 Downstream of the Associated Wellhead, where a 1999 draft study by ICF for EPA says that methane emissions downstream of the associated wellhead are equal to 60.8 Bcf (59.2 Bcf from production facilities, 0.3 from transportation, and 1.3 from refining). The study goes on to say that 43.7 Bcf is technically recoverable and 13.7 is economically recoverable. If this is the case, technical recovery is equivalent to 5.3 MMTCe and economically recoverable emissions are equal to 1.6 MMTCe

I hope this helps. Give me a call if you have any questions.

Paul

Paul F McArdle, Ph.D.  
Program Manager  
Greenhouse Gases Program  
U S Department of Energy  
Energy Information Administration

002034

CEQ 000284

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<<ch4vent2.xls>>



- ch4vent2.xls

## Methane Emissions by Sector

	Emission Rate (Bcf/Yr)	Emission Rate MMT	Emission Rate MMTCe
<b>Crude Oil Production</b>			
<b>Vented</b>			
Storage Tanks	25.7	0.493	3.092
Pneumatic Devices (high-bleed)	19.9	0.382	2.394
Pneumatic Devices (low-bleed)	3.7	0.071	0.445
Chemical Injection Pumps	2.8	0.054	0.337
Smaller sources	1.7	0.033	0.205
<b>Subtotal</b>	<b>53.8</b>	<b>1.032</b>	<b>6.472</b>
<b>Fugitive</b>			
Light oil wellheads	1.3	0.025	0.156
Smaller sources	1.7	0.033	0.205
<b>Subtotal</b>	<b>3.0</b>	<b>0.058</b>	<b>0.361</b>
<b>Combustion</b>			
Gas Engines	1.4	0.027	0.168
Smaller sources	0.4	0.008	0.048
<b>Subtotal</b>	<b>1.8</b>	<b>0.035</b>	<b>0.217</b>
<b>Production Upsets</b>	<b>0.6</b>	<b>0.012</b>	<b>0.072</b>
<b>Total Production</b>	<b>59.2</b>	<b>1.135</b>	<b>7.122</b>
<b>Crude Oil Transportation</b>			
Vented	0.3	0.005	0.031
Fugitive	0.1	0.001	0.006
Combustion	0.0	0.000	0.000
<b>Total Transportation</b>	<b>0.3</b>	<b>0.006</b>	<b>0.037</b>
<b>Crude Oil Refining</b>			
Vented	1.1	0.021	0.132
Fugitive	0.1	0.002	0.012
Combustion	0.1	0.002	0.012
<b>Total Refining</b>	<b>1.3</b>	<b>0.025</b>	<b>0.156</b>
<b>Total Oil Industry</b>	<b>60.8</b>	<b>1.166</b>	<b>7.315</b>
<b>Breakdown by Emission Type - Vented, Fugitive, Combustion and Upsets</b>			
Vented	55.2	1.058	6.636
Fugitive	3.2	0.060	0.379
Combustion	1.9	0.036	0.229
Upsets	0.6	0.012	0.072

1/ Based on "Estimates of Methane Emissions from the U.S. Oil Industry,"  
Draft study prepared for the U.S. EPA by ICF Consulting, October 1999.

Paul McArdle, EI-81



July 27, 2001

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CEQ 25 PC

EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF SCIENCE AND TECHNOLOGY POLICY  
WASHINGTON, D.C. 20502

September 6, 2001

Christopher C. Horner  
Competitive Enterprise Institute  
1001 Connecticut Avenue, NW  
Suite 1250  
Washington, D.C. 20036


Dear Mr. Horner:

The purpose of this letter is to explain the status of the national assessment of climate change sponsored by the U.S. Global Change Research Program and to explain how the Administration is developing its policies on global climate change.

The national assessment, titled *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*, consists of an overview document of about 150 pages and a foundation document of about 600 pages. These documents were the product of the National Assessment Synthesis Team, an advisory committee chartered under the Federal Advisory Committee Act. As such, they are not policy positions or official statements of the U.S. government. Rather, they were produced by the scientific community and offered to the government for its consideration.

The formulation of a comprehensive policy addressing global climate change is an important priority for this Administration. Towards this end, the President has constituted a Cabinet-level working group to study this issue and assist in the development of such comprehensive policy. Among other things, this working group is conducting an extensive review of climate change science and technology, has commissioned and received a report from the U.S. National Academy of Sciences on climate change science questions and uncertainties, and is carefully examining how best to address the challenge of climate change. The efforts of this working group will form the basis of government decision-making on the important issue of global climate change.

Sincerely,



Rosina Bierbaum  
Acting Director  
Office of Science and Technology Policy

002032

CEQ 000290

To : Phil Cooney, CEQ

From : Ted Ulyot, WHCO

2 pages

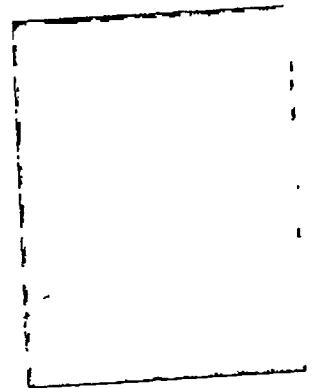
3/19/03

Phil: Here is the letter we sent  
to CFI. I can

fill you in on the  
background. My phone # is

Thanks,

Ted



## THE WHITE HOUSE

WASHINGTON

March 3, 2003

Dear Mr. Horner:

On behalf of the Office of the Counsel to the President, I write in reference to your e-mail of February 5, 2003 – addressed to Karl Rove and others – in which you state that “the Administration [has] renege[d] on the deal [that the Competitive Enterprise Institute (“CEI”)] struck with Brad Berenson in the WH Counsel’s office, to resolve [CEI’s] litigation against the National Assessment on Climate Change.” I understand the litigation to which you are referring to be the case of *CEI, et al. v. Bush*, DDC No. 00-02383. As you know, CEI and the other plaintiffs dismissed their complaint in that case following the issuance, on September 6, 2001, of a letter by Rosina Bierbaum, Acting Director of the Office of Science and Technology Policy.

Acting Director Bierbaum’s letter states that the documents comprising the national assessment of climate change (formally titled *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*) “are not policy positions or official statements of the U.S. government.” Rather, as the letter explains, the documents “were produced by the scientific community and offered to the government for its consideration.”

Your e-mail appears to contend that the citation and discussion of *Climate Change Impacts* in the document U.S. Department of State, *U.S. Climate Action Report 2002* (Washington, D.C., May 2002), is inconsistent with the Bierbaum letter. We do not agree. Dr. Bierbaum’s letter expressly states that the *Climate Change Impacts* documents had been “offered to the government for its consideration,” and does not purport to place limits on what use various Federal entities might make of those documents in the future. Accordingly, no matter what use has subsequently been made of the national assessment, there has been no “renegeing” on the Bierbaum letter.

Sincerely,



David G. Leitch  
Deputy Counsel to the President

Christopher C. Horner  
Competitive Enterprise Institute  
1001 Connecticut Avenue, NW, Suite 1250  
Washington, D.C. 20036

cc: Karl C. Rove



OFFICE OF SCIENCE AND TECHNOLOGY POLICY  
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FAX TRANSMITTAL SHEET

Date: 1 April

To: Phil Cooney

Phone Number:

Fax Number: 202 - 456 - 2710

From:

Phone Number: David Halpern  
202 - 456 - 6038

NUMBER OF PAGES (INCLUDING COVER SHEET):

6

Feb 27, 2003

1518 | critical question that needs to be faced up to, and then if  
1519 | we are going to do it, how much money does it cost? And be  
1520 | real about that and tell people what it is going to cost to  
1521 | do that, and then what are the risks to continue using the  
1522 | current transportation system?

1523 | Thank you, Mr. Chairman. I am sure I am over my time.

1524 | Mr. WALSH. Thank you, Alan.

1525 | I am going to call on Mr. Knollenberg next for questions,  
1526 | but before I do that, I have to leave. I am going to hand  
1527 | over the gavel to the Vice Chairman of the subcommittee, Mr.  
1528 | Goode, for the first time. He sat on this committee for the  
1529 | last two years as an independent representative. He is now,  
1530 | I am glad to say, a Republican, so I will be glad to turn  
1531 | over the gavel to Mr. Goode at this time. Thank you.

1532 | Mr. GOODE. Thank you very much.

1533 | Mr. KNOLLENBERG. Thanks, Mr. Chairman.

1534 | Dr. Marburger, I am going to get into, as quick as I can,  
1535 | a situation that goes back well before your time, and so it  
1536 | was not on your watch. But you are familiar obviously with  
1537 | in 1990 the Congress passed a Global Change Research Act  
1538 | which requires a national assessment be done by 1994. And  
1539 | they set forth 8 criteria for this national assessment. Once  
1540 | the national assessment is issued, the law requires a  
1541 | follow-up report every four years. In 1994, which would have  
1542 | been the year that they should have complied, but they did

1543 not, there was no report submitted. In 2000 the national  
1544 assessment is finally released just before the election, 6  
1545 years overdue. And that report was not complete. That  
1546 assessment, by the way, even states that the report could not  
1547 attempt to be comprehensive, and further, only completed 5 of  
1548 the 8 criteria.

1549 Now, this is where it gets a little bit interesting. In  
1550 October that year, myself along with Senator Inhofe and  
1551 Congresswoman Joanne Emerson, filed suit against the national  
1552 assessment, simply because of the fact that it was not,  
1553 because it could not become a tool or an instrument to  
1554 advocate policy. We filed suit, and subsequent to that in  
1555 September, and I have got a letter here that I want to give  
1556 to you. You probably have this, but this letter was the  
1557 agreement that we made in September of 2001. That letter  
1558 states that the climate scenarios in the national assessment  
1559 do not represent Government policy. It is at I think the  
1560 bottom of the second paragraph, and are not policy positions  
1561 or statements of the U.S. Government. With that statement,  
1562 we agreed to drop the lawsuit. In June of 2002, on good  
1563 faith, the EPA submitted the national assessment as the U.S.  
1564 position and policy on climate change under the Rio Treaty,  
1565 and further, in effect, they went back on, as I see it, their  
1566 word. Now, that is signed by somebody who is no longer with  
1567 the agency, as you know, and that is some of the problem.

1568 This thing is a little bigger than it looks. It is not  
1569 just a complaint that we are raising, because in fact we are,  
1570 about their going back on their word, but what is picked up  
1571 now, because there is a website, as you know, that portrays  
1572 this at least in a general way as being public policy, and  
1573 there are seven states now that have attorneys general, seven  
1574 states that are ready to file suit. I think there is a  
1575 window of time here of 60 days or something.

1576 But the point I am making is that, as I mentioned, this  
1577 is not on your watch, so it may be something that you have  
1578 inherited that you do not particularly want, you would like  
1579 to see it go away. And I think some of us would too. But  
1580 the story is simply this--and I do not know the outcome of  
1581 those lawsuits--but on the basis of our agreement which we  
1582 had, and the letter obviously responds to that, why is the  
1583 national assessment still being circulated, if in fact that  
1584 it is? We believe that it is, or these 7 states would not be  
1585 considering a lawsuit, because they are seeing it as public  
1586 policy, and I guess the question I would ask too, since it is  
1587 being disseminated, because they are getting the information,  
1588 when will cessation of that dissemination stop? That is the  
1589 basic question.

1590 Mr. MARBURGER. I am not sure I am familiar with all of  
1591 the ins and outs of this issue, but I am familiar with some  
1592 of it.



1593 Mr. KNOLLENBERG. You would be familiar with it if it  
1594 were--

1595 Mr. MARBURGER. First of all, Congressman, the U.S.  
1596 Government does circulate or actually makes accessible a lot  
1597 of material that is not administrative policy. And so that I  
1598 am not sure that I want to address the issue of let us say  
1599 pulling things off of websites or so forth. My understanding  
1600 is that there is a lot of information in the report that you  
1601 are referring to that is useful to the science community, so  
1602 that is probably why it is still available. But as far as I  
1603 am concerned, and as far as this administration is concerned,  
1604 the statement in this letter of September 6, 2001 is correct,  
1605 this is not a statement of administration policy.

1606 The EPA report that you referred to I believe did not  
1607 actually submit the--it was not simply equivalent to the  
1608 assessment. I believe it did refer to the assessment in  
1609 several places, and if I am not mistaken, did not refer to it  
1610 as administrative policy. So perhaps the situation requires  
1611 additional clarification, and I would be glad to address this  
1612 in more legalistic terms and so forth, but that is my  
1613 understanding of the current situation.

1614 Mr. KNOLLENBERG. Well, that is what I am looking for.  
1615 It is possible that these attorneys general are acting on a  
1616 bit of a slim foundation. On the other hand, they are  
1617 acting, or they are assuming they are going to act within the

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1618 | next 60 days. It tells me that they have taken a different  
1619 | view of that, and what perhaps would have been a view that  
1620 | you hold or would like to hold certainly. And we knew we had  
1621 | an agreement. We thought it was solid. And now we find that  
1622 | there is a difference interpretation being taken, perhaps  
1623 | wrongly, and I guess that is what we have to clarify, what  
1624 | the real position of EPA is, and a court of law will decide I  
1625 | guess who is right here. But it appears to us that--and  
1626 | incidentally, I might mention that CEI, on the basis of this,  
1627 | is also filing a lawsuit. The terms of that are too long to  
1628 | go into here, but it is all over the same thing. It is  
1629 | turning around, because one of the people on the lawsuit was  
1630 | from CEI as well, a Mr. Horner. I remember that name too.

1631 | I just want you to be aware if it. I would like a  
1632 | response to it. I would like a response to it so that we  
1633 | know. I spoke to Mrs. Emerson this morning, who is aware of  
1634 | this and concerned about it as well, so there is an interest  
1635 | on our part in having some bona fide response.

1636 | Mr. MARBURGER. I think the appropriate thing for us to  
1637 | do is to provide you with a letter or memorandum that gives  
1638 | the status and the exact position of the administration on  
1639 | this issue.

1640 | Mr. KNOLLENBERG. I would like that very much if you  
1641 | would do that.

1642 | Mr. MARBURGER. We will be glad to do it.

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## S.169

### Global Change Research Act of 1990 (Enrolled as Agreed to or Passed by Both House and Senate)

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#### SEC. 106. SCIENTIFIC ASSESSMENT.

On a periodic basis (not less frequently than every 4 years), the Council, through the Committee, shall prepare and submit to the President and the Congress an assessment which--

- (1) integrates, evaluates, and interprets the findings of the Program and discusses the scientific uncertainties associated with such findings;
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#### SEC. 107. ANNUAL REPORT.

(a) GENERAL- Each year at the time of submission to the Congress of the President's budget, the Chairman of the Council shall submit to the Congress a report on the activities conducted by the Committee pursuant to this title, including--

- (1) a summary of the achievements of the Program during the period covered by the report and of priorities for future global change research;
- (2) an analysis of the progress made toward achieving the goals of the Plan;
- (3) expenditures required by each agency or department for carrying out its portion of the Program, including--
  - (A) the amounts spent during the fiscal year most recently ended;
  - (B) the amounts expected to be spent during the current fiscal year; and
  - (C) the amounts requested for the fiscal year for which the budget is being submitted.

(b) **RECOMMENDATIONS**- The report required by subsection (b) shall include recommendations by the President concerning--

(1) changes in agency or department roles needed to improve implementation of the Plan; and

(2) additional legislation which may be required to achieve the purposes of this title.

## **SEC. 108. RELATION TO OTHER AUTHORITIES.**

(a) **NATIONAL CLIMATE PROGRAM RESEARCH ACTIVITIES**- The President, the Chairman of the Council, and the Secretary of Commerce shall ensure that relevant research activities of the National Climate Program, established by the National Climate Program Act (15 U.S.C. 2901 et seq.), are considered in developing national global change research efforts.

(b) **AVAILABILITY OF RESEARCH FINDINGS**- The President, the Chairman of the Council, and the heads of the agencies and departments represented on the Committee, shall ensure that the research findings of the Committee, and of Federal agencies and departments, are available to--

(1) the Environmental Protection Agency for use in the formulation of a coordinated national policy on global climate change pursuant to section 1103 of the Global Climate Protection Act of 1987 (15 U.S.C. 2901 note); and

(2) all Federal agencies and departments for use in the formulation of coordinated national policies for responding to human-induced and natural processes of global change pursuant to other statutory responsibilities and obligations.

(c) **EFFECT ON FEDERAL RESPONSE ACTIONS**- Nothing in this title shall be construed, interpreted, or applied to preclude or delay the planning or implementation of any Federal action designed, in whole or in part, to address the threats of stratospheric ozone depletion or global climate change.

## **TITLE II--INTERNATIONAL COOPERATION IN GLOBAL CHANGE RESEARCH**

### **SEC. 201. SHORT TITLE.**

This title may be cited as the 'International Cooperation in Global Change Research Act of 1990'.

### **SEC. 202. FINDINGS AND PURPOSES.**

(a) **FINDINGS**- The Congress makes the following findings:

(1) Pooling of international resources and scientific capabilities will be essential to a successful international global change program.

(2) While international scientific planning is already underway, there is currently no comprehensive intergovernmental mechanism for planning, coordinating, or implementing research to understand global change and to mitigate possible adverse effects.

(3) An international global change research program will be important in building future consensus on methods for reducing global environmental degradation.

(4) The United States, as a world leader in environmental and Earth sciences, should help provide leadership in developing and implementing an international global change research program.

(b) PURPOSES- The purposes of this title are to--

- (1) promote international, intergovernmental cooperation on global change research;
- (2) involve scientists and policymakers from developing nations in such cooperative global change research programs; and
- (3) promote international efforts to provide technical and other assistance to developing nations which will facilitate improvements in their domestic standard of living while minimizing damage to the global or regional environment.

## SEC. 203. INTERNATIONAL DISCUSSIONS.

(a) GLOBAL CHANGE RESEARCH- The President should direct the Secretary of State, in cooperation with the Committee, to initiate discussions with other nations leading toward international protocols and other agreements to coordinate global change research activities. Such discussions should include the following issues:

- (1) Allocation of costs in global change research programs, especially with respect to major capital projects.
- (2) Coordination of global change research plans with those developed by international organizations such as the International Council on Scientific Unions, the World Meteorological Organization, and the United Nations Environment Program.
- (3) Establishment of global change research centers and training programs for scientists, especially those from developing nations.
- (4) Development of innovative methods for management of international global change research, including--
  - (A) use of new or existing intergovernmental organizations for the coordination or funding of global change research; and
  - (B) creation of a limited foundation for global change research.
- (5) The prompt establishment of international projects to--
  - (A) create globally accessible formats for data collected by various international sources; and
  - (B) combine and interpret data from various sources to produce information readily usable by policymakers attempting to formulate effective strategies for preventing,

mitigating, and adapting to possible adverse effects of global change.

(6) Establishment of international offices to disseminate information useful in identifying, preventing, mitigating, or adapting to the possible effects of global change.

(b) **ENERGY RESEARCH-** The President should direct the Secretary of State (in cooperation with the Secretary of Energy, the Secretary of Commerce, the United States Trade Representative, and other appropriate members of the Committee) to initiate discussions with other nations leading toward an international research protocol for cooperation on the development of energy technologies which have minimally adverse effects on the environment. Such discussions should include, but not be limited to, the following issues:

(1) Creation of an international cooperative program to fund research related to energy efficiency, solar and other renewable energy sources, and passively safe and diversion-resistant nuclear reactors.

(2) Creation of an international cooperative program to develop low cost energy technologies which are appropriate to the environmental, economic, and social needs of developing nations.

(3) Exchange of information concerning environmentally safe energy technologies and practices, including those described in paragraphs (1) and (2).

#### **SEC. 204. GLOBAL CHANGE RESEARCH INFORMATION OFFICE.**

Not more than 180 days after the date of enactment of this Act, the President shall, in consultation with the Committee and all relevant Federal agencies, establish an Office of Global Change Research Information. The purpose of the Office shall be to disseminate to foreign governments, businesses, and institutions, as well as the citizens of foreign countries, scientific research information available in the United States which would be useful in preventing, mitigating, or adapting to the effects of global change. Such information shall include, but need not be limited to, results of scientific research and development on technologies useful for—

(1) reducing energy consumption through conservation and energy efficiency;

(2) promoting the use of solar and renewable energy sources which reduce the amount of greenhouse gases released into the atmosphere;

(3) developing replacements for chlorofluorocarbons, halons, and other ozone-depleting substances which exhibit a significantly reduced potential for depleting stratospheric ozone;

(4) promoting the conservation of forest resources which help reduce the amount of carbon dioxide in the atmosphere;

(5) assisting developing countries in ecological pest management practices and in the proper use of agricultural, and industrial chemicals; and

(6) promoting recycling and source reduction of pollutants in order to reduce the volume of waste which must be disposed of, thus decreasing energy use and greenhouse gas emissions.

**TITLE III—GROWTH DECISION AID****SEC. 301. STUDY AND DECISION AID.**

(a) The Secretary of Commerce shall conduct a study of the implications and potential consequences of growth and development on urban, suburban, and rural communities. Based upon the findings of the study, the Secretary shall produce a decision aid to assist State and local authorities in planning and managing urban, suburban, and rural growth and development while preserving community character.

(b) The Secretary of Commerce shall consult with other appropriate Federal departments and agencies as necessary in carrying out this section.

(c) The Secretary of Commerce shall submit to the Congress a report containing the decision aid produced under subsection (a) no later than January 30, 1992. The Secretary shall notify appropriate State and local authorities that such decision aid is available on request.

Speaker of the House of Representatives.

Vice President of the United States and

President of the Senate.

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COUNCIL ON ENVIRONMENTAL QUALITY

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	Scott Rayder / NOAA	Erin Wuchte / OMB	Paul Anastas / OSTP
FROM:	Phil Cooney		Deb Fiddelke / CEQ
			Kameron Oakey / CEQ
			Maxine O'Brien / OSTP
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COMMENTS: for consideration of National Assessment  
issues. Phil

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DATE: March 5, 2003  
TO: Phil Cooney  
FROM: Dennis Deziel *Denz*  
RE: **Status of National Assessment Report**

Attached for your information is a table which lists the five major sectors of the National Assessment and their status, as well as the 19 major regional sectors included in the National Assessment, and their status. This information was obtained primarily with discussions with Richard Moss of the U.S. Global Change Research Program.

According to my information to date, it is worth noting the following observations:

- All five Sector Reports have been completed. The Agriculture Sector Report was the final Report, published in July 2002.
- Out of 19 Regions, there are SIX Regional Reports pending. The remaining reports to be finalized are the following:
  - **California Region** (Out for Public Comment; Scheduled for first half, 2003)
  - **Northern Great Plains Region** (Scheduled for first half, 2003)
  - **Rocky Mountain/Great Basin Region** (Scheduled for first half, 2003)
  - **Gulf Coast Region** (Scheduled for first half, 2003)
  - **Native Peoples/Native Homelands** (Scheduled for first half, 2003)
  - **Southern Great Plains – Rio Grande Basin Region** (Date Uncertain)

It is also worth mentioning that there is an abundance of conflicting and confusing information regarding the status of these sector and regional reports, due to inconsistent report formatting, as well as frequent USGCRP staff changes. I will keep you apprised of any edits to this information. Please let me know if you have questions or comments.

Thank you.

**Table 1. Status of National Assessment as of March 2003.**

National Assessment Section		Status
Sector Reports (5)	Agriculture	July 2002
	Water Resources	September 2000
	Human Health	May 2001
	Forests	September 2001
	Coastal Areas & Marine Resources	December 2001
Regional Reports (19)	Alaska	December 1999
	Appalachians	Merged
	California	Published for Public Comment in September 2001 Final due in Early 2003
	Eastern Midwest	Merged
	Great Lakes	October 2000
	Great Plains (Central)	July 2002
	Great Plains (Northern)	Due in first half 2003
	Great Plains (Southern)/Rio Grande	Date Uncertain
	Gulf Coast	Due in first half 2003
	Metro East Coast	October 2001
	Mid-Atlantic	January 2001
	Native Peoples/Native Homelands	Due in first half 2003
	New England	December 2001
	Pacific Islands	November 2001
	Pacific Northwest	November 1999
Rocky Mountains/Great Basin	Due in first half 2003	

National Assessment Section		Status
	South Atlantic Coast and Caribbean	Merged
	Southeast	December 2002
	Southwest	September 2000
National Assessment Synthesis		Overview -- 2000 Foundation -- 2001

FROM RICHARD MOSS

## Publications Related to National Assessment

(Updated to 2/3/03)

This listing includes reports published by the regional and sectoral teams and by the National Assessment Synthesis Team. Journal article publications, unless appearing as part of a special journal issue, are not included.

Published Reports	Team/Agency Contact(s)	Products	Science Contact(s)
November 1999	Pacific Northwest Region Claudia Nierenberg, NOAA 301-427-2089 ext. 46	Summary report and Technical report	Phil Mote, University of Washington 206-616-5346
December 1999	Alaska Region Dave Kirtland, USGS 703-648-4712	Summary report	Gunter Weller, University of Alaska 907-474-7371
	Water Resources Sector Dave Kirtland, USGS 703-648-4712	Special issue of journal: <i>Journal of American Water Resources Association</i> — Vol. 35, No. 6 Includes papers from the regional team.	Peter Gleick, Pacific Institute for Studies in Development 510-251-1600  Briane Adams, USGS, 770-409-7700
March 2000	Mid-Atlantic Region Joel Scheraga, EPA, 202-564-3385	Summary report	Ann Fisher, Pennsylvania State Univ. 814-865-3143
	Human Health Sector Joel Scheraga, EPA 202-564-3385	Summary report <i>Environmental Health Perspectives</i> — Vol. 108, No. 4 On-line	Jonathan Patz, Johns Hopkins Univ. 410-955-4195  Mike McGeehin, Centers for Disease Control and Prevention, 770-488-7351
April 2000	Human Health Sector Joel Scheraga, EPA 202-564-3385	Summary report: <i>Environmental Health Perspectives</i> — Vol. 108, No. 4 Hardcopy	Jonathan Patz, Johns Hopkins Univ. 410-955-4195  Mike McGeehin, Centers for Disease Control and Prevention, 770-488-7351
	Water Resources Sector Dave Kirtland, USGS 703-648-4712	Special issue of journal: <i>Journal of American Water Resources Association</i> —Vol. 36, No. 2	Peter Gleick Pacific Institute for Studies in Development, 510-251-1600  Briane Adams, USGS, 770-409-7700
	Gulf Coast Region Joel Scheraga, EPA, 202-564-3385	Volume of technical papers, Franklin Press	Zhu Hua Ning, Southern University 225-771-3286
May 2000	Mid-Atlantic Region Joel Scheraga, EPA, 202-564-3385	Special issue of journal: <i>Climate Change Journal</i> Special Issue 7, Vol. 14, No. 3	Ann Fisher, Pennsylvania State Univ. 814-865-3143
June 2000	Great Lakes Region Joel Scheraga, EPA, 202-564-3385	Special issue of journal: <i>Journal of Great Lakes Research</i>	Peter Sousounis, Michigan State University 517-355-0231

September 2000	Southwest Region Todd Hinkley, USGS 303-236-5850	Technical report	William Sprigg, Univ. of Arizona 520-622-9014
October 2000	Great Lakes Region Joel Scheraga, EPA, 202-564-3385	Summary report	Peter Sousounis, Michigan State University, 517-355-0231
November 2000	Forest Sector Steven McNulty, USDA Forest Service, 919-515-9489	Special issue of journal: <i>Science &amp; Total Environment</i> – Vol. 262, No. 3	John Aber, Univ. of New Hampshire 603-862-3045  Steven McNulty, USDA Forest Service, 919-515-9489
	National Assessment Synthesis Team Thomas Spence, NSF 703-292-8500	President Clinton's official release of Overview and Foundation documents to Congress	Jerry Melillo, Marine Biological Laboratory, 508-548-3705  Anthony Janetos, World Resources Institute (current affiliation: Heinz Center, 202-737-6307)
	National Assessment Synthesis Team Thomas Spence, NSF 703-292-8500	Overview report published by Cambridge Univ. Press ( <i>Climate Change Impacts on the United States: Overview</i> )	Tom Karl, NOAA, National Climate Data Center, 828-271-4476
December 2000	Water Resources Sector Dave Kirtland, USGS 703-648-4712	Summary report, including several papers from the regional teams.	Peter Gleick, Pacific Instit. for Studies in Development, 510-251-1600  Briane Adams, USGS, 770-409-7700
January 2001	Coastal Areas and Marine Resources Sector Donald Scavia, NOAA 301-713-3060	Technical report	Donald Boesch, Univ. of Maryland 410-228-9250 ext. 601  Donald Scavia, NOAA, 301-713-3060
	Mid-Atlantic Region Joel Scheraga, EPA, 202-564-3385	Technical report	Ann Fisher, Pennsylvania State Univ. 814-865-3143
April 2001	National Assessment Synthesis Team Thomas Spence, NSF 703-292-8500	Foundation document published by Cambridge University Press ( <i>Climate Change Impacts on the United States: Foundation Report</i> )	Jerry Melillo, Marine Biological Laboratory, 508-548-3705  Anthony Janetos, World Resources Institute (current affiliation: Heinz Center, 202-737-6307)  Tom Karl, NOAA National Climate Data Center, 828-271-4476
May 2001	Health Sector Joel Scheraga, EPA, 202-564-3385	Technical report published in journal <i>Environmental Health Perspectives</i> Volume 109 (Supplement 2) May 2001	Jonathan Patz, Johns Hopkins Univ. 410-955-4195  Mike McGeekin, Ctrs. for Disease Control and Prevention, 770-488-7351

September 2001	Forest Sector Steven McNulty, USDA Forest Service, 919-515-9489	Articles published in: <i>Ecosystems</i> —Vol. 4, No. 3 (special feature on Forest Biodiversity under Global Change)	John Aber, Univ. of New Hampshire, 603-862-3045  Steven McNulty, USDA Forest Service, 919-515-9489
	Forest Sector Steven McNulty, USDA Forest Service, 919-515-9489	Forest Sector summary brochure that extracted key findings from published assessment report	John Aber, Univ. of New Hampshire, 603-862-3045  Steven McNulty, USDA Forest Service, 919-515-9489
	New England Region Thomas Spence, NSF 703-292-8500	Summary report	Barry Rock, Univ. of New Hampshire 603-862-2949
October 2001	Metro East Coast Region Thomas Spence, NSF 703-292-8500	Technical report with extended summary, and summary brochure	Cynthia Rosenzweig, NASA Goddard, 212-678-5562
November 2001	Pacific Islands Region Thomas Spence, NSF 703-292-8500	Summary report and summary brochure	Eileen Shea, East-West Center 808-944-7253
December 2001	New England Region Thomas Spence, NSF 703-292-8500	Technical report	Barry Rock, Univ. of New Hampshire 603-862-2949
	Coastal Areas and Marine Resources Sector Donald Scavia, NOAA 301-713-3060	Coastal Sector summary brochure that extracts key findings from published assessment report	Donald Scavia, NOAA, 301-713-3060  Donald Boesch, Univ. of Maryland 410-228-9250 ext. 601
May 2002	Native Peoples/Native Homelands – National Region William Turner, NASA Headquarters, 202-358-1662	Workshop report	Nancy Maynard, NASA, 301-286-1404  Robert Gough, 303-384-7110
July 2002	Agriculture Sector Jim Hrubovcak, USDA 202-720-6699	Technical report published by Cambridge University Press	John Reilly, MIT, 617-253-8040  Jim Hrubovcak, USDA 202-720-6699
	Central Great Plains Region Jerry Elwood, DOE, 301-903-4583	Technical/Summary report	Dennis Ojima, Colorado State Univ., 970-491-1976
December 2002	Southeast Region William Turner, NASA Headquarters, 202-358-1662	Technical report	James Cruise Univ. of Alabama—Huntsville 256-961-7745

**Technical and Summary Reports:** A technical report and a summary report cover similar topics but provide different levels of detail and are stylistically distinct. Technical reports contain more detailed technical information about methodologies and are written in a style appropriate for researchers and other technical audiences. Summary reports generally provide only an overview of findings and use language more easily understood by non-technical and non-scientific audiences.

**Workshop report:** The term “workshop report” refers to those reports that are based on a workshop that has been held by a region or sector. These workshops were designed to bring together scientists and key stakeholders, e.g., natural resources managers and state and local individuals, to identify the scientific information needed by stakeholders.

## Reports Pending

Release Date (TENTATIVE)	Team/Agency Contact(s)	Products	Science Contact(s)
First half 2003	<b>California Region</b> Thomas Spence, NSF 703-292-8500  <b>Northern Great Plains Region</b> William Turner NASA Headquarters, 202-358-1662	Summary report and Technical report posted for public comment at <a href="http://www.ncgia.ucsb.edu/products.html">http://www.ncgia.ucsb.edu/products.html</a> Summary report	Robert Wilkinson, Univ. of California, Santa Barbara 805-569-2590  George Seielstad, Univ. of North Dakota, 701-777-4755
	<b>Rocky Mtn/ Great Basin Region</b> Tom Stohlgren, DOI/USGS 970-491-1980	Summary report and Technical report	Frederic Wagner, Utah State Univ. 435-797-2852
	<b>Gulf Coast Region</b> Joel Scheraga, EPA, 202-564-3385	Summary report	Zhu Hua Ning, Southern University 225-771-3286
	<b>Native Peoples/Native Homelands- Southwest Region</b> William Turner, NASA Headquarters, 202-358-1662	Summary report	Stanley Morain, Univ. of New Mexico, 505-277-3622 ext. 228
	Uncertain	<b>Southern Great Plains – Rio Grande Basin Region</b> Jim Hrubovcak, USDA 202-720-6699  Alexander Tuyahov, NASA, 202-358-0250	Summary report

Tentative: Please note that dates for pending releases are subject to change. For additional information, please communicate with the appropriate agency or science contact(s).



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- (1) a summary of the achievements of the Program during the period covered by the report and of priorities for future global change research;
- (2) an analysis of the progress made toward achieving the goals of the Plan;
- (3) expenditures required by each agency or department for carrying out its portion of the Program, including--
  - (A) the amounts spent during the fiscal year most recently ended;
  - (B) the amounts expected to be spent during the current fiscal year; and
  - (C) the amounts requested for the fiscal year for which the budget is being submitted.

(b) RECOMMENDATIONS- The report required by subsection (b) shall include recommendations by the President concerning--

- (1) changes in agency or department roles needed to improve implementation of the Plan; and
- (2) additional legislation which may be required to achieve the purposes of this title.

**SEC. 108. RELATION TO OTHER AUTHORITIES.**

(a) NATIONAL CLIMATE PROGRAM RESEARCH ACTIVITIES- The President, the Chairman of the Council, and the Secretary of Commerce shall ensure that relevant research activities of the National Climate Program, established by the National Climate Program Act (15 U.S.C. 2901 et seq.), are considered in developing national global change research efforts.

(b) AVAILABILITY OF RESEARCH FINDINGS- The President, the Chairman of the Council, and the heads of the agencies and departments represented on the Committee, shall ensure that the research findings of the Committee, and of Federal agencies and departments, are available to--

- (1) the Environmental Protection Agency for use in the formulation of a coordinated national policy on global climate change pursuant to section 1103 of the Global Climate Protection Act of 1987 (15 U.S.C. 2901 note); and
- (2) all Federal agencies and departments for use in the formulation of coordinated national policies for responding to human-induced and natural processes of global change pursuant to other statutory responsibilities and obligations.

(c) EFFECT ON FEDERAL RESPONSE ACTIONS- Nothing in this title shall be construed, interpreted, or applied to preclude or delay the planning or implementation of any Federal action designed, in whole or in part, to address the threats of stratospheric ozone depletion or global climate change.

**TITLE II-INTERNATIONAL COOPERATION IN GLOBAL CHANGE RESEARCH**

**SEC. 201. SHORT TITLE.**

This title may be cited as the 'International Cooperation in Global Change Research Act of 1990'.

**SEC. 202. FINDINGS AND PURPOSES.**

(a) FINDINGS- The Congress makes the following findings:

- (1) Pooling of international resources and scientific capabilities will be essential to a successful international global change program.
- (2) While international scientific planning is already underway, there is currently no comprehensive intergovernmental mechanism for planning, coordinating, or implementing research to understand global change and to mitigate possible adverse effects.

(3) An international global change research program will be important in building future consensus on methods for reducing global environmental degradation.

(4) The United States, as a world leader in environmental and Earth sciences, should help provide leadership in developing and implementing an international global change research program.

(b) **PURPOSES-** The purposes of this title are to--

(1) promote international, intergovernmental cooperation on global change research;

(2) involve scientists and policymakers from developing nations in such cooperative global change research programs; and

(3) promote international efforts to provide technical and other assistance to developing nations which will facilitate improvements in their domestic standard of living while minimizing damage to the global or regional environment.

## SEC. 203. INTERNATIONAL DISCUSSIONS.

(a) **GLOBAL CHANGE RESEARCH-** The President should direct the Secretary of State, in cooperation with the Committee, to initiate discussions with other nations leading toward international protocols and other agreements to coordinate global change research activities. Such discussions should include the following issues:

(1) Allocation of costs in global change research programs, especially with respect to major capital projects.

(2) Coordination of global change research plans with those developed by international organizations such as the International Council on Scientific Unions, the World Meteorological Organization, and the United Nations Environment Program.

(3) Establishment of global change research centers and training programs for scientists, especially those from developing nations.

(4) Development of innovative methods for management of international global change research, including--

(A) use of new or existing intergovernmental organizations for the coordination or funding of global change research; and

(B) creation of a limited foundation for global change research.

(5) The prompt establishment of international projects to--

(A) create globally accessible formats for data collected by various international sources; and

(B) combine and interpret data from various sources to produce information readily usable by policymakers attempting to formulate effective strategies for preventing,

mitigating, and adapting to possible adverse effects of global change.

(6) Establishment of international offices to disseminate information useful in identifying, preventing, mitigating, or adapting to the possible effects of global change.

(c) ENERGY RESEARCH- The President should direct the Secretary of State (in cooperation with the Secretary of Energy, the Secretary of Commerce, the United States Trade Representative, and other appropriate members of the Committee) to initiate discussions with other nations leading toward an international research protocol for cooperation on the development of energy technologies which have minimally adverse effects on the environment. Such discussions should include, but not be limited to, the following issues:

(1) Creation of an international cooperative program to fund research related to energy efficiency, solar and other renewable energy sources, and passively safe and diversion-resistant nuclear reactors.

(2) Creation of an international cooperative program to develop low cost energy technologies which are appropriate to the environmental, economic, and social needs of developing nations.

(3) Exchange of information concerning environmentally safe energy technologies and practices, including those described in paragraphs (1) and (2).

#### SEC. 204. GLOBAL CHANGE RESEARCH INFORMATION OFFICE.

Not more than 180 days after the date of enactment of this Act, the President shall, in consultation with the Committee and all relevant Federal agencies, establish an Office of Global Change Research Information. The purpose of the Office shall be to disseminate to foreign governments, businesses, and institutions, as well as the citizens of foreign countries, scientific research information available in the United States which would be useful in preventing, mitigating, or adapting to the effects of global change. Such information shall include, but need not be limited to, results of scientific research and development on technologies useful for--

(1) reducing energy consumption through conservation and energy efficiency;

(2) promoting the use of solar and renewable energy sources which reduce the amount of greenhouse gases released into the atmosphere;

(3) developing replacements for chlorofluorocarbons, halons, and other ozone-depleting substances which exhibit a significantly reduced potential for depleting stratospheric ozone;

(4) promoting the conservation of forest resources which help reduce the amount of carbon dioxide in the atmosphere;

(5) assisting developing countries in ecological pest management practices and in the proper use of agricultural, and industrial chemicals; and

(6) promoting recycling and source reduction of pollutants in order to reduce the volume of waste which must be disposed of, thus decreasing energy use and greenhouse gas emissions.

**TITLE III—GROWTH DECISION AID****SEC. 301. STUDY AND DECISION AID.**

(a) The Secretary of Commerce shall conduct a study of the implications and potential consequences of growth and development on urban, suburban, and rural communities. Based upon the findings of the study, the Secretary shall produce a decision aid to assist State and local authorities in planning and managing urban, suburban, and rural growth and development while preserving community character.

(b) The Secretary of Commerce shall consult with other appropriate Federal departments and agencies as necessary in carrying out this section.

(c) The Secretary of Commerce shall submit to the Congress a report containing the decision aid produced under subsection (a) no later than January 30, 1992. The Secretary shall notify appropriate State and local authorities that such decision aid is available on request.

Speaker of the House of Representatives.

Vice President of the United States and

President of the Senate.

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-EXECUTIVE OFFICE OF THE PRESIDENT-

**COUNCIL ON  
ENVIRONMENTAL  
QUALITY**



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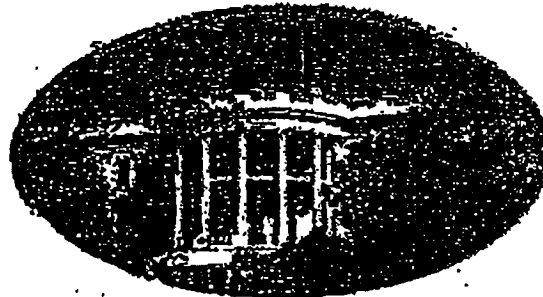
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TO:	Dan Reifsnyder		
FROM:	Phil Cooney		
DATE:	06/04/02	PAGES:	3
(INCLUDING COVER SHEET)			

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Dr. John H. Marburger  
Director, Office of Science and Technology Policy  
Executive Office of the President  
Washington, D.C. 20502



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FAX TRANSMITTAL SHEET

DATE: 6-4-02

TO: Phil Conroy

PHONE NUMBER: ~~6-2710~~

~~6-5456~~ 66546

FAX NUMBER: ~~19~~

FROM: Richard Russell

NUMBER OF PAGES (INCLUDING COVER SHEET): 2

MESSAGE:

EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF SCIENCE AND TECHNOLOGY POLICY  
WASHINGTON, D.C. 20502

September 6, 2001

Christopher C. Horner  
Competitive Enterprise Institute  
1001 Connecticut Avenue, NW  
Suite 1250  
Washington, D.C. 20036

Dear Mr. Horner:

The purpose of this letter is to explain the status of the national assessment of climate change sponsored by the U.S. Global Change Research Program and to explain how the Administration is developing its policies on global climate change.

The national assessment, titled *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*, consists of an overview document of about 150 pages and a foundation document of about 600 pages. These documents were the product of the National Assessment Synthesis Team, an advisory committee chartered under the Federal Advisory Committee Act. As such, they are not policy positions or official statements of the U.S. government. Rather, they were produced by the scientific community and offered to the government for its consideration.

The formulation of a comprehensive policy addressing global climate change is an important priority for this Administration. Towards this end, the President has constituted a Cabinet-level working group to study this issue and assist in the development of such comprehensive policy. Among other things, this working group is conducting an extensive review of climate change science and technology, has commissioned and received a report from the U.S. National Academy of Sciences on climate change science questions and uncertainties, and is carefully examining how best to address the challenge of climate change. The efforts of this working group will form the basis of government decision-making on the important issue of global climate change.

Sincerely,



Rosina Bierbaum  
Acting Director  
Office of Science and Technology Policy



**Fax Cover Sheet**

Date: September 6, 2001

To: Phil Cooney

From: Bob Reinstein

Subject: Some ideas

Number of pages (including cover sheet): 21

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Dear Phil,

Attached are notes I made of some ideas discussed in this morning's meeting, which I sent as a follow-up to Bob McNally. Also included is the attachment to the message I sent him (how come he can get email?). I'm off to the airport in about 20 minutes, but will return on September 29 and will be in town until October 21. Would a meeting/lunch be useful?

Take care,

Bob

**001506**

### 1. Near-Term Actions (the political down-payment to show good faith)

This would be a list of actions the US is taking/has been taking that will result in US emissions being lower than they otherwise would have been. All of these would be actions that have multiple benefits (in addition to limiting GHG emissions) and this is why we are prepared to take them now. The actions would cut across all sectors and all GHGs. See the attachment for a list of possible measures that is extracted from the longer study I mentioned. You might go through this just as a checklist to see which of these the US might be doing. We already prepare, in accordance with Article 4.2(b) of the UN Framework Convention, a National Communication on actions we are taking. Check with Dan Reifsnyder (647-4069) at the State Department to see whether we have a draft of the most recent Communication, which would cover most of the actions we might want to list. (Dan was my right hand during the original negotiations and can be relied on to help us try to look better.) The Communication is supposed to quantify the effect of these actions on our projected emissions. To the degree we decide to add a few actions (e.g., from the attached list), DOE and EPA should be jointly tasked with quantifying the impact of these actions.

### 2. Longer-Term Technology Development (the real response that will change emission trends)

This would be a description of a broad range of research on energy, transport, materials (buildings), agriculture, etc., that over the longer term will lead us to a future that is far more efficient, less energy-intensive, etc. We will need this technology for many reasons, including economic, security, etc. It is clearly in our long-term interest to be on the cutting edge of development of technology for the future, not only for our own economy but for export to the rest of the world. The time frame here is decades, not years, but we may see some earlier results, and there will be spin-off benefits, just as there were from the space program.

### 3. Enhanced Cooperation With Other Countries (winning back our friends and allies)

We should emphasize in Marrakesh (COP-7) that we have not withdrawn from the international process. In fact, the process is under the UN Framework Convention on Climate Change, which the US was the industrialized country to ratify. We should send a clear signal to developing countries and to countries with economies in transition (central and eastern European countries) that we plan to enhance our cooperation with them on joint actions to reduce global emissions through projects in their countries. This is provided for under Article 4.2(a) of the Convention. The right message with the right tone could win back for us at least half of the world.

### 4. Communication With Closest Allies (fence-mending)

We need to signal to our closest friends on this issue (Canada, Japan, Australia, New Zealand, Norway, Russia) what we are planning to say and do in advance of Marrakesh, so they are not surprised again and hopefully will intervene to support us. We should also include some key developing countries, especially Mexico. Depending on how things are going, we might also tell the Brits.

All this will take a little time to develop and get through the system. I would not try to rush it in

order to have a complete package in time for Marrakesh, which is only six weeks off. Better to have a broad outline of the basic approach and concentrate on nuances and spin, plus consultations with allies. The details of the domestic actions (part 1 above) can come later. Our people should be prepared to answer all questions about the basic approach, since that is where our credibility will be tested.

## Summary of Major Policies and Measures by Sector

The following is a listing of major policies and measures adapted from *Outlook for Industrialized Countries Greenhouse Gas Emissions, 1999 Edition*, by Reinstein & Associates International. The measures have been identified from a variety of sources and include both cross-cutting measures and sector-specific measures. Only policies and measures that have been identified by several countries and have at least moderate (low-to-medium) emission reduction potential are included here.

Each measure is characterized with regard to emission reduction potential, cost-effectiveness potential and replicability potential. An indication of "variable" means that the potential varies according to national circumstances and thus the general assessment of low, medium or high does not necessarily apply to all countries. This is the case with many measures with regard to at least one type of potential, if not all three.

### General/Cross-cutting

#### Energy market restructuring and liberalization

- *Emission reduction potential*: medium-high (depends on previous pricing structure)
- *Cost-effectiveness potential*: high
- *Replicability potential*: high
- *Discussion*: Many countries are adopting this measure to promote greater efficiency and lower energy prices through increased competition. It involves a number of specific measures, such as elimination of subsidies, privatization of government-owned entities and rules to allow non-discriminatory access to electricity transmission networks or gas pipeline systems. The emission reduction potential depends on several factors, including whether energy prices have been kept artificially low in the past (thus inflating demand) or, if not, whether a drop in energy prices from competition might lead to a "rebound effect" of increased energy demand. It also depends on the relative prices of different fuels, so that in one situation (such as the UK) a switch from coal to gas might result while in another situation increased generation of electricity from coal might result. On average, the reduction potential might be medium-high, while the cost-effectiveness is high, since such restructuring is fully justified on economic grounds. Replicability is also high.

#### Carbon-energy taxes

- *Emission reduction potential*: medium-high/variable (depends on demand elasticity)
- *Cost-effectiveness potential*: medium/variable (depends on competitiveness impact, etc.)
- *Replicability potential*: high/variable (depends on political factors)
- *Discussion*: This measure has long been identified as having high emission reduction potential and high replicability. The main problem has been its cost, in regard to industry concerns about international competitiveness. This makes common or coordinated action necessary for those sectors which participate in international markets. Coordination is less necessary for the transport sector, but the reduction potential in this sector may not be as

high because of already high tax levels in many countries and the effect of “lifestyle preferences” in offsetting the potential effect of any tax.

#### **Tax credits for energy efficiency investments**

- *Emission reduction potential:* medium-high/variable (depends on targeting specific measures)
- *Cost-effectiveness potential:* low-medium/variable
- *Replicability potential:* high
- *Discussion:* Some modest potential exists for emission reductions through energy efficiency investments, but it varies considerably from country to country and from sector to sector. To have the maximum cost-effectiveness, such credits would need to be targeted to specific sectors and situations where a modest incentive from the government side can have multiple effects and benefits. Ideally, tax credits should also be time-limited with the idea of speeding up the commercialization of certain efficiency technologies but not replacing the criterion that they should ultimately meet the test of the market.

#### **Public education and awareness**

- *Emission reduction potential:* variable (depends on targeting specific behavior)
- *Cost-effectiveness potential:* high
- *Replicability potential:* high
- *Discussion:* This measure has very high cost-effectiveness potential and replicability, but its emission-reduction potential is often thought to be low. However, in view of the demonstrated effect of “lifestyle” preferences on consumer behavior and resulting CO<sub>2</sub> emissions, its importance may be underrated. To be most effective, government (and private) efforts should focus on identifying and promoting specific actions and technologies that can be justified as “no-regrets” and have failed to reach market potential because of information barriers. Consumer behavior in relation to simple energy-saving opportunities should be a main area for awareness. On the other hand, efforts to frighten the public into actions by unbalanced presentations of the “threat” of climate change could be counterproductive if their credibility were to be undermined by being shown to be only partially substantiated and ignoring facts that were not supportive of the arguments.

### **Energy: Electricity/Heat Generation and Energy Transformation**

#### **Quotas for renewable energy use by utilities**

- *Emission reduction potential:* low-medium/variable (depends on energy sources)
- *Cost-effectiveness potential:* variable (depends on specific energy situation)
- *Replicability potential:* high
- *Discussion:* Although this measure has been widely favored by many governments, its emission reduction potential varies from country to country and is only low to medium on average. Its cost-effectiveness potential also varies. Many sources of renewable energy are more expensive than conventional fossil fuel technologies. Replicability is high, but in a situation where electricity markets are increasingly open and competitive, it is difficult to see how such quotas could be introduced without possibly causing major market distortions.



**Requirement to buy renewable-based electricity at premium prices**

- *Emission reduction potential:* low-medium/variable (depends on energy sources)
- *Cost-effectiveness potential:* variable (depends on specific energy situation)
- *Replicability potential:* high
- *Discussion:* This measure is also widely favored. It has some of the same advantages and drawbacks as quotas for renewable energy. Among the differences, it does not force utilities to buy or produce renewable energy at whatever cost may occur in order to meet an arbitrary percentage of supply. On the other hand, by guaranteeing premium prices in order to encourage purchases, it does not have any incentives for renewable energy to compete with conventional electricity sources at lower prices.

**Voluntary agreements with utilities to limit emissions**

- *Emission reduction potential:* variable (depends on terms of agreement)
- *Cost-effectiveness potential:* high
- *Replicability potential:* high
- *Discussion:* This is another popular measure, especially with industry. Its emission reduction potential depends on what specific actions or reduction targets utilities might actually agree to under a specific agreement with the government. Its cost-effectiveness potential is high (because utilities will not agree to expensive actions that are not cost-justified) and its replicability is high.

**Fuel-switching to natural gas**

- *Emission reduction potential:* high
- *Cost-effectiveness potential:* medium/variable (depends on gas price)
- *Replicability potential:* high/variable (depends on gas availability)
- *Discussion:* This measure has high emission reduction potential if the gas is used to replace coal. Its cost, however, depends on the relative availability and costs of both coal and gas, including the social costs of replacing coal that is produced by domestic workers with imported natural gas. Its replicability also depends on the availability of natural gas in the quantities required.

**Wind energy**

- *Emission reduction potential:* medium/variable (depends on several factors, especially wind)
- *Cost-effectiveness potential:* medium-high/variable (depends on energy market situation)
- *Replicability potential:* variable
- *Discussion:* The cost-effectiveness of this measure has improved significantly in recent years, but its emission reduction potential and its replicability depend very much on individual national and regional circumstances. The number of locations with good wind potential is limited. Public acceptance of large-scale wind energy has not really been tested fully. Some concerns have been raised about noise pollution from large wind machines, visually disturbing effects, impact on birds and other wildlife, esthetics, and the large land-use

requirements.

### Solar energy

- *Emission reduction potential:* low-medium/variable (depends on many factors)
- *Cost-effectiveness potential:* low/variable (expensive except for certain niche market uses)
- *Replicability potential:* variable
- *Discussion:* Solar, like wind, is also highly dependent on variable external conditions and must be supplemented with back-up power for periods when its output is reduced or unavailable. Also, public acceptance of large-scale solar has not really been tested fully. Some concerns have been raised about the large land-use requirements.

### Biomass

- *Emission reduction potential:* low-medium/variable (depends on biomass availability, etc.)
- *Cost-effectiveness potential:* medium/variable (depends on relative prices)
- *Replicability potential:* medium/variable (depends on land availability and cost, etc.)
- *Discussion:* This renewable form of energy has the advantage, unlike solar and wind, that it is in principle available all the time. However, emission reduction potential, cost-effectiveness and replicability all depend on many factors, including availability of biomass fuels at competitive prices, cost of retrofitting existing equipment, available land for biomass production and opportunity cost of this use of the land as compared with alternative uses, energy costs (and emissions) associated with biomass production, processing and transport, and so forth.

### Nuclear energy

- *Emission reduction potential:* high
- *Cost-effectiveness potential:* medium/variable (depends on several factors, including offsets)
- *Replicability potential:* variable (depends on public attitudes and acceptance)
- *Discussion:* The emission reduction potential of this alternative energy source is high, especially in those countries where fossil fuels are the current source of energy for power generation. In fact, no other alternative to the use of fossil fuels for electric generation has comparable potential for large-scale avoidance of CO<sub>2</sub> emissions. Its cost-effectiveness, however, is difficult to assess because of differences in the valuation given to such factors as energy supply security, on the one hand, and public attitudes about safety and waste disposal, on the other hand. Its replicability is low at present, because of some of these same factors and differences among countries.

### Hydropower

- *Emission reduction potential:* medium/variable (depends on national situations)
- *Cost-effectiveness potential:* medium-high
- *Replicability potential:* medium/variable
- *Discussion:* Although large-scale hydro is basically mature in most Annex B countries, there are still some opportunities for smaller-scale projects that may be quite cost-effective. The

emission reduction potential and replicability depend highly on individual national circumstances.

#### **Combined heat and power (CHP), or cogeneration**

- *Emission reduction potential:* high
- *Cost-effectiveness potential:* high
- *Replicability potential:* medium/variable (depends on market for steam)
- *Discussion:* This measure has very high emission reduction potential and high cost-effectiveness (low cost), but its replicability depends very much on national and local circumstances. There is clearly a major gain in efficiency, and therefore a reduction in emissions, in situations where electricity and steam can both be utilized from the same facility. Because there must be a demand for the steam produced during power generation, it is a realistic option only where (1) there is a nearby major industrial facility that requires steam for its process, or (2) the local climate is cold enough (or hot enough) to make use of the steam for district heating or cooling economical. Each specific situation must be evaluated on its own merits, but the potential for replicability is probably medium to high.

#### **Improvement of generation efficiency**

- *Emission reduction potential:* medium/variable (depends on current efficiency level)
- *Cost-effectiveness potential:* high
- *Replicability potential:* high
- *Discussion:* There are a number of technical options for general improvement of efficiency in older power plants. If these measures have not already been taken for economic reasons (as they have been in many plants), then their emission reduction potential and cost effectiveness are fairly high. Replicability is also fairly high.

#### **Integrated resource planning (IRP)**

- *Emission reduction potential:* variable (depends on specific characteristics of system)
- *Cost-effectiveness potential:* medium-high/variable
- *Replicability potential:* variable
- *Discussion:* This measure applies to the broader efficiency of a power system rather than only to an individual plant. It is an approach that is intended to maximize the output of an entire system at least cost and involves making decisions on a system-wide basis to minimize energy usage, among other benefits. Its potential depends on the degree to which utility managers are not already doing many of the things implied by IRP, and thus it may be applicable only to somewhat inefficient systems.

#### **Improvement of transmission efficiency**

- *Emission reduction potential:* low-medium/variable (depends on current efficiency level)
- *Cost-effectiveness potential:* high
- *Replicability potential:* high
- *Discussion:* This is the complement to improvement of generation efficiency. Again there are

a number of small technical adjustments that may serve to increase transmission efficiency and therefore reduce emissions. Cost-effectiveness is reasonably high, but emission reduction potential is probably somewhat low and replicability varies according to specific situations.

#### **Demand-side management (DSM) programs**

- *Emission reduction potential:* low-medium/variable (depends on consumer response)
- *Cost-effectiveness potential:* variable (depends on several factors including program design)
- *Replicability potential:* high
- *Discussion:* These can be quite cost-effective in certain situations in limiting emissions, if they promote relatively economic investments or behavior changes by electricity consumers that reduce overall demand and the need for additional generation capacity. Actual experience with such programs is somewhat mixed and therefore it is a little difficult to characterize the emission reduction potential and cost-effectiveness, since it depends on local circumstances and the specific design of the program. Replicability is high, in principle.

#### **Coal-seam methane capture and use**

- *Emission reduction potential:* medium-high/variable (depends on access to gas supply network)
- *Cost-effectiveness potential:* medium/variable (depends on gas market situation)
- *Replicability potential:* high
- *Discussion:* Methane is often found in coal deposits and needs to be removed for safety reasons. In the past many mines simply vented or flared the gas, but increasingly it is being captured for fuel use in many countries. If a natural gas pipeline system is accessible, the methane can be treated and injected into the larger gas supply system. If not, then at least part of it can be used for local energy needs. Emission reduction potential is fairly high. Cost-effectiveness depends in part on access to a gas distribution network. Replicability is high, depending mostly on the same factor.

#### **Reduction of leakage from gas systems**

- *Emission reduction potential:* medium/variable (depends on current system efficiency)
- *Cost-effectiveness potential:* high
- *Replicability potential:* high/variable (depends if a country has a gas system)
- *Discussion:* The emission reduction potential of this measure depends on the relative age and efficiency of the current natural gas network, and its cost depends on the specific structure and technical characteristics of that network. Its replicability is limited to those countries with significant gas networks, but there are many such countries and their number is increasing.

### **Industry**

#### **Voluntary agreements to reduce emissions**

- *Emission reduction potential:* medium-high/variable (depends on sector, specific measures)

- *Cost-effectiveness potential:* high
- *Replicability potential:* medium-high (depends on sector, specific measures)
- *Discussion:* One widely adopted measure is voluntary agreements with industry to achieve emission limitation or reduction based on actions that industry itself has agreed are justified and cost-effective without harming international competitiveness. Most of these agreements are with specific industry subsectors and, as with electric utilities, may involve a commitment to a particular set of actions and/or to a particular level of emission reduction. The emission reduction potential of such agreements is medium to high but depends on the sector and the specific measures agreed. Cost-effectiveness is high and replicability medium-high, depending on the sector and the specific measures.

#### **Improvement of electric motor efficiency**

- *Emission reduction potential:* low-medium
- *Cost-effectiveness potential:* medium-high/variable (depends on age of existing motors)
- *Replicability potential:* high
- *Discussion:* There are many electric motors used throughout industry and a number of these could be replaced with more efficient motors based on the latest technology. Emission reduction potential is probably low to medium, and would actually be registered as a reduction in electric utility emissions rather than industry emissions. Cost-effectiveness is medium to high, depending on the age of existing motors. Replicability is high.

#### **Combined heat and power (CHP), or cogeneration by industry**

- *Emission reduction potential:* medium-high
- *Cost-effectiveness potential:* high
- *Replicability potential:* medium-high/variable (depends on specific facility steam needs)
- *Discussion:* This measure has very high emission reduction potential and high cost-effectiveness (low cost) because of the major gain in efficiency, and therefore a reduction in emissions, in situations where electricity and steam can both be utilized from the same facility. Its replicability depends very much on specific circumstances. While the situation is more limited for conversion of power plants to CHP because there must be a demand for the steam produced during power generation, it is more favorable for a major industrial facility that requires steam for its process. (Excess steam cannot be transmitted over long distances but excess electricity can be.) However, many industrial facilities where CHP is an option have already taken advantage of its economic benefits and thus it is not clear how much additional unutilized potential exists. Each specific situation must be evaluated on its own merits, but the potential for replicability is probably medium to high.

#### **Switching to electric-arc furnace steel-making technology**

- *Emission reduction potential:* medium-high/variable (depends on source of electricity)
- *Cost-effectiveness potential:* variable (depends on characteristics of existing plant)
- *Replicability potential:* variable
- *Discussion:* The feasibility of reducing emissions through this basic change in technology

depends very much on the situation of the company involved in relation to both domestic and international markets. Not all steel-making can be converted, and the economics also depend on the age, efficiency and other characteristics of existing capacity. The net impact of this change on emissions depends, of course, on whether the electricity used is imported or domestically produced, and if so, what sources of energy are used for electricity generation. Thus, emission reduction potential, cost-effectiveness and replicability all depend on the specific circumstances.

#### **Biomass energy from forest-product industry**

- *Emission reduction potential:* high
- *Cost-effectiveness potential:* high
- *Replicability potential:* variable (depends if country has forest product industry)
- *Discussion:* This sector has achieved a significant contribution to reducing emissions, in Canada, Finland and Sweden, for example, by the use of "black liquor" byproduct from the pulp and paper industry to generate electricity. This measure has very high emission reduction potential and high cost-effectiveness but low replicability. Only those countries with a major pulp and paper industry could make use of this measure.

#### **Reduction of PFC emissions from aluminum production**

- *Emission reduction potential:* high
- *Cost-effectiveness potential:* high
- *Replicability potential:* variable (depends if country has aluminum industry)
- *Discussion:* For those countries that have not already implemented measures to reduce PFC emissions from this sector by conversion to prebaked anodes, this measure has high emission reduction potential and relatively low cost. Its replicability is obviously limited to those countries with an aluminum industry.

### **Transport**

#### **Increased fuel taxes**

- *Emission reduction potential:* variable (depends on price elasticity, consumer behavior)
- *Cost-effectiveness potential:* medium-high
- *Replicability potential:* high/variable (depends on politics, equitability of impacts)
- *Discussion:* Many countries have had very high fuel taxes for decades. When they were first introduced, primarily to limit dependence on oil imports, they were fairly effective in modifying vehicle purchases and use. As a result, the existing auto fleet in these countries tends to be smaller and more efficient on average than that in countries with lower taxes. However, in recent years the effectiveness of these taxes has declined as a result of a number of factors, including diminishing marginal effects on demand because of already high rates, increased disposal income of drivers, changing lifestyles and prolonged low world oil prices. The emission reduction potential of this measure depends on several variables, including price elasticity and consumer behavior. Cost-effectiveness is medium to high. Replicability depends on politics, including equitability of impacts across income groups and regions of a

country.

#### Road user tolls

- *Emission reduction potential:* low-medium/variable (depends on level, other route options)
- *Cost-effectiveness potential:* medium/variable (depends on implementation)
- *Replicability potential:* high
- *Discussion:* It is difficult to assess the effectiveness of this measure in the abstract because it depends on many factors, such as the level of the fees, the relative availability and convenience of alternative routes and how the fees are collected. The experience with fuel taxes suggests that economic incentives alone may not have a large impact on driving behavior, unless they are very high (which raises political problems and opposition to their implementation). However, if the fees are collected in a fairly intrusive way that frequently interrupts the journey, this may have more of an effect on discouraging travel than the level of the fees themselves. Cost-effectiveness is probably medium, and replicability, in principle, high.

#### Differential vehicle taxes based on fuel efficiency or weight

- *Emission reduction potential:* low-medium
- *Cost-effectiveness potential:* medium-high
- *Replicability potential:* high
- *Discussion:* This type of tax has been imposed in the past based on the principle that larger, heavier vehicles cause a greater share of the need for road repairs and maintenance than smaller vehicles. Unless the differentials are very large, the impact on vehicle choice is probably not significant, and thus the emission reduction potential is low to medium. Cost-effectiveness is medium to high (since such taxes are easy to implement), and replicability is high.

#### Higher fuel efficiency standards

- *Emission reduction potential:* medium-high/variable (depends on consumer behavior)
- *Cost-effectiveness potential:* low-medium/variable (depends on how achieved, competition)
- *Replicability potential:* high
- *Discussion:* This measure has high emission reduction potential (especially as an alternative to increased fuel taxes or modal shifts) and high replicability. Its cost, however, depends to a great degree on a coordinated approach and on effective efforts at public education that might counteract the "lifestyle" trends that otherwise inhibit the market for new, more fuel-efficient vehicles. Here the issue is not whether cars that are more fuel-efficient can be produced but whether the public will buy them. As with appliance standards, if higher fuel efficiency standards mean diminished performance (less passenger and baggage carrying space, less power for acceleration in traffic, less safety from collisions, etc.), then the public is unlikely to accept the more fuel-efficient vehicles. Efforts to promote high-efficiency vehicles in the wake of the oil shocks met with only minimal success (and consequent financial losses for some manufacturers), and industry would likely seek assurances from the government of adequate demand for the newer vehicles before committing major capital

investments.

#### **Mandatory maintenance and vehicle inspections**

- *Emission reduction potential:* low-medium
- *Cost-effectiveness potential:* low-medium
- *Replicability potential:* medium-high
- *Discussion:* Vehicles have higher efficiency if they are regularly maintained. This includes tune-ups for engine performance and maintaining tire pressure. The emission reduction potential of this measure is fairly low, assuming it was implemented in a moderate and reasonable manner. Cost-effectiveness potential is low to medium, since a significant amount of administrative cost is involved, as well as loss of driver time (which has economic value). Replicability potential is medium to high.

#### **Addition of biomass-based ethanol to gasoline**

- *Emission reduction potential:* low-medium/variable (depends on ethanol availability)
- *Cost-effectiveness potential:* low/variable (depends on relation to agriculture, other costs)
- *Replicability potential:* low-medium (depends on ethanol availability)
- *Discussion:* This measure has been used in the past either to displace imported oil or to reduce local air pollution. The usual feedstocks for ethanol (ethyl alcohol) production have been sugar cane (in Brazil), corn (in the US) and surplus wine (in Europe). The emission reduction potential is limited and depends in part on what fuel is used for the ethanol production process (in the US it is often coal). Cost-effectiveness is also difficult to determine because the interaction with various agricultural subsidies and other incentive programs is often extremely complex. Replicability is low to medium, depending on availability of ethanol feedstocks.

#### **Use of compressed natural gas or LPG**

- *Emission reduction potential:* low-medium/variable (depends on alternative fuel availability)
- *Cost-effectiveness potential:* medium (if other environmental benefits are credited)
- *Replicability potential:* low-medium/variable (depends on alternative fuel availability, other)
- *Discussion:* This measure has usually been used in fleet vehicles to reduce urban air pollution. It requires a modified type of internal combustion engine and a separate fuel distribution system. Thus, it is not suitable for vehicles that will be used outside the limited range of the fuel supply system, which makes its emission reduction potential rather limited. Cost-effectiveness is moderate, when other environmental benefits are taken into account, but replicability is limited.

#### **Use of electric or hybrid vehicles**

- *Emission reduction potential:* low/variable (depends on limited local situations)
- *Cost-effectiveness potential:* low
- *Replicability potential:* low-medium/variable (depends on situation, use of hybrid approach)
- *Discussion:* The electric motor technology for autos dates from the earliest models of a



century ago, but it has not advanced much over that period. The major drawback is the need for battery storage of the electricity. Current battery technology is heavy, requires a significant amount of space and must be recharged fairly frequently. Vehicles operating only on electricity have very limited use, usually in situations where air quality is of concern. One approach to trying to deal with these problems is a hybrid vehicle that includes both a conventional internal combustion engine and an electric motor, with batteries being partly recharged while the other engine is operating. This reduces some of the space requirements and extends the range of the vehicle, but its cost-effectiveness is quite low by current economic comparisons.

#### Use of fuel-cell engines

- *Emission reduction potential:* low (in 2010 timeframe)
- *Cost-effectiveness potential:* low-medium (in 2010 timeframe)
- *Replicability potential:* low (in 2010 timeframe)
- *Discussion:* This is a fundamentally different technology that derives energy from the energy released when hydrogen and oxygen combine to form water. It has considerable promise over the longer term because the basic inputs are in principle readily available in most locations and the byproduct (water) creates no environmental problems. However, in the short term it still faces many technical and economic obstacles, including the total size and weight of the fuel system, the availability of a hydrogen supply network, safety concerns (hydrogen is highly flammable), the need to keep hydrogen very cold and/or under high pressure to maintain it as a liquid and other factors. As a result, the emission reduction potential, cost-effectiveness and replicability of this measure must be considered low in the 2010 timeframe.

#### Lower speed limits

- *Emission reduction potential:* medium/variable (depends on specific limit)
- *Cost-effectiveness potential:* medium-high (depends partly on specific limit)
- *Replicability potential:* high/variable (depends on political acceptance)
- *Discussion:* Many countries initiated lower speed limits in the 1970s to encourage energy conservation. Lower speeds also reduce the number of traffic accidents, which is an additional benefit. On the other hand, it was found that for certain speed limits, the fuel use of large trucks actually increased relative to higher speed limits because of the need to shift to lower gears more often, and some countries (notably the US) have since raised speed limits somewhat in more open areas away from cities. The emission reduction potential of this measure thus varies, depending on what limits are established. Cost-effectiveness is medium to high, but partly depending on level of the limit. Replicability is high but varies for a few countries (e.g., Germany) where lifestyle preferences resist speed limits.

#### Subsidies for Public Transport

- *Emission reduction potential:* low-medium/variable (depends on demographics, land use)
- *Cost-effectiveness potential:* low-medium
- *Replicability potential:* medium/variable (depends on demographics, land use)

- *Discussion:* This measure is usually adopted for other reasons, particularly to provide transport for lower-income segments of the population, to reduce traffic congestion or to reduce local air pollution. The emission reduction potential depends on several factors, including population density, income distribution patterns and land use patterns, but is probably only low to medium. Cost-effectiveness is also low to medium and replicability is medium but depends on many of the factors that also affect emission reduction potential.

#### **Incentives for modal shifts from autos to public transport**

- *Emission reduction potential:* medium-high/variable (depends on available public transport)
- *Cost-effectiveness potential:* variable (depends on population density, other)
- *Replicability potential:* variable (depends on many factors)
- *Discussion:* The emission reduction potential of this measure depends on national circumstances. Where an alternative public transport mode is available, it can have high potential for limiting emissions growth in this sector. The cost and replicability may be difficult to calculate in some situations, especially as population density differs greatly among countries and some rural public transport requires governmental assistance.

#### **Improvement of traffic flow**

- *Emission reduction potential:* low-medium/variable (depends on nature of traffic, other transport mode availability)
- *Cost-effectiveness potential:* high/variable (depends on specific measure)
- *Replicability potential:* medium-high/variable (depends on specific measure)
- *Discussion:* There are many specific measures that have this objective. The emission reduction potential is difficult to assess because the effects are mixed. On the one hand, traffic congestion increases emissions from the fuel consumed during delays. On the other hand, it discourages some discretionary travel and/or diverts passengers to rail-based public transport, where available. Thus, improving traffic flow, while desirable from other points of view, can reduce emissions from travel that would occur in any case but may increase emissions due to a "rebound effect" of increased discretionary driving. Emission reduction potential is probably only low to medium on average but cost-effectiveness is high (depending on the specific measure) due to other economic and environmental benefits of reducing congestion. Replicability is moderately high, depending on the specific measure.

#### **Restrictions on vehicle use and/or parking in central cities**

- *Emission reduction potential:* variable (depends on travel need patterns, public alternatives)
- *Cost-effectiveness potential:* variable (depends on travel need patterns, public alternatives)
- *Replicability potential:* variable
- *Discussion:* This is a more direct way to reduce traffic congestion in central cities but may have more difficulty gaining political acceptance. Its emission reduction potential, cost-effectiveness and political acceptability all depend on such factors as how many people are required to travel in and out of the city for employment, the availability, convenience and cost of public transport, and so forth.

## **Buildings and Other**

### **Higher efficiency standards for new buildings**

- *Emission reduction potential:* medium-high/variable (depends on climate, other factors)
- *Cost-effectiveness potential:* high/variable (depends on climate, other factors)
- *Replicability potential:* high
- *Discussion:* Many countries have proposed or actually adopted stricter standards for the efficiency of new buildings. The emission reduction potential of this measure is fairly high over the longer term, but the timeframe for the turnover of capital stock in the building sector is quite long, on the order of several decades. The actual potential in any location depends on climate, the specifics of the standards and other factors. Cost-effectiveness is also high, but again over the longer term and depending on various factors. Higher standards generally add to the cost of construction but result in savings in energy costs for heating and cooling. How quickly the higher cost of construction is recovered depends on climate, energy costs, etc. Replicability potential is high.

### **Retrofitting of existing buildings**

- *Emission reduction potential:* medium-high/variable (depends on existing condition, other)
- *Cost-effectiveness potential:* medium/variable (depends on several factors)
- *Replicability potential:* variable
- *Discussion:* There are many factors which must be considered in assessing possible emission reductions in existing buildings. In general, only small gains would be anticipated through most retrofitting measures. Both price and supply security incentives, in some cases supplemented by government tax incentives, were insufficient to capture all the potential for energy savings in the buildings sector during and following the oil price shocks of the 1970s. There are many reasons for this, including limited capital availability and in some cases long payback times. The emission reduction potential of this measure is medium to high, but depends on the existing condition of the building stock and other factors. Cost-effectiveness potential is medium on average but depends on what would be required for a specific building, local energy costs, etc. Replicability is also variable.

### **District heating**

- *Emission reduction potential:* medium/variable (depends on climate, other energy alternatives)
- *Cost-effectiveness potential:* medium/variable (depends on climate, etc., high if with CHP)
- *Replicability potential:* variable
- *Discussion:* This measure has been widely used for many years in northern Europe, where the relatively cold climate justifies the investment in the infrastructure to supply heat to many buildings from a single central plant. Since the initial construction could be fairly costly and disruptive to a community, the advantages in terms of energy savings should be significant. District heating alone has perhaps only medium emission reduction and cost-effectiveness potential, depending on climate and the alternative options for heating, but if part of a combined heat and power (CHP) system, the potential is higher. Replicability depends entirely on local circumstances.

**Improvement of lighting efficiency**

- *Emission reduction potential:* medium-high
- *Cost-effectiveness potential:* high
- *Replicability potential:* high
- *Discussion:* The potential for reducing electricity use and emissions through technical modification of lighting systems has been recognized for some time. This can be done through a variety of specific measures, such as use of modern compact fluorescent lamps, lighting timers, motion sensors and other devices. Many countries had already used some of these devices in response to the energy shocks of the 1970s, and more recently there have been programs to promote the use of highly efficient light bulbs. The emission reduction potential of this measure is medium to high, and cost-effectiveness and replicability are both high.

**Efficiency standards for space heating and cooling equipment and hot water heaters**

- *Emission reduction potential:* medium-high
- *Cost-effectiveness potential:* high (assuming no premature replacement of existing equipment)
- *Replicability potential:* high
- *Discussion:* The emission reduction potential of this measure is medium to high. It has an immediate impact on all new installation, either in new buildings or in replacement of older equipment when necessary. For older equipment that does not need to be replaced, the effect of the measure is delayed according to the average lifetime of the equipment, unless the government intervenes with incentives to encourage earlier replacement. Cost-effectiveness and replicability are high, assuming no premature replacement of existing equipment.

**Efficiency standards for office equipment and household appliances**

- *Emission reduction potential:* medium
- *Cost-effectiveness potential:* medium-high
- *Replicability potential:* high
- *Discussion:* Some improvement could be achieved through such measures, but how much depends on whether the higher standards could be met without diminishing the performance of the appliances. People buy appliances not to consume energy but to have the energy service (comfort, convenience, speed, communication, entertainment, etc.) provided through the energy input. If the energy service must be reduced in any way to meet the efficiency standard, then consumers will likely resist the higher standards, especially if competing products are available in the market from countries not subject to the standard. The emission reduction potential is probably only medium. Cost-effectiveness is medium to high and replicability is high, especially if the equipment is widely sold in international markets.

**Improvement of electric motor efficiency**

- *Emission reduction potential:* low-medium/variable (depends on consumer response)

- *Cost-effectiveness potential*: medium-high (depends on age of existing motors)
- *Replicability potential*: high
- *Discussion*: This measure is discussed above in relation to manufacturing industry use of electric motors, and the same assessment generally applies, except that building owners are likely to be less sensitive to cost savings than businesses that are in competition with others for output product markets. Emission reduction potential is probably low to medium, and would actually be registered as a reduction in electric utility emissions rather than buildings emissions. Cost-effectiveness is medium to high, depending on the age of existing motors, and replicability is high.

#### Fuel switching to natural gas

- *Emission reduction potential*: medium-high/variable (depends on energy source replaced)
- *Cost-effectiveness potential*: variable (depends on investment cost, relative energy prices)
- *Replicability potential*: medium-high/variable (depends on availability of gas)
- *Discussion*: This measure is discussed above in relation to electric utilities. The same assessment generally applies also to fuel-switching for buildings use, although the volumes of gas involved are not as large and therefore the potential supply and price impacts on gas markets are not as large. Emission reduction potential is medium to high in principle, if the gas is replacing direct use of oil or especially coal, but if it is replacing electricity from non-fossil fuel-based generation or direct use of wood, then the emissions impact is negative. Cost-effectiveness depends on the required investments and the relative prices of energy sources. Replicability is medium to high, depending on availability of natural gas.

#### Use of wood for heating

- *Emission reduction potential*: low-medium/variable (depends on location, climate)
- *Cost-effectiveness potential*: medium-high
- *Replicability potential*: low-medium/variable (depends on location, wood availability)
- *Discussion*: Long a traditional energy source for home heating, wood is being used increasingly again because of the relatively recent development of very efficient modern stoves. Its use is likely to be fairly limited to mostly rural locations. Emission reduction potential is therefore low, but cost-effectiveness is medium to high. Replicability is low to medium, limited to largely rural areas where wood is readily available at economic prices.

#### Use of solar for heating, hot water and small appliances

- *Emission reduction potential*: low-medium/variable (depends on location)
- *Cost-effectiveness potential*: low-medium/variable (depends on location, sunlight availability)
- *Replicability potential*: low-medium/variable (depends on location)
- *Discussion*: Solar energy can provide heat or electricity for a number of small applications, such as space heating and hot water or small devices that do not require large amounts of electricity and can store energy during periods of sunlight. Because water has excellent capacity to store heat, it can be used in conjunction with solar-based space heating and

obviously for hot water needs. Electrical uses of solar energy can present a more complicated challenge in terms of storing the energy for night-time use, but a number of applications work quite well for remote locations where connecting to grid-based power is logistically difficult and/or expensive. Supply reliability can be a problem, depending on location and incidence of cloudiness. Overall emission reduction potential and cost-effectiveness are both low to medium at best, but can be higher depending on location. Replicability is also low to medium.

#### **Behavioral changes in heating, cooling and lighting**

- *Emission reduction potential:* high/variable (depends on public response)
- *Cost-effectiveness potential:* high
- *Replicability potential:* high
- *Discussion:* One measure that has high emission-reduction potential in principle is efforts to bring about behavioral changes in energy use for heating, cooling and lighting. This is one of the examples where the cross-cutting government measure of public education and awareness could be used to promote implementation. There are many opportunities for cutting back on heat in the winter or air-conditioning in the summer in a number of countries (especially parts of the US). Turning off lights and other appliances when not in use or needed could also save energy and reduce emissions. However, efforts of this kind to change energy-use behavior in the 1970s met with only limited success, in spite of clear incentives to save energy. Even at currently lower energy prices, the measure would still have high cost-effectiveness and replicability.

#### **Agriculture, Fisheries and Forestry**

##### **Agricultural policy reform**

- *Emission reduction potential:* high/variable
- *Cost-effectiveness potential:* high
- *Replicability potential:* medium-high/variable
- *Discussion:* This measure tends to reduce both CH<sub>4</sub> emissions from livestock and N<sub>2</sub>O emissions from fertilizer use. The emission reduction potential is high in those countries where agricultural programs have encouraged excess production. Since countries differ significantly in climate, soil quality, precipitation and other factors that affect agricultural productivity and competitiveness, the potential varies considerably from country to country. The cost-effectiveness of agricultural reform is high, even taking into account the cost of social adjustments. Replicability is probably medium to high on average but varies significantly.

##### **Reduction of CH<sub>4</sub> emissions by reduction of livestock**

- *Emission reduction potential:* low-medium/variable (depends on timeframe, technology)
- *Cost-effectiveness potential:* low-medium/variable (depends on agricultural markets)
- *Replicability potential:* medium-high/variable (depends on timeframe, technology)
- *Discussion:* Apart from agricultural reform, which has a tendency to reduce the number of

animals overall, there are techniques for increasing productivity from a given number of animals that can also encourage a reduction in the number of animals. The emission reduction potential of this measure is probably low or medium at most in the near term but may have greater potential over the longer term (beyond the timeframe of the initial Kyoto targets). Cost-effectiveness may be low to medium, depending on agricultural market factors. Replicability might be medium to high.

#### **Reduction of CH<sub>4</sub> emissions by modification of livestock feed**

- *Emission reduction potential:* variable (depends on timeframe, technology)
- *Cost-effectiveness potential:* variable (depends on timeframe, technology)
- *Replicability potential:* variable (depends on many factors, including regulatory)
- *Discussion:* There are varieties of animal feeds that result in lower methane emissions from enteric fermentation and more efficient conversion of feed to meat. If the use of such feeds becomes more widespread, it could result in fairly significant reductions in CH<sub>4</sub> emissions. Cost-effectiveness and replicability depend on a number of factors, including any necessary regulatory approvals.

#### **Reduction of N<sub>2</sub>O emissions by reduced nitrogenous fertilizer use:**

- *Emission reduction potential:* medium-high/variable (depends on local conditions)
- *Cost-effectiveness potential:* medium-high/variable (depends on local conditions)
- *Replicability potential:* medium-high/variable (depends on local conditions)
- *Discussion:* A number of governments are encouraging reduction of fertilizer use by promoting less intensive agricultural practices. This has benefits in terms of the impact on water quality from run-off water and also reduces N<sub>2</sub>O emissions. Fertilizer use may also be reduced through reduction of agricultural subsidies that result in land-use change away from intensive crops. Emission reduction potential, cost-effectiveness and replicability all vary according to local circumstances but probably average medium to high.

#### **Afforestation**

- *Emission reduction potential:* low-medium/variable (depends on land availability, other uses)
- *Cost-effectiveness potential:* high
- *Replicability potential:* medium-high/variable (depends on land availability)
- *Discussion:* This is a very popular measure in many countries. Tree-planting has a number of benefits other than climate change, and it appeals to the general public. Emission reduction potential in most countries is fairly low, depending on land availability, alternative uses for the land, etc. Where it is feasible, the cost-effectiveness is high. Replicability is also moderately high in principle, although it depends on land availability.

#### **Reforestation**

- *Emission reduction potential:* low-medium/variable (depends on land availability, other uses)
- *Cost-effectiveness potential:* high
- *Replicability potential:* high/variable (depends on land availability)

- *Discussion:* The assessment of this measure is much the same as for afforestation, except that land availability is presumably less of an issue, since the land in question had previously already been forested. This suggests that the emission reduction potential and replicability might be somewhat higher than for afforestation.

#### **Forest preservation**

- *Emission reduction potential:* low-medium/variable (depends on baseline assumptions)
- *Cost-effectiveness potential:* high
- *Replicability potential:* high
- *Discussion:* The emission reduction potential of this measure depends on what one assumes for the situation in the absence of a specific intervention for purposes of protecting the climate system. In reality, most countries already have programs for forest preservation, and so the impact of this measure is very small compared to what is likely to happen in any case. The cost-effectiveness is high, since little additional action is required, and replicability is also high.

#### **Waste**

##### **Capture and use of methane from landfills**

- *Emission reduction potential:* high/variable (depends on scale, gas system proximity)
- *Cost-effectiveness potential:* medium-high/variable (depends on scale)
- *Replicability potential:* high/variable (depends partly on local conditions)
- *Discussion:* Capture and use of methane from landfills: Methane that is recovered from landfills can be used on-site for generation of electricity that can be supplied to the electricity grid or it can be treated and injected into the natural gas distribution system. In either case, the volumes collected must be large enough to justify the investment in either generation equipment or gas treatment equipment. In the worst case, the gas can be flared, which is still a net reduction in emissions because CO<sub>2</sub> has a lower GWP than methane. The emission reduction potential of this measure is high and the cost-effectiveness medium to high, if the scale of the operation is large enough. Replicability is high in principle, but depends partly on local conditions.

##### **Direct combustion of solid wastes for electricity or heat generation**

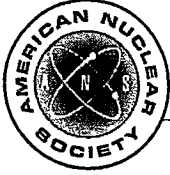
- *Emission reduction potential:* medium/variable (depends on scale)
- *Cost-effectiveness potential:* medium/variable (depends on scale)
- *Replicability potential:* medium-high
- *Discussion:* In some cases solid waste can be burned directly for generation of electricity or heat, thus reducing the amount of organic matter that is landfilled. This limits both methane emissions from landfills and CO<sub>2</sub> emissions that might otherwise come from utilities. The emission reduction potential and cost-effectiveness of this measure are probably medium, depending on the scale of the incinerator, and the replicability is medium to high.

##### **Separation and recycling of solid wastes**



- *Discussion:* This measure has frequently been mentioned as a measure for reducing GHG emissions. However, most of the materials usually recycled, including aluminum cans, glass and plastic, are not particularly important in terms of giving rise to GHG emissions from waste sites. Recycling can, in principle, result in lower energy use in the manufacturing sector because the processing of recycled material is less energy-intensive than production from basic raw materials, especially in the case of aluminum. However, for other materials only a full life-cycle analysis of energy requirements, including transport, can determine whether there is a significant net benefit to recycling from a CO<sub>2</sub> point of view, regardless of whatever other benefits the measure may have.





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September 14, 2001

Mr. George Frampton  
Chair - Designate  
Council of Environmental Quality  
722 Jackson Place, NW  
360 EEOB  
Washington, DC 20503

Dear Mr. Frampton:

The American Nuclear Society (ANS) wishes to advise you of a significant policy statement issued by the International Nuclear Societies Council (INSC) on the issue of reducing global carbon dioxide (CO<sub>2</sub>) emissions. The INSC represents 39 scientific nuclear societies world-wide, including the ANS, and consists of more than 50,000 nuclear science and engineering professionals from around the world. The INSC has been very concerned about the issue of global climate change, and in particular, the role that nuclear energy can play in reducing CO<sub>2</sub> emissions.

The enclosed policy statement is a consensus statement prepared to advise senior policy makers on the very important issue surrounding global climate change and nuclear energy's capability to contribute to the reduction of CO<sub>2</sub> emissions. As you may be aware, at its most recent meeting of the Conference of the Parties in Bonn, nuclear energy was specifically excluded from clean development mechanisms that would credit nations using nuclear energy in their efforts at reducing CO<sub>2</sub> emissions. The INSC and the ANS believe that this action is a strategic mistake and should be reversed. If one objectively looks at the facts surrounding nuclear energy, and the demonstrated capability of reducing CO<sub>2</sub> emissions, it is quite clear that nuclear energy can and should play a role in reducing greenhouse gas emissions.

As the United States prepares to seek alternatives to the implementation of the Kyoto accords, we recommend that you review the enclosed policy statement and set the United States on a track that can meaningfully reduce CO<sub>2</sub> emissions using nuclear energy as part of the global solution.

Should you have any questions regarding the policy statement, or would like additional information, please do not hesitate to contact Mr. Doug Wasitis, American Nuclear Society Representative, 805 15<sup>th</sup> Street, NW, Suite 700, Washington, DC 20005; telephone: 202/312-7482; fax: 202 312-7401; or, email: <dwasitis@bakerd.com>.

Sincerely,

A handwritten signature in cursive script that reads "James A. Lake".

James A. Lake  
President, 2000-2001

Enclosure

*Leaders in the development, dissemination and application of nuclear science and technology to benefit humanity.*

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### Fax Cover Sheet

Date: September 15, 2001

To: Phil Cooney, CEQ

From: Bob Reinstein

Subject: IPCC chairmanship

Number of pages (including cover sheet): 2

## REINSTEIN & ASSOCIATES INTERNATIONAL, INC.

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Dear Phil,

Attached is a copy of a message I sent to Bob McNally last Sunday. I was planning to send it to you as well when this past week's terrible events occurred. I hope everyone is all right there. I had email from my friend Yoriko Kawaguchi this week giving feedback on her meetings with your boss and others (we are in fairly regular touch). How did you see the meetings, and is there any way I can help with the US-Japan link? I'm in Helsinki now and will be here this coming week, then in Geneva and Paris the following week, returning to Washington on September 29. I'll be in town until October 21, when I go to Buenos Aires for most of a week and then to Marrakesh. Would it be helpful to get together while I'm in town?

Take care,

Bob

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*Handwritten signature*

MESSAGE OF SEPTEMBER 9

I learned today that in a few days the Government of India will nominate Dr. R. K. Pachauri to replace Bob Watson as chairman of the IPCC. Here are some reasons why the US should consider supporting Pachauri:

1) As a developing country expert, it would give the developing countries more of a sense of ownership of the international process (and take a little pressure off having them chair the FCCC process), and could contribute toward promoting developing country participation in the global response in line with the Byrd-Hagel resolution and the recent Senate Foreign Relations resolution.

2) Pachauri is an energy expert with a good sense of economics (unlike Watson, who is an atmospheric chemist).

3) He is a straight-shooter and far less likely to play the kind of political games Watson has played with the IPCC reports. I have worked directly with him on projects in the past and have found him very decent and knowledgeable. He has on occasion criticized the US for not doing more to improve its energy efficiency and conservation, but so have lots of people (including some Republicans) and in his case it was based at least on some knowledge of energy economics not just politics.

4) In any case, it's time to get rid of Watson, who was Al Gore's person and put in the IPCC job through Gore's influence to promote the Gore philosophy on climate change. He has publicly and personally insulted the President (at a World Bank briefing a few months ago) for expressing any question about the certainty of the science.

Here's how I would play it:

After India makes its announcement, wait a couple of days, then issue a low-key comment to the effect that, since developing countries are likely to be affected the most by any climate change that may occur, it would be appropriate to have a qualified developing country expert in the IPCC chair.

Then wait several weeks to let this point mobilize developing country support for one of their people and to see if any other developing country candidates emerge that might be even better than Pachauri.

In any case, avoid any attacks on Watson, because if the EU thinks the US is trying to get rid of Watson because he twisted the science to support their political position, they will immediately come to his support and try to make a martyr out of him.



CEQ  
477PC

### Fax Cover Sheet

Date: September 15, 2001

To: Phil Cooney, CEQ

From: Bob Reinstein

Subject: IPCC chairmanship

Number of pages (including cover sheet): 2

## REINSTEIN & ASSOCIATES INTERNATIONAL, INC.

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E-mail: ReinsteinB@aol.com

Dear Phil,

Attached is a copy of a message I sent to Bob McNally last Sunday. I was planning to send it to you as well when this past week's terrible events occurred. I hope everyone is all right there. I had email from my friend Yoriko Kawaguchi this week giving feedback on her meetings with your boss and others (we are in fairly regular touch). How did you see the meetings, and is there any way I can help with the US-Japan link? I'm in Helsinki now and will be here this coming week, then in Geneva and Paris the following week, returning to Washington on September 29. I'll be in town until October 21, when I go to Buenos Aires for most of a week and then to Marrakesh. Would it be helpful to get together while I'm in town?

Take care,

Bob

000967

CEQ 000352



*Handwritten signature*

MESSAGE OF SEPTEMBER 9

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 Robert C. McNally  
03/13/2002 10:30:17 AM

Record Type: Record

To: Phil Cooney/CEQ/EOP@EOP  
cc  
Subject: IPCC chairmanship

Hi Phil, I understand you also know Bob Reinstein. I was planning to raise the issue he alerted me to -- whether we should support Watson for IPCC or recommend new (and developing country leadership) to Larry tomorrow but wanted to run it by you first. Could we discuss this when you have a moment?  
Thanks,  
Bob

----- Forwarded by Robert C. McNally/OPD/EOP on 03/13/2002 10:28 AM -----



ReinsteinB@aol.com  
03/04/2002 03:12:36 AM

Record Type: Record

To: Robert C. McNally/OPD/EOP@EOP  
cc: Caroline Boeckel/OPD/EOP@EOP  
Subject: IPCC chairmanship

*On top  
State why this  
practical  
political  
presentation*

Dear Bob,

I guess we are scheduled to meet next week, Wednesday, March 13, 10 AM. There is one item, however, that is time-sensitive that I thought I should alert you to. That is the decision on the chairmanship of the IPCC that is to be decided formally next month, but in practice will get wired in the next few weeks.

Bob Watson is seeking to retain the chairmanship and has been campaigning openly here in Europe, where he has considerable support because his approach of selective presentation and hyping of the facts has helped support EU political positions.

I personally strongly believe he needs to be replaced. He has done much to discredit the IPCC and undermine its scientific credibility by the way he has shamelessly presented the IPCC results in a distorted manner, while politicizing the IPCC both internally and in its relation to the outside world. The NAS review of the IPCC did not find basic fault with the overall results, which were properly caveated in the underlying full report, but did acknowledge that the summaries and oral presentations by IPCC leadership

(read Watson) may have lacked balance and appropriate references to the uncertainties.

Watson has also expressed disregard and even hostility toward US views and the US approach to climate change, even under the late Clinton days. His public remarks have been dismissive and sometimes insulting, and his private remarks (I have reports of meetings he had recently here in Europe) even worse. There was one public World Bank seminar last year where Watson remarked, "If George Bush thinks the science of climate change isn't settled, he must be one of only ten people or less in the world who think so" (I tried to find my record of the actual quote but can't lay my hands on it). He's got to go.

The other candidate, as I mentioned in an earlier message, is Dr. Rajendra Pachauri of India. I know Pachy fairly well and have worked with him in the past. He is highly qualified and knowledgeable and holds two doctorates. He has a good background in energy technology and economics. The EU doesn't like him and thinks the chair should be an expert in climate science (i.e., atmospheric chemistry). However, they had no problem with Watson, an atmospheric chemist, chairing the IPCC working group dealing with energy technology and economics, of which he knew nothing. While Pachauri may not be ideal from the US perspective, he would be a vast improvement over Watson

The EU doesn't think the US will oppose Watson (and some, unbelievably, thought the US might even PROPOSE him for another term), thanks to Watson reassuring them that he has "broad" support to continue. The US needs to send a signal quickly that we think it's "time for new leadership" in the IPCC and would favor a "suitably qualified" developing country chair at this stage. This is not an outright rejection of Watson or endorsement of Pachauri but would give the right tilt away from Watson and help to mobilize developing countries behind Pachauri. They should be able to do the rest. And if the EU doesn't like Pachauri, it would put the onus on them to identify another "qualified" developing country candidate at this very late stage.

One idea floated as a "compromise" would be to have both Watson and Pachauri as "co-chairs." This wouldn't work, as Watson would simply push Pachauri aside and continue with the same old unbalanced presentation of the science. He needs to be out of the IPCC leadership 100%.

Unfortunately, some of my old friends and colleagues at the State Department do not feel as strongly. Some view Watson, in spite of his known flaws, as the least of various evils. They need to be told that the US cannot remain neutral on this question and needs to get a message out to the rest of the world, as soon as possible, that the US is not backing Watson for a new term.

See you next week

Bob





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*PK*

**FACSIMILE TRANSMITTAL SHEET**

TO: *Phil Cooney*

FROM: *Glenn Kelly*

DATE: *10/31/01*

NO. OF PAGES INCLUDING COVER: *5*

URGENT     FOR REVIEW     PER REQUEST     FYI

NOTES/COMMENTS:

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**001603**

**Statement of**  
**Glenn Kelly**  
**Executive Director**  
**Global Climate Coalition**

**For the Senate Committee on Environment and Public Works**  
**Hearing on S.556, the Clean Power Act**  
**November 1, 2001**

On behalf of the member organizations of the Global Climate Coalition, and the over six million businesses, companies, and corporations we collectively represent, I thank Chairman Jeffords and Ranking Member Smith for the opportunity to provide our comments on S.556, the Clean Power Act of 2001.

The GCC is the voice for business in the climate change debate, representing every major sector of the U.S. economy – including agriculture and forestry, electric utilities, railroads, transportation, manufacturing, small businesses, mining, oil and natural gas, and coal. Our members have participated in domestic and international discussions on the issue of climate change virtually from their beginning. Moreover, the industries represented by GCC members, by their own initiative, are responsible for some of the most innovative and technologically advanced solutions for addressing greenhouse gas emission issues. We remain committed to applying constructive approaches to voluntarily address the climate issue.

As the GCC represents a considerable portion of U.S. economic activity, any proposals to reduce emissions of criteria pollutants or carbon dioxide will have a substantial impact on the way our members do business, the states in which they operate, and on the consumers who use their products to enhance everyday life. Thus, our interest in this legislation is motivated by a desire to better understand the proposals now being considered and to offer the Committee the benefit of our experience, wherever that experience can add constructively to the debate in the weeks ahead.

The GCC believes that S.556, as a proposal to reduce greenhouse gas emissions, is seriously flawed and virtually unworkable. We base this assertion on the fact that the structure of S.556 is virtually indistinguishable from the Kyoto Protocol, and thus prescribes the same types of unreasonable targets and timetables that would cause immediate and long-term damage to the U.S. economy, workers, and consumers.

Despite a continuing long-term trend of improved energy efficiency in our economy, U.S. economic strength, output, and energy use are directly related to carbon dioxide emissions. At a time when the U.S. economy is in a period of

dangerous uncertainty, and thus highly sensitive to negative stimuli, the language regulating carbon dioxide found in S.556 would increase energy costs, restrict productivity and impair overall growth.

S.556 would increase the difficulty of maintaining the reliability of the electricity grid that links our homes, businesses, communities, cities, and states. Put simply, achieving the goal of reducing CO<sub>2</sub> emissions to 1990 levels in the year 2007 will require that a significant portion of the nation's electricity sector be shut down. Because America's demand for energy – specifically, electricity – is growing, this strategy would be unwise.

CO<sub>2</sub> emissions from electric power plants, despite efficient technologies and practices, are projected to increase by 217 million metric tons (or 39%) over the next twenty years as the demand for electricity increases. While acknowledging that 75% of the increase in electricity generation between 1999 and 2020 is projected from natural gas, power sector CO<sub>2</sub> emissions in 2020 are projected to be from 262 to 286 million metric tons above 1990 levels. A reduction of the magnitude required by S.556 would be impossible to achieve without fencing in a significant portion of the nation's electricity generating infrastructure.

The levels of emissions reduction in S.556 is on par with those called for under the Kyoto Protocol, which has been rejected by both the Bush Administration and Congress, in part, as being too costly to the U.S. economy. This notion was recently reinforced by the U.S. Energy Information Administration (EIA). In an analysis prepared for the Senate, EIA concluded that a multi-emissions reduction strategy “[meeting] the individual emissions limits for NO<sub>x</sub>, SO<sub>2</sub>, mercury, and CO<sub>2</sub> [in S.556] will all require significant effort; the CO<sub>2</sub> and mercury limits are likely to be the most difficult to meet.”<sup>i</sup> Moreover, “to meet the assumed CO<sub>2</sub> limit, significant switching from coal to other fuels is expected, because low-cost technologies for capturing and sequestering CO<sub>2</sub> are not expected to be widely available” even by 2020, let alone in the 2002-2007 timeframe established in S.556.<sup>ii</sup>

While GCC members, as noted above, remain committed to developing and deploying technologies and innovations that reduce, avoid, or sequester emissions, we oppose a command-and-control approach to the issue precisely for the reasons put forth by EIA: “Among the four emissions that have limits in these cases, CO<sub>2</sub> emissions tend to be the most costly to reduce, largely through the premature retirement of existing coal plants and the increased use of natural gas and renewable technologies.”<sup>iii</sup>

It must also be emphasized that the scenarios with the lowest costs for reducing CO<sub>2</sub> emissions (as outlined in an earlier EIA report, *Scenarios for a Clean Energy Future*) are based on assumptions that EIA itself questions. These include assumed changes in consumer behavior that are not consistent with historical behavioral patterns; results from R&D funding increases that have not occurred;

and voluntary and information programs for which there is no analytical basis for evaluating the impacts. Furthermore, some of the policy assumptions in *Scenarios for a Clean Energy Future* require legislative or regulatory actions that may not be enacted or, if enacted, may become effective at later dates than assumed.

If the Committee on Environment and Public Works reports out S.556, it does so in the face of clear evidence the U.S. manufacturing sector has entered a downturn. Indeed, the manufacturing sector has been in recession since Fall 2000, triggered, in part, by the sharp increase in overall energy prices, particularly for natural gas and a concern over energy-supply reliability. During the last seven months of 2000, more than 200,000 net manufacturing jobs were lost, largely due to sudden energy price increases. This human cost, combined with the \$115 billion in higher energy prices paid by all energy consumers during 2000, cut about one-half of a percentage point off anticipated GDP growth just last year.

Energy-intensive industries, such as steel, auto making, chemistry, paper, coal mining and oil and gas extraction are especially affected by rises in energy costs. These costs vary widely across states and regions, as these industries tend to be located unevenly across the country. The East South-Central and East North-Central regions, heavy in coal mining and energy-intensive industry, shoulder a disproportionate share of the burden on manufacturing. Short supplies of electricity and natural gas, and the world price of petroleum, already have contributed to current economic hardships. In addition, the requirements of S.556 would apply to many highly efficient combined heat and power units and boilers at industrial facilities, which would bear significant capital costs in addition to rising energy costs.

S.556 would permanently impose these conditions on the economy by forcing electric generators to choose between investing large amounts of capital to continue using coal or building the new facilities necessary to switch to more expensive natural gas – perhaps jeopardizing the energy system's reliability during the transition. This, in the words of one manufacturing trade association, is a "Hobson's choice" not acceptable "absent an overwhelmingly compelling argument that human health, the environment or national security requires it."<sup>iv</sup>

This last statement prompts the GCC to question the need to establish policy on emissions reductions whose extent reaches far beyond even the Clean Air Act. According to the latest Environmental Protection Agency (EPA) report on national long-term trends in air pollution, "the trend toward cleaner air has continued since EPA's formation in 1970, while during the same time, the gross domestic product increased 158 percent, miles traveled by cars and trucks increased 143 percent, and energy consumption increased by 45 percent."<sup>v</sup> The government's environmental arm has said that air is getting cleaner. There is every reason to expect, with government-private sector partnerships, and industry's continued commitment to voluntary approaches, that this trend will continue to be the norm in the United States even in the absence of legislation such as S.556.



As we have stated many times in the past, answering the challenge posed by climate change is a long-term proposition that will require new technologies and new ways of doing business. However, S.556, which implicitly assumes the development, deployment, and consumer adoption of renewable energy and energy-efficient technologies by 2007, is unrealistic in this regard.

And it is a simple fact that renewable energy has not developed in such a way as to sustain the nation's growing appetite for energy. Even if it had, there are no assurances of affordability or that the public would embrace renewables. In a 2000 analysis of the Climate Change Tax Initiative, EIA argued that consumers would be "reluctant to invest in more expensive technologies with long payback periods to recover the incremental costs," and that energy efficiency is "only one of many attributes" they consider when purchasing appliances.

GCC also believes that this particular aspect of the multi-emissions issue suffers from the tendency by many to express overly optimistic assumptions about emissions control technology efficiencies on the one hand, and too conservative estimates of future growth in electricity demand on the other.

The Global Climate Coalition believes that S.556 should be set aside in favor of a cooperative approach with the Bush Administration on this issue. The Administration's cabinet-level review of climate change policy, and its planning on power plant emissions, are ongoing; it should at least be given the time to complete its work and propose policy. S.556's resemblance to the Kyoto Protocol – which has been dismissed by President Bush and effectively opposed by the Senate in the form of S.Res.98 – virtually ensures that it will be neither enacted nor signed into law.

In the months ahead, we look forward to continuing to work with both the Committee and the Administration in fashioning common sense policy approaches to these very complex issues.

## End Notes

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<sup>i</sup> Strategies for Reducing Multiple Emissions From Electric Power Plants, U.S. Energy Information Agency, October 2001, x.

<sup>ii</sup> Ibid.

<sup>iii</sup> Ibid.

<sup>iv</sup> Position on Multi-Emissions Legislation, National Association of Manufacturers, October 2001.

<sup>v</sup> Headquarters Press Release, Environmental Protection Agency, October 18, 2001.



I.M.I

## **Global Climate & Energy Report No. 163**

Date: October 10, 2001

To: Phil Cooney

From: Bob Reinstein

Number of pages (including cover sheet): 12

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### REINSTEIN & ASSOCIATES INTERNATIONAL

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E-mail: ReinsteinB@aol.com

- The plenary session of the Intergovernmental Panel on Climate Change (IPCC-18) met 24-29 September 2001 in London and approved the Synthesis Report, thus completing nearly five years of work on its Third Assessment Report (TAR). The final report was largely as expected, since it was based on the already approved reports of IPCC's three working groups. Nevertheless, there were some clear differences in how governments wanted to present and emphasize some of the earlier results.
- The world political situation in the aftermath of September 11 seems to have had little effect on preparations for COP-7, which will begin in less than three weeks. The meeting in Marrakesh will focus on finalizing the rules for the Kyoto Protocol and on financing for developing countries. The secretariat has taken the unusual step of calling attention to various political issues that are not on the agenda for COP-7 but will be contentious issues in the next few years.

001626

CEQ 000363

## **IPCC Approves Third Assessment Report, As Expected**

The plenary session of the Intergovernmental Panel on Climate Change (IPCC-18) met 24-29 September 2001 in London and approved the Synthesis Report, thus completing nearly five years of work on its Third Assessment Report (TAR). The final report was largely as expected, since it was based on the already approved reports of IPCC's three working groups, as discussed in earlier GCERs. Nevertheless, there were some clear differences in how governments wanted to present and emphasize some of the earlier results.

Nearly 300 representatives of governments and other organizations participated in the six-day session. As in other international processes, "contact groups" were formed to address contentious issues in informal closed meetings. The summary of the TAR was approved on a line-by-line basis, while the underlying longer part was adopted paragraph-by-paragraph during the final two days. The final adoption of the Synthesis Report was completed on Saturday.

The approach focused on nine "policy-relevant questions" that were addressed in various ways by the IPCC's three working groups. There were a number of differences on issues such as

- how the findings of the working groups should be synthesized, interpreted and reflected in the Synthesis Report
- how to ensure consistency between the Summaries for Policy Makers of the three working groups and of the Synthesis Report
- what messages should be conveyed to policy makers

The discussion below summarizes the issues raised and IPCC results:

### **Question 1: Contribution of scientific, technical and socioeconomic analyses to determining what constitutes dangerous anthropogenic interference with the climate system.**

There was a debate on such issues as how to define "dangerous anthropogenic interference with the climate system" (as referred to in FCCC Article 2) and on the various uncertainties associated with this concept. There were also differences regarding the use of the phrase "mitigative capacity" in connection with this question, as well as debates regarding the specificity of the IPCC's comments and the possible use of an illustration linking stabilization of CO<sub>2</sub> concentrations with risks of

climate change damages (which was not included).

The final text states that natural, technical and social sciences can provide essential information and evidence needed for decision-making on what constitutes “dangerous anthropogenic interference with the climate system.” At the same time, it notes that such decisions are value judgments determined through socio-political processes, taking into account considerations such as development, equity, and sustainability, as well as uncertainties and risk.

The text also states that the basis for determining what constitutes “dangerous anthropogenic interference” will vary among regions and depends upon mitigative capacity, since the magnitude and the rate of change are both important.

**Question 2: Evidence for, and causes and consequences of, changes in the Earth's climate since the pre-industrial era.**

Considerable debate focused on proposed amendments to the sentence “There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.” IPCC chair Bob Watson was particularly attached to this sentence from the Working Group I Summary, and worked hard to assure that the sentence was approved without change.

Other differences included whether to make additions highlighting differences between satellite and surface temperature measurements. Again Watson wished to avoid supporting arguments by climate skeptics and instead proposed to include a sentence stating that temperature changes have not been uniform globally, but have varied over regions and different parts of the lower atmosphere. There were also differences over a proposed list of observed changes to climate and biophysical systems in the 20th century.

The approved text states that the Earth's climate system has demonstrably changed on both global and regional scales since the pre-industrial era, with some of these changes attributable to human activities. It notes that it is very likely that the 1990s was the warmest decade on a global average basis, and 1998 the warmest year, in the surface instrumental record covering the period 1861-2000.

The text also notes that changes in sea level, snow cover, ice extent and precipitation are consistent with warming near the Earth's surface, providing examples and noting uncertainties. It states that observed regional climate changes have already affected hydrological systems and terrestrial and

marine ecosystems, and socioeconomic vulnerability to climate change appears to be rising. A table provides examples of observed changes during the 20th century in the atmosphere, climate and biophysical system.

**Question 3: Regional and global climatic, environmental, and socioeconomic consequences in the next 25, 50 and 100 years associated with a range of greenhouse gas emissions arising from scenarios used in the TAR.**

Debate on this issue was focused on the implications of various emission scenarios, but whether the scenarios themselves were reasonable (as questioned in earlier GCERs) was not addressed because the IPCC had earlier approved publication and use of these scenarios.

Differences arose in connection with a number of possible impacts of climate change, including human health (with several delegates noting the existence of positive effects), crop yields, water resources (with some noting that factors other than climate change contribute to water shortages) and social and economic effects faced in particular by populations that inhabit small islands and/or low lying coastal areas.

The last issue was pushed by AOSIS countries, which were able to get references to additional areas of concern, such as the loss of beaches, coastal erosion and storm surges. Other issues debated by delegates included the extent to which adaptation can reduce the adverse effects of climate change; and the estimated changes in GDP on developing and developed countries as a result of climate change.

The compromise text on this question begins by listing the following ranges of impacts projected for the IPCC emission scenarios for 2100: CO<sub>2</sub> concentrations of 540-970 ppm; an increase in globally averaged surface temperature of 1.4-5.8°C; and an increase in sea level of 0.09-0.88 m.

The text goes on to say that projected climate change will have both beneficial and adverse environmental and socioeconomic effects, but the larger the changes and rate of change in climate, the more the adverse effects predominate. There is additional discussion of various specific projected impacts and the potential for adaptation to reduce adverse effects of climate change.

**Question 4: Climate fluctuations, extreme events and the risk of abrupt/non-linear changes.**

There were a fair amount of differences over this set of issues, and the extent to which changes may

From: Robert Reinstein To: Phil Cooney Date: 10/17/2007 Time: 2:55:00 PM Page 5 of 12

be irreversible. Some problems arose because of varying terminology used in the different working groups.

The text finally agreed states that models project an increase in daily, seasonal, inter-annual and decadal climate variability, as well as changes in frequency, intensity, and duration of extreme climate events. In addition, GHG forcing in the 21st century could set in motion abrupt/non-linear changes in physical and biological systems over the coming decades to millennia, with a wide range of associated likelihoods. Although the text notes that some of the projected changes could be irreversible, it acknowledges that there is an incomplete understanding of some of the underlying processes.

One example of projected abrupt/non-linear changes that was discussed was the impact of local warming over Greenland on global sea-level rise. Agreement was reached on a sentence stating that: "Ice sheet models project that a local warming of larger than 3°C, if sustained for millennia, would lead to virtually a complete melting of the Greenland ice sheet with a resulting sea-level rise of about 7 meters." Comment: This sounds like one of those events that have "a wide range of associated likelihoods."

**Question 5: Inertia and time-scales associated with changes in the climate system, ecological systems, and socioeconomic sectors and their interactions.**

From the debate on this set of issues, it was apparent that IPCC participants differed rather widely in their knowledge base and level of understanding of the concepts involved. For example, Bob Watson had to clarify for more than one delegation the fact that stabilization of CO<sub>2</sub> emissions at near-current levels will never lead to stabilization of CO<sub>2</sub> atmospheric concentrations.

Ideological differences also emerged as participants debated the costs of changing socioeconomic systems to address climate change, and how such costs vary depending on the speed of response, the availability of technology and the depreciation of capital stock. Some argued that changes are possible at no net cost, even when responding under pressure, but others disagreed.

The final text notes that inertia is a widespread and inherent characteristic of the interacting climate, ecological and socioeconomic systems, and thus some impacts of climate change may be slow to become apparent and could be irreversible if thresholds are crossed. For example, surface air temperature and sea levels will continue to rise after stabilization of greenhouse gas concentrations. Inertia makes adaptation inevitable and already necessary in some cases.

**Question 6: Implications of stabilizing concentrations of greenhouse gases at a range of levels for the climate, ecological systems and socioeconomic sectors.**

In the debate on this question, there were a number of delegates who wanted to make reference to the cost of emission reductions, which is actually the subject of Question 7. The only reference to cost that was included here was a sentence acknowledging that stabilization of atmospheric concentrations at lower levels would generate greater benefits in terms of less damage.

Some wanted to make a reference to the desirability of achieving certain levels of concentration stabilization in certain time frames, but others disagreed. A sentence referring to two outer stabilization levels (450 ppm and 1000 ppm) and the timings of their respective emission peaks was eventually adopted.

The final text states that a wide band of uncertainty exists in the amount of warming that would result from any stabilized GHG concentration. It further notes that, in addition to reducing emissions, adaptation is a necessary strategy at all scales to complement mitigation efforts.

**Question 7: Potential for, costs and benefits of, and time frame for, reducing greenhouse gas emissions.**

A number of contentious issues were debated under this general topic, including uncertainties in the “spillover” effect of mitigation policies by Annex B countries on developing countries, the possible role of sinks in achieving lower response costs and whether it was appropriate to average costs over the long term (100 years).

The final text notes that there are many opportunities to reduce near-term emissions and that technical progress in this regard has been faster than anticipated, but barriers exist to the deployment of these opportunities (see also discussion in GCER-147). The text also discusses the reasons behind the varying mitigation cost estimates of different models and studies, and notes substantial opportunities for lowering costs, for example, through use of sinks and emissions trading.

The text also notes the fact that actions in Annex B countries can have effects on developing countries, explains how technology development and diffusion are important components of cost-effective stabilization, and how the path taken to a particular atmospheric concentration



stabilization target will have an impact on mitigation cost.

**Question 8: Interactions between climate change, other environmental issues and sustainable development.**

In an interesting shift in emphasis in the IPCC, running contrary to the current green ideology in Europe, there was a debate whether to refer to increasing the use of advanced fossil fuel technologies rather than the substitution of fossil fuel combustion by renewable energy. The final text includes a sentence referring to increasing the share of lower carbon emitting fossil fuels, advanced fossil fuel technologies and renewable energy technologies.

The agreed text also rambles through the usual litany of connections, interactions and trade-offs, including between local, regional and global environmental issues, sustainable development, biodiversity loss, desertification and stratospheric ozone depletion.

**Question 9: Summary of the most robust findings and uncertainties.**

This set of issues began with a debate on the definition of “robust finding” (a term not previously used in IPCC Summaries). Following that, there was discussion on a table listing the most robust findings and associated key uncertainties. Not surprisingly, some wanted to add either additional robust findings or additional key uncertainties. Among the robust findings on climate change impacts, there were proposals for greater emphasis on both positive and negative impacts.

IPCC chair Bob Watson emphasized the need for “balance” and stressed that most people will be adversely affected by, rather than benefit from, climate change. He said the list should focus on large-scale impacts. When later presenting to the plenary session a revised list prepared by a contact group, he noted that several hours had gone into its preparation and urged delegates to accept it without change.

The final text defines a “robust finding” as one that holds under a variety of approaches, methods, models and assumptions and one that is expected to be relatively unaffected by uncertainties. “Key uncertainties” are those that, if reduced, may lead to new and robust findings. The text also identifies areas where further work is required.

***But What Does It Mean?***

The TAR can be viewed in many different ways. On the one hand, it confirmed the current political positions of most governments, which as earlier GCERs have observed is to be expected, since it is an "intergovernmental" panel composed of representatives of those governments.

Those who want to find cause for alarm over the potential threat of dangerous climate change will find many statements in the report to support their position. On the other hand, those who want to find cause for caution in proceeding too rapidly with response measures will find numerous references to many uncertainties that would support this position as well.

Thus, the IPCC report has the potential to be all things to all people, depending on how they wish to use it and what statements they wish to quote from it. It is certain to be quoted widely in the coming months. The real, longer-term issue is whether it will shed light and promote real increased understanding of the complex issues, or only generate more heat in a debate that is already highly polarized.

### **Preparations Moving Ahead for COP-7**

The world political situation in the aftermath of September 11 seems to have had little effect on preparations for COP-7, which will begin in less than three weeks. The meeting in Marrakesh will focus on finalizing the rules for the Kyoto Protocol and on financing for developing countries. The secretariat has taken the unusual step of calling attention to various political issues that are not on the agenda for COP-7 but will be contentious issues in the next few years.

### ***Work Will Focus on Package of Decisions Implementing Bonn Agreement***

According to a UNFCCC secretariat press release on 9 October, the main objective of COP-7 is to "finalize the procedures and institutions needed to make the Kyoto Protocol fully operational ... by negotiating a package of formal Conference decisions on the basis of political principles agreed by ministers and senior officials last July in Bonn." The decisions will also include increased financial and technological support to developing countries under the Convention.

The Bonn Agreement contains a number of broad principles, which are to be implemented through 15 separate COP decisions that are to be adopted as a package. These include 10 draft decisions agreed in Bonn (mostly on issues concerning the Convention), three draft decisions discussed but not completed (on sinks, mechanisms, and compliance under the Protocol) and two draft decisions

not discussed in Bonn (on policies and measures, and on reporting and review).

The press release elaborates the principles set out by the Bonn Agreement as a basis for the Marrakech decisions as including:

- greater access to funds and technology to be provided by developed countries so that developing countries can limit emissions and adapt to climate change
- developed countries to minimize the economic impact that their efforts to reduce emissions will have on developing countries
- developed countries to receive credit towards their Kyoto emissions targets for carbon sinks (from revegetation and the management of forests, croplands and grazing lands)
- energy efficiency, renewable energy, and forest sink projects can qualify for the Clean Development Mechanism, but developed countries are to refrain from using nuclear facilities in the CDM
- use of the Kyoto mechanisms should be supplemental to domestic action, which will constitute a significant element of the effort made by each Party
- a compliance mechanism overseen by a Compliance Committee with a facilitative branch and an enforcement branch
- requirement for any country missing its target in the first commitment period to reduce an additional 1.3 tonnes during the second commitment period for each tonne exceeding the target

The press release highlights some of the specific results agreed in Bonn that may still cause some problems for some countries. For example, it describes the several different new funds that the Bonn Agreement would create. On sinks, it notes that individual country quotas have been set, with the result that "sinks will account for only a fraction of the emissions reductions that can be counted towards the Kyoto targets."

There are also a number of administrative and organizational matters to take care of in Marrakesh. For example, the Executive Board for the CDM should in principle be elected during COP-7. A

new bureau of officers (including the chair) needs to be elected in Marrakesh, but one issue is when does it take office. The new chair of the COP (replacing Pronk) will be Mohamed Elyazghi, Moroccan Minister of Territory Planning, Urban Management, Housing and Environment.

According to early indications, in Marrakesh meetings of COP-7 and SB-15 will alternate on successive days. The high-level segment for ministers and senior officials is scheduled for 7 to 9 November.

### ***Press Release Highlights Political Issues for Next Few Years***

The secretariat press release says the Protocol process will move into high gear once the package of decisions is adopted at COP-7. It expects many countries to ratify following the meeting. So far, 40 countries have ratified, but only one industrialized country (Romania). The Protocol will enter into force and become legally binding after it has been ratified by at least 55 Parties to the Convention, but these countries must account for at least 55% of the total 1990 CO<sub>2</sub> emissions by the industrialized (Annex I) countries.

In a statement that may touch some sensitive nerves in a few countries, the secretariat observes that, following resolving the rules for the Protocol and the funding issues, "the Parties to the Convention could start discussing the political issues that are likely to dominate the next few years," including:

- the widespread desire to re-engage the US in emissions limitation
- the second period for emissions cuts under the Protocol (on which negotiations should start by 2005)
- the prospects for expanding the group of countries with emissions targets

The press release also notes the links between the UNFCCC process and the World Summit on Sustainable Development (Rio+10), to take place in Johannesburg in September 2002. Finally, COP-7 will take up the implications of the IPCC's Third Assessment Report (discussed above).

### ***Estrada & Slade Are Candidates to Succeed Zammit-Cutajar***

One issue that will get extensive discussion in the corridors is the campaign to find a replacement for Michael Zammit-Cutajar, who will retire by the end of the year as Executive Secretary and head

of the UNFCCC secretariat. The job requires considerable skills, knowledge of languages, culture, politics, economics, history, etc., that few people have.

The two leading candidates that have been publicly announced are Ambassador Raúl Estrada Oyuela of Argentina, who (as all regular GCER readers know) chaired the negotiations that resulted in adoption of the Kyoto Protocol in December 1997, and Ambassador Tuiloma Neroni Slade of Samoa, who has been a leading spokesperson for the small islands.

Other names that have also been mentioned include John Ashe of Antigua and Barbuda, Harald Dovland of Norway, and Penny Wensley and Meg McDonald, both from Australia. The EU is considering whether to put forward a candidate, but no names have emerged yet. Some individual EU countries have begun floating names, including Finland's former environment minister (and head of the Green Party) Pekka Haavisto.

UN Secretary General Kofi Annan supposedly has a troika of "wise men" advising him and assisting in conducting a search for candidates. The three wise men are Maurice Strong (who organized the Earth Summit in Rio in 1992 and was the first head of UNEP), Klaus Toepfer (former German environment minister and current head of UNEP) and Nitin Desai (head of the secretariat of the Commission on Sustainable Development in New York, who was Strong's deputy leading up to Rio).

It is not at all clear that all these efforts will come up with a suitable candidate. In addition to the skills needed by the head of the secretariat noted above, the climate issue is more about sustainable development, especially in the energy, agriculture and transport sectors, than about environmental protection. Most of the candidates mentioned so far either come from the environment side or at the least are considered "creatures of the process" who might have difficulty separating themselves from the various roles they have played in the past.

### ***Security Issue Also Seems Downplayed, But Not Ignored***

The decision of the organizers to go ahead with COP-7 as if nothing had happened on September 11, or was happening in Afghanistan currently, is interesting. It may be because the climate "mafia" feels itself to be far removed and hardly related to these political events (although the heavy security in Bonn suggests otherwise). On the other hand, it is more likely that they wish to send a strong signal that the international process will go on and governments will not be intimidated by the

threat of terrorism.

The latter explanation would seem to fit the apparent US inclination to send a delegation from Washington to COP-7. Thus far there have been no public indications of plans to keep senior US officials away from Marrakesh. The US certainly has some interests to watch out for, especially the decisions on developing country funding that will be under the Convention rather than the Protocol. Also, as it is trying to build alliances for its efforts against terrorism, it will want to keep up an image of being fully and cooperatively engaged in all international processes.

On the other hand, a number of industry observers have decided to reduce their attendance at COP-7, reflecting the kinds of considerations discussed in GCER-161. For example, as a number of readers are already aware, I have decided not to attend myself but to follow the meeting through the Internet and email contacts with friends and associates who will be attending. Among the many considerations that led to this decision was the following sentence from the February 1998 fatwa (religious edict) by Osama bin Laden: "The killing of Americans and their civilian and military allies is a religious duty for each and every Muslim to be carried out in whichever country they are found."



CEQ  
360 PC

## Summary of Proposed Climate Change Legislation – November 2001

### 1. Federal Climate Strategy/Management

- A. Creates White House Office to develop national climate strategy in 1 year, chair a cabinet level interagency task force and coordinate all federal efforts (S. 1008, Byrd-Stevens, passed by Senate Government Affairs Committee in July 2001)
- B. Creates Office of Climate Change Action within OSTP to develop US climate action strategy within 18 months and coordinate federal efforts; creates interagency task force chaired by Secretary of Commerce (S. , Kerry, Stevens, Hollings, Inouye, Akaka; also rumored to be part of Daschle energy bill)
- C. Creates office in DOE to coordinate technology R & D; President develops and implements a national strategy within 1 year (S. 1294, Hagel, Craig, Murkowski, Bond, Roberts, Domenici)

### 2. Federal Climate Science Scientific Research Program

- A. Provides \$50 million in new funding for Director of US Global Climate Research Program to coordinate and prioritize federal climate science research (S. 1294, Hagel, Craig, Murkowski, Bond, Roberts, Domenici)

### 3. Significantly Enhanced Federal Technology Research and Development

- A. \$2 billion over 10 years; not necessarily new money (S. 1294 Hagel, Craig, Mukowski, Bond, Roberts, Domenici)
- B. \$4 billion over 10 years; new money; focus on "cutting edge technologies" (S. 1008, Byrd-Stevens, passed by Senate Government Affairs Committee in July 2001)

### 4. GHG Registry

- A. Secretary of Energy develops guidelines to improve accuracy of existing voluntary emissions program under Energy Policy Act 1605(b) (S. 1294, Hagel, Craig, Murkowski, Bond, Roberts, Domenici )

### 5. Mandatory Industry Reporting

- A. Covers 75% of US sources of GHGs; Commerce Secretary issues regs within 2 years (S. \_\_\_\_, Kerry, Stevens, Hollings, Inouye, Akaka)
- B. National Greenhouse Gas Registry (rumored to be in Daschle energy bill)

### 6. Carbon Sequestration

- A. International: \$2.50 per ton international tax credit (S. 769, Brownback)
- C. Domestic: \$20 per acre set asides, up to 20 million acres (S. 785, Brownback)
- D. Forest/agriculture carbon sequestration measurement and reporting guidelines and state revolving loan programs (S. 1225, Wyden, Brownback)



E. USDA carbon sequestration research (Farm bill, also may be in Daschle energy bill)

**7. Technology Transfer to Developing Countries**

- A. \$1 billion, 10 year loan program to promote exports of advanced technology to developing countries (S. 1294, Hagel, Craig, Murkowski, Bond, Roberts, Domenici)
- B. Secretary of Commerce establishes technology transfer program for developing countries and countries in transition (S. , Kerry, Stevens, Hollings, Inouye, Akaka)
- C. Authorizes International Clean Energy Technology Exports Program (similar to Byrd FY 01 Appropriations, rumored to be in Daschle energy bill)

**8. Mandatory Carbon Dioxide Controls**

- A. Clean Power Act--Utilities (S. 556, Jeffords, Lieberman, Chafee)
- B. Economy-Wide GHG Cap and Trade (8/3/01 pledge by McCain & Lieberman to introduce)





"Koenig, Steven F (OES)" <KoenigSF@state.gov>  
11/16/2001 08:42:26 AM

Record Type: Record

To: OES Team Climate-DL <OTC@state.gov>, "(RIA) Nyman, Elisha E" <e.nyman@state.gov>  
cc: Phil Cooney/CEQ/EOP  
Subject: US Stance On Global Warming Criticised By French Official

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US Stance On Global Warming Criticised By French Official  
AFP

Paris - French Finance Minister Laurent Fabius attacked the United States on Thursday for its environmental policy, homing in on its decision to abandon the Kyoto Protocol, the landmark UN agreement on curbing climate change.

"I am very happy that 170 governments managed on Saturday in Marrakesh to approve rules for the implementation of the Kyoto Protocol. But I regret that the United States continues to refuse (to participate). This is serious in the light of what is at stake - the fight to prevent global warming," he said.

Making another indirect dig at the United States and the G77 group of 77 developing countries, Fabius said he was glad moves to exclude environmental issues from a new round of global trade liberalisation talks had not succeeded.

Ministers from the more than 140 countries in the World Trade Organisation agreed to the new round of trade negotiations on Wednesday at the end of a meeting in the Qatari capital Doha.

"It's a positive sign that for the first time the environment will be an integral part of multilateral trade negotiations," Fabius said.

"But this will only be effective if multilateral agreements on the environment are signed and ratified by the whole of the international community," he warned.

The United States has declined to ratify a string of multilateral agreements on the environment.

For example, Washington has signed the UN convention on biodiversity but not ratified the accord.

Neither has it ratified the UN protocol on biosafety, which was finalised in Montreal in January 2000 and concerns the import and export of genetically modified organisms. The United States is the world's main exporter of genetically modified crops.

Fabius was speaking at an award ceremony for the best company environmental report.

Now in its second year, the prize was awarded to steel company Usinor and pharmaceutical company Rhodia.

The prize is awarded by Entreprise et Progres, which comprises around 100 company heads. - AFP



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RECORD TYPE: FEDERAL (NOTES MAIL)

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CREATION DATE/TIME: 19-NOV-2001 20:05:42.00

SUBJECT: The Global Climate Change Act of 2001

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READ: UNKNOWN

TO: James Connaughton ( CN=James Connaughton/OU=CEQ/O=EOP@EOP [ CEQ ] )  
READ: UNKNOWN

TO: Phil Cooney ( CN=Phil Cooney/OU=CEQ/O=EOP@EOP [ CEQ ] )  
READ: UNKNOWN

TEXT:  
FYI

----- Forwarded by Marcus Peacock/OMB/EOP on 11/19/2001  
06:56 PM -----

Scott Rayder <SRAYDER@coreocean.org>  
11/19/2001 06:44:08 PM

Record Type: Record

To: Marcus Peacock/OMB/EOP@EOP; Richard M. Russell/OSTP/EOP@EOP, Shana L. Dale/OSTP/EOP@EOP

CC:

Subject: The Global Climate Change Act of 2001

FYI . . . see the attached. I am sure they will want a SAP.

-----Original Message-----

From: Margaret\_Spring@commerce.senate.gov  
[mailto:Margaret\_Spring@commerce.senate.gov]  
Sent: Friday, November 16, 2001 12:06 PM  
To: Floyd\_DesChamps@commerce.senate.gov; ginny\_worrest@snowe.senate.gov;  
Allen\_Tom@inouye.senate.gov; john\_adornato@akaka.senate.gov;  
George\_Abar@kerry.senate.gov; matthew\_paxton@stevens.senate.gov;  
David\_Russell@stevens.senate.gov; Jean\_Toal\_Eisen@commerce.senate.gov;  
sara\_barth@boxer.senate.gov; Sarah\_Bittleman@wyden.senate.gov;  
Bridget\_walsh@billnelson.senate.gov;  
russell\_lefevre@rockefeller.senate.gov;  
Stephanie\_Bailenson@commerce.senate.gov;  
sara\_hessenflow@brownback.senate.gov; Steve\_Kozak@kerry.senate.gov;  
Webster, Eric; Jansen, Dave; Rayfield, John;  
John\_Flynn@breaux.senate.gov; franz\_wuerfsmannsdobler@byrd.senate.gov;  
tim\_profeta@lieberman.senate.gov; bob\_simon@energy.senate.gov;  
chris\_miller@epw.senate.gov  
Cc: Kevin\_Kayes@commerce.senate.gov; Kevin\_Kimball@commerce.senate.gov;  
Kathy\_Mills@commerce.senate.gov; McGee, Sally;  
robert.palmer@mail.house.gov; Ashley\_Cooper@hollings.senate.gov;  
Andy\_Davis@hollings.senate.gov; Turner, Jim;  
Drew\_Minkiewicz@commerce.senate.gov; Camilla\_Boyte@commerce.senate.gov  
Subject: Global Climate Change Act introduced

Attached is a copy of the Global Climate Change Act of 2001, introduced yesterday evening by Sens. Kerry, Stevens, Hollings, Inouye, and Akaka.

Page 1

001252

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Thanks!  
Margaret

- att1.htm
- climate10.pdf
- Globalk Change Research Act of 2001 (section by section).doc

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<DIV><FONT size=2>FYI . . . see the attached. I am sure they will  
want a SAP.</FONT></DIV>  
<DIV> </DIV>  
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Dave; Rayfield, John;</FONT> <BR><FONT size=2>John\_Flynn@breau.senate.gov;  
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<BR><FONT size=2>chris\_miller@epw.senate.gov</FONT> <BR><FONT size=2>Cc:  
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<BR><FONT size=2>Kathy\_Mills@commerce.senate.gov; McGee, Sally;</FONT> <BR><FON  
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size=2>robert.palmer@mail.house.gov; Ashley\_Cooper@hollings.senate.gov;</FONT>  
<BR><FONT size=2>Andy\_Davis@hollings.senate.gov; Turner, Jim;</FONT> <BR><FONT  
size=2>Drew\_Minkiewicz@commerce.senate.gov;  
Camilla\_Boyte@commerce.senate.gov</FONT> <BR><FONT size=2>Subject: Global  
Climate Change Act introduced</FONT> <BR></DIV>  
<P><FONT size=2>Attached is a copy of the Global Climate Change Act of 2001,  
Page 2

0059\_f\_5f5t4004\_ceq.txt

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</FONT></P>

<P><FONT size=2>Thanks!</FONT> <BR><FONT size=2>Margaret

</FONT></P></BODY></HTML>

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RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR: Phil Cooney ( CN=Phil Cooney/OU=CEQ/O=EOP [ CEQ ] )

CREATION DATE/TIME: 20-NOV-2001 07:35:06.00

SUBJECT:: The Global Climate Change Act of 2001

TO: Kameran L. Bailey ( CN=Kameran L. Bailey/OU=CEQ/O=EOP@EOP [ CEQ ] )  
READ: UNKNOWN

TEXT:

FYI -- More on climate, PHIL

----- Forwarded by Phil Cooney/CEQ/EOP on 11/20/2001  
07:38 AM -----

Marcus Peacock  
11/19/2001 06:57:19 PM  
Record Type: Record

To: Robert S. Fairweather/OMB/EOP@EOP, James  
Connaughton/CEQ/EOP@EOP, Phil Cooney/CEQ/EOP@EOP  
CC:  
Subject: The Global Climate Change Act of 2001

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Scott Rayder <SRAYDER@coreocean.org>  
11/19/2001 06:44:08 PM  
Record Type: Record

To: Marcus Peacock/OMB/EOP@EOP, Richard M. Russell/OSTP/EOP@EOP, Shana L.  
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tim\_profeta@lieberman.senate.gov; bob\_simon@energy.senate.gov;

Page 1

001253

CEQ 000386

0060\_f\_atbt4004\_ceq.txt

chris\_miller@epw.senate.gov

Cc: Kevin\_Kayes@commerce.senate.gov; Kevin\_Kimball@commerce.senate.gov;  
Kathy\_Mills@commerce.senate.gov; McGee, Sally;  
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Andy\_Davis@hollings.senate.gov; Turner, Jim;  
Drew\_Minkiewicz@commerce.senate.gov; Camilla\_Boyte@commerce.senate.gov  
Subject: Global Climate Change Act introduced

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Margaret

- att1.htm
- climate10.pdf
- Global Change Research Act of 2001 (section by section).doc

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size=2>Stephanie_Bailenson@commerce.senate.gov;</FONT> <BR><FONT
size=2>sara_hessenflow@brownback.senate.gov;
Steve_Kozak@kerry.senate.gov;</FONT> <BR><FONT size=2>Webster, Eric; Jansen,
Dave; Rayfield, John;</FONT> <BR><FONT size=2>John_Flynn@breux.senate.gov;
```

0060\_f\_atbt4004\_ceq.txt

franz\_wuerfsmannsdobler@byrd.senate.gov;</FONT> <BR><FONT  
size=2>tim\_profeta@lieberman.senate.gov; bob\_simon@energy.senate.gov;</FONT>  
<BR><FONT size=2>chris\_miller@epw.senate.gov</FONT> <BR><FONT size=2>Cc:  
Kevin\_Kayes@commerce.senate.gov; Kevin\_Kimball@commerce.senate.gov;</FONT>  
<BR><FONT size=2>Kathy\_Mills@commerce.senate.gov; McGee, Sally;</FONT> <BR><FON  
T  
size=2>robert.palmer@mail.house.gov; Ashley\_Cooper@hollings.senate.gov;</FONT>  
<BR><FONT size=2>Andy\_Davis@hollings.senate.gov; Turner, Jim;</FONT> <BR><FONT  
size=2>Drew\_Minkiewicz@commerce.senate.gov;  
Camilla\_Boyte@commerce.senate.gov</FONT> <BR><FONT size=2>Subject: Global  
Climate Change Act introduced</FONT> <BR></DIV>  
<P><FONT size=2>Attached is a copy of the Global Climate Change Act of 2001,  
introduced yesterday evening by Sens. Kerry, Stevens, Hollings, Inouye, and  
Akaka.&nbsp; The bill focuses on Commerce Committee/Dept. of Commerce programs  
(mainly NOAA, NIST, OSTP). It contains sections on climate change science,  
monitoring, measurement/verification and reporting, technology innovation, and  
coastal adaptation/planning.&nbsp; Title VI contains language many of you have  
seen on an Ocean and Coastal Observing System.&nbsp; </FONT></P>  
<P><FONT size=2>A section by section is attached.&nbsp; Some offices expressed  
interest in cosponsoring, but we ran out of time or it was too busy to get a  
final decision.&nbsp; Apologies for the timing, and we look forward to  
discussing additional cosponsorship after the Thanksgiving break.&nbsp;  
</FONT></P>  
<P><FONT size=2>Thanks!</FONT> <BR><FONT size=2>Margaret  
</FONT></P></BODY></HTML>

===== END ATTACHMENT 1 =====

===== ATTACHMENT 2 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:  
Unable to convert NSREOP0201:[ATTACH.D23]SREOP024004TBTA.002 to ASCII,  
The following is a HEX DUMP:

===== END ATTACHMENT 3 =====



0061\_f\_v2ft4004\_ceq

RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR:TKassinger@doc.gov ( TKassinger@doc.gov [ UNKNOWN ] )

CREATION DATE/TIME:20-NOV-2001 09:29:45.00

SUBJECT:: Global Climate Change Act introduced

TO:James Connaughton ( CN=James Connaughton/OU=CEQ/O=EOP@EOP [ CEQ ] )  
READ:UNKNOWN

TEXT:

----- Forwarded by Ted Kassinger/HCHB/Osnet on 11/19/01 07:10 PM -----

tkassinger@doc.gov	Margaret_Spring@commerce. senate.gov (Margaret Spring)	To:	
Climate Change Act introduced		cc:	
	11/16/01 12:18 PM	Subject:	Global

Ted, it was a crazy week, and we didn't get the second iteration of the bill done till yesterday, when we introduced it. would be interested in your thoughts. If you could pass on to Sloan, I'm sure he'd be interested, too. In particular, the bill does not have auth levels indicated all the way through, and we probably need some help working that out so we are covered in any final bill.

We are also considering the idea of a loan guarantee for efficiency technology innovation/transfer (like steel loan guarantee) - don't know if that is of any interest @ DOC (or how much money it would take/that we could get). I think Sen. Murkowski's bill had one for DOE. We have been working w. Sen. McCain and Snowe and expect that before we leave for the year we will have a bill that will also include them as cosponsors. The primary issue was timing (we expect that many of these provisions will appear in the Daschle energy bill, but we needed to introduce a Commerce Committee bill before the energy bill came out). I think Sen. McCain may be introducing a Commerce emissions reductions registry proposal soon- we expect that any bill we work out with him will include that.

Talk to you soon, Margaret

-----  
Attached is a copy of the Global Climate Change Act of 2001, introduced yesterday evening by Sens. Kerry, Stevens, Hollings, Inouye, and Akaka. The bill focuses on Commerce Committee/Dept. of Commerce programs (mainly NOAA, NIST, OSTP). It contains sections on climate change science, monitoring, measurement/verification and reporting, technology innovation, and coastal adaptation/planning. Title VI contains language many of you have seen on an Ocean and Coastal Observing System. A section by section is attached. Thanks!

Margaret

(See attached file: climate10.pdf)(See attached file: INTRODUCED section by section.wpd)

- climate10.pdf - INTRODUCED section by section.wpd===== ATTACHMENT

1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

0061\_f\_v2ft4004\_ceq

TEXT:

===== END ATTACHMENT 2 =====





0062\_f\_cg594003\_ceq.txt

RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR:James Connaughton ( CN=James Connaughton/OU=CEQ/O=EOP [ CEQ ] )

CREATION DATE/TIME:20-NOV-2001 15:26:47.00

SUBJECT:: Global Climate Change Act introduced

TO:Phil Cooney ( CN=Phil Cooney/OU=CEQ/O=EOP@EOP [ CEQ ] )

READ:UNKNOWN

TO:Kameran L. Bailey ( CN=Kameran L. Bailey/OU=CEQ/O=EOP@EOP [ CEQ ] )

READ:UNKNOWN

TEXT:

----- Forwarded by James Connaughton/CEQ/EOP on  
11/20/2001 03:26 PM -----

TKassinger@doc.gov

11/19/2001 07:09:30 PM

Record Type: Record

To: James Connaughton/CEQ/EOP@EOP

CC:

Subject: Global Climate Change Act introduced

----- Forwarded by Ted Kassinger/HCHB/Osnet on 11/19/01 07:10 PM -----

Margaret\_Spring@commerce.  
senate.gov (Margaret

To:

tkassinger@doc.gov

Spring)

CC:

Subject: Global

Climate Change Act introduced

11/16/01 12:18 PM

Ted, it was a crazy week, and we didn't get the second iteration of the bill done till yesterday, when we introduced it. Would be interested in your thoughts. If you could pass on to Sloan, I'm sure he'd be interested, too. In particular, the bill does not have auth levels indicated all the way through, and we probably need some help working that out so we are covered in any final bill.

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Page 1

001255

CEQ 000393

0062\_f\_cg594003\_ceq.txt

include that.

Talk to you soon, Margaret

-----  
Attached is a copy of the Global Climate Change Act of 2001, introduced yesterday evening by Sens. Kerry, Stevens, Hollings, Inouye, and Akaka. The bill focuses on Commerce Committee/Dept. of Commerce programs (mainly NOAA, NIST, OSTP). It contains sections on climate change science, monitoring, measurement/verification and reporting, technology innovation, and coastal adaptation/planning. Title VI contains language many of you have seen on an Ocean and Coastal Observing System. A section by section is attached. Thanks!  
Margaret

(See attached file: climate10.pdf)(See attached file: INTRODUCED section by section.wpd)

- climate10.pdf
- INTRODUCED section by section.wpd

===== ATTACHMENT 1 =====  
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:  
Unable to convert NSREOP0103:[ATTACH.D82]SREOP01300495GC.001 to ASCII,  
The following is a HEX DUMP:

===== END ATTACHMENT 2 =====





"Koenig, Steven F (OES)" <KoenigSF@state.gov>  
11/27/2001 09:19:13 AM

Record Type: Record

To: Phil Cooney/CEQ/EOP@EOP

cc:

Subject: FW: Britain's Environment Minister Urges Australia To Ratify Kyoto Treaty-Best Way To Get U.S. To Join

---

> -----Original Message-----

> From: Koenig, Steven F (OES)

> Sent: Tuesday, November 27, 2001 9:18 AM

> To: OES Team Climate-DL

> Subject: Britain's Environment Minister Urges Australia To Ratify

> Kyoto Treaty-Best Way To Get U.S. To Join

>

> Britain's Environment Minister Urges Australia To Ratify Kyoto Treaty-

> Best Way To Get U.S. To Join

> Radio Australia

>

> November 28

> Britain's Environment Minister, Michael Meecher, has urged Australia to

> ratify the Kyoto Treaty on global warming, saying that's the best way to

> get the United States to join the Treaty.

>

> However, Matt Peacock reports the Australian Government has already said

> there's no point in ratifying the accord without the U-S also coming on

> board.

>

> Britain expects the Kyoto Treaty to come into force next year even without

> the United States, says Environment Minister Michael Meecher, and if

> Australia wants the US to join in, the best way is for it, too, to ratify.

> Linking the battle against terror with the battle against global warming,

> the Minister has this message for the US. "We need you just as you needed

> us in pursuing your international campaign on terrorism. Let's all get

> together " Mr Meecher acknowledges that Australia has an economy based

> largely on fossil fuels- but he says that's why it's been set fairly mild

> targets for greenhouse gas reduction.

>

>

>

>

>

>



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14<sup>th</sup> Floor  
Chicago, Illinois 60604 USA  
Phone: +1-312-554-3370  
Fax: +1-312-554-3373

**FAX**

TO: PHIL COONEY

FROM: AUDIE LE BLANC

DATE: 11.14.01

MESSAGE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FAX #: 202.456.2710

# OF PAGES: 4  
(Including this one)

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Fax 312-782-4160  
[www.joycefdn.org](http://www.joycefdn.org)

November 13, 2001

For information contact:  
Mary O'Connell 312 782 2464  
Rafael Marques, 312 554 3384  
[www.chicagoclimateX.com](http://www.chicagoclimateX.com)

### **Chicago, Mexico City Join Carbon Trading Market**

#### **Mayor Announces Commitment to Chicago Climate Exchange in Unveiling City Energy Policy**

The City of Chicago will become the nation's first municipality to commit to participate in the development of a carbon emissions trading system, a widely hailed strategy for addressing climate change, Mayor Daley announced today. At the same time, Mexico City officials also announced their intention to join Chicago in the carbon trading initiative.

The City of Chicago and Mexico City are joining the Chicago Climate Exchange, a voluntary market for trading emissions of greenhouse gases, which scientists say are the chief culprit in global warming and other climate changes. Mr. Daley will become honorary Chairman of the Exchange, now in its design phase.

"For years our financial exchanges have been a vital part of the local and national economy," said Mayor Daley. "This is a good example of the kind of innovation that will help us solve our energy and environmental problems."

"Mexico City is pleased to announce its participation in the Chicago Climate Exchange design phase," said Mexico City's Environment Secretary Claudia Sheinbaum. "Our participation supports the development of options to reduce greenhouse gas emissions that are both cost effective and supportive of sustainable development. We are convinced that the CCX is a key opportunity to help the City of Mexico achieve sizable greenhouse gas emission reductions."

Grupo IMSA of Mexico is also announcing its intent to participate in the design phase of the CCX. It will join 40 other entities that have made a similar commitment, signalling their willingness to help devise a market-based mechanism for limiting emissions through a voluntary cap. The CCX would enable them to get credit for such voluntary reductions and to buy and sell credits in order to find the most cost-effective way of achieving reductions, with a goal of reducing participants' greenhouse gas emissions by 5 percent below 1999 levels over 5 years.

"We are delighted to welcome the sister cities of Chicago and Mexico City, as well as Grupo IMSA into the CCX. The commitments of major North American cities and corporations to this initiative indicate that the concept of emissions trading is gaining greater acceptance as a cost-effective way of achieving environmental benefits," said Dr. Richard Sandor, Chairman of the Chicago Climate Exchange.

Funded through \$1.1 million in grants from the Chicago-based Joyce Foundation, the Chicago Climate Exchange draws on the model of sulfur dioxide trading, which has been successful in cutting pollution that causes acid rain. To address climate change, companies would set voluntary limits on their greenhouse gas emissions, and then either make the reductions themselves or buy credits from others that have "extra" reductions to sell. The Exchange, now in its design phase, would offer a market for such transactions, and thus help reveal the "price" of cutting carbon emissions.

After years of discussion about the potential for trading carbon emissions, the Chicago Climate Exchange<sup>sm</sup> will first test the concept on a regional scale, and then promptly expand to cover the rest of the U.S., Mexico and Canada. The Midwest is a promising location for starting the



market, according to Sandor, because of its nearly one-fifth share of the U.S. economy and greenhouse gas emissions, its mix of manufacturing, transport, energy, agriculture and forestry sectors, and its extensive international linkages.

Mr. Daley announced the City's commitment to CCX in outlining a 13-point energy plan for Chicago. The Mayor spoke at a meeting of corporate leaders, under the auspices of The CEO Coalition, discussing "The Future of Energy and Clean Air in Mid-America." Dr. Sandor was a featured speaker at the event.

Chairman and CEO of Chicago-based Environmental Financial Products and a research professor at the Kellogg Graduate School of Management at Northwestern University, Dr. Sandor is known for developing innovative commodity and environmental markets. He was honored by the Chicago Board of Trade and the City of Chicago for his universal recognition as the "father of financial futures."

With assets of roughly \$900 million, the Joyce Foundation is known for its strategic public policy grantmaking intended to enhance the quality of life in the Midwest. The Foundation has been a longtime funder of efforts to protect and enhance the natural environment of the Great Lakes region. Funding for the Chicago Climate Exchange comes under the Joyce Millennium Initiatives. Launched in 2000 to mark the millennium, and ranging between \$250,000 and \$1 million, the Millennium Initiatives support "intergenerational" activities — intended to reinforce and carry forward landmark achievements of the twentieth century, as well as promote bold, change-oriented initiatives for the century to come.



George C. Marshall  
INSTITUTE

Climate Science  
and Policy:

MAKING THE  
CONNECTION



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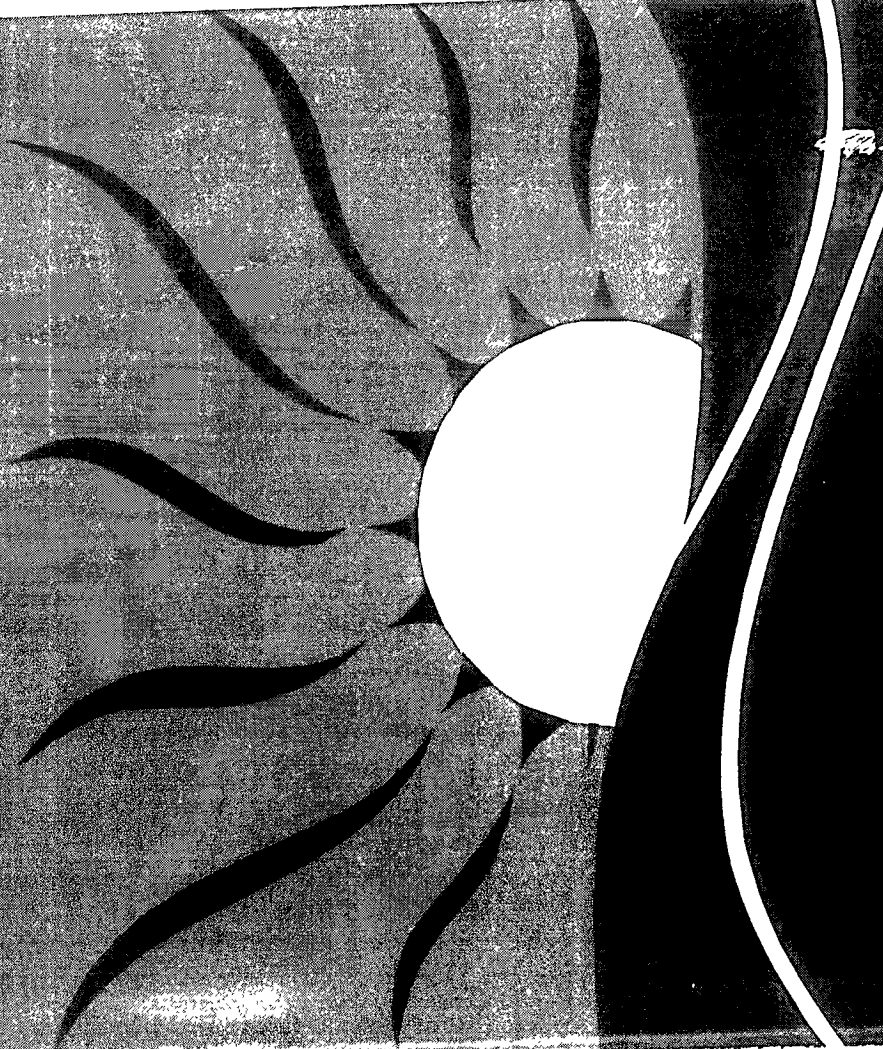
CLIMATE MODELS  
AND THE  
NATIONAL ASSESSMENT



By David R. Legates

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A GUIDE TO

# GLOBAL WARMING

*Questions and Answers on Climate Change*



# George C. Marshall INSTITUTE

## Climate science and Policy: Making the Connection

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Matthew Crawford

email  
info@marshall.org

Website  
www.marshall.org

To conduct this study, the George C. Marshall Institute consulted with a distinguished workgroup of scientists and policy experts that was chaired by **James Schlesinger**, former Secretary of Defense and Energy, and **Robert Sproull**, President Emeritus of the University of Rochester.

Information on the IPCC assessment of science was reviewed by them and discussions were held about the state of climate science, our understanding of the climate system, the relationship of science to policy, and actions to address gaps in the state of scientific knowledge. **Dr. Lenny Bernstein** used the information obtained through this process to prepare this report. Dr. Bernstein is a chemical engineer who was a Lead Author for the IPCC Third Assessment Report.

The workgroup includes:

**Albert Arking, Johns Hopkins University**, is a Principal Research Scientist in Earth and Planetary Sciences at JHU. Previously, he was a Senior Scientist at NASA Goddard Space Flight Center, where he headed the Climate and Radiation Branch. Dr. Arking is Associate Editor of Theoretical and Applied Climatology and Chairman of the Review Committee for the Environmental Research Division at Argonne National Laboratory.

**Richard Cooper, Harvard University**, is a Professor of Economics and former Undersecretary of State for Economic Affairs.

**William Happer, Princeton University**, is Professor of Physics and a prominent technical consultant to industry and government. He served as director of the Office of Energy in the first Bush Administration. Dr. Happer is a member of JASON, a group of nationally known scientists who advise government agencies on defense, energy, and other technical issues and served as its chairman from 1987 to 1990.

**David R. Legates, University of Delaware**, is Associate Professor of Climatology in UD's Center for Climatic Research. He has taught at Louisiana State University, the University of Oklahoma and the University of Virginia and held the position of chief research scientist at the Southern Regional Climate Center in Baton Rouge and the Center for Computational Geosciences in Norman, OK

001545

(over)

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CEQ 000407

**MARSHALL INSTITUTE STUDY PROVIDES  
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CHANGE SCIENCE POLICIES**

***Report Reduces Confusion Over Global Warming;  
Urges a strengthening of Scientific Foundation.***

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Lowell Wood  
*Lawrence Livermore  
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**Executive Director**

Matthew Crawford

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info@marshall.org

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Washington, December 4, 2001 – The George C. Marshall Institute today will release a new, comprehensive analysis of the state of climate science based on the work of group of science and policy experts it convened. As the Bush Administration moves closer to final policy recommendations on climate change, the Marshall study, which will be forwarded to Administration officials and members of Congress, offers science policy recommendations to improve the relevance and value of U.S. climate science research.

The study, *Climate Change and Policy: Making the Connection*, is the result of an extensive review by a distinguished group of scientists and public policy experts of the science behind recent findings of the United Nations Intergovernmental Panel on Climate Change (IPCC). Former Secretary of Defense and Energy **James Schlesinger** and **Robert Sproull**, President Emeritus of the University of Rochester, chaired workgroup discussions, and Dr. Lenny Bernstein, a Lead Author for the IPCC's recent Third Assessment Report, used the information gathered to prepare the Institute report. Other participants were:

**Albert Arking**, Johns Hopkins University

**Richard Cooper**, Harvard University

**Will Happer**, Princeton University

**David Legates**, University of Delaware

**Richard Lindzen**, Massachusetts Institute of Technology

**Rodney Nichols**, President, New York Academy of Sciences

**William O'Keefe**, President, George C. Marshall Institute

**Roger Sedjo**, Resources for the Future

(over)



# **Climate science and Policy: Making the Connection**

## **George C. Marshall Institute**

Scientific assessment is the critical step in turning scientific information into useful input for public policy decisions. It needs to be carried out at both the national and international level. The U.S. does not have a credible, ongoing assessment process and needs to establish one.

Better climate models will require improved:

- Knowledge of key climate processes, e.g., the roles of clouds, water vapor, aerosols, ocean currents and solar radiation issues
- Understanding of the influences that determine future rates of greenhouse gas and aerosol emissions
- Climate data to calibrate and validate improved climate models
- Increased computer capacity to represent climate processes at the necessary level of complexity.

Currently the U.S. Global Change Research Program provides the umbrella for federally-funded research on climate change. But the effort is not a "program" in the usual sense of the word, since, according to the National Research Council, it lacks a comprehensive strategy, a mechanism for prioritization, and adequate funding.

**A better, more cost-effective approach requires:**

- Focused research programs with tangible deliverables that address significant, policy-relevant scientific uncertainties
- Consistent, long-term commitment to climate observation and data collection
- Improved scientific assessments
- A process for integrating the information provided by these programs.

In addition, a focused research program will require:

- Prioritizing scientific uncertainties in terms of their ability to reduce policy uncertainty
- Research programs with quantifiable measures of progress and estimates of the time and funding required to achieve specific milestones
- A stewardship and oversight procedure that:
  - (1) evaluates the merits of the research
  - (2) revises scientific priorities as necessary
  - (3) terminates projects that have reduced priority or appear unlikely to achieve their desired results
  - (4) takes actions to keep the program from being politicized or a basis for perennial budget growth.





"Povenmire, Susan L (OES)" <PovenmireSL@state.gov>  
12/06/2001 05:00:44 PM

Record Type: Record

To: Phil Cooney/CEQ/EOP@EOP

cc:

Subject: FW: France criticizes U.S. position on global warming treaty -AP Dec. 5

---

fyi

> ---Original Message---

> From: Kozelka, Paul R (OES)

> Sent: Thursday, December 06, 2001 4:56 PM

> To: OES Team Climate-DL

> Subject: France criticizes U.S. position on global warming treaty -AP

> Dec. 5

>

> France criticizes U.S. position on global warming treaty

> The Associated Press

> PARIS (December 5, 2001)- French President Jacques Chirac said Tuesday he

> regretted that the United States has decided not to join an international

> treaty to stop global warming, but he promised that France would ratify

> the pact next year.

> At a two-week conference in Morocco last month, negotiators from 165

> countries agreed on rules for implementing the 1997 Kyoto Protocol, which

> calls on about 40 industrialized nations to limit carbon emissions or cut

> them to below 1990 levels. The United States has rejected the accord.

> "I regret that the United States has refused to join in this collective

> discipline," Chirac told an environment conference outside Paris. "This

> accord foreshadows a new world governance that we must devise to master

> certain aspects of globalization."

> The United States argues that the accord would harm the U.S. economy and

> says it is unfair because it excuses heavily polluting developing

> countries like India and China from any obligations.

> Chirac said France and other European Union nations would ratify the

> treaty next year, adding that France would have to "expand its national

> plan to fight greenhouse gases" to meet the accord's standards.

> The treaty needs ratification by 55 countries, including those that

> produced 55 percent of greenhouse gas emissions in 1990. Without the

> United States, virtually every other industrial country would have to

> endorse the agreement to reach that goal.

>





Breidenich.Claire@epamail.epa.gov  
12/03/2001 10:10:59 AM

Record Type: Record

To: Phil Cooney/CEQ/EOP@EOP  
cc:  
Subject: Climate comments anyone?

---

FYI

----- Forwarded by Joe Kruger/DC/USEPA/US on 11/29/01 03:49 PM -----

"David E. Wojick"  
<dwojick@climatechanged.org> To: Luke Nachbar <Luke\_Nachbar@gregg.senate>, Lani  
Sinclair <lanisinclair@earthlink.net>, "Lisa S. Beal" <lbeal@ingaa.org>, Lisa  
ebate.org> <ljacobson@bcse.org>, Linda Trocki <trockl@inel.gov>,  
"Linda S. Taylor" <ltaylor@dpsv.state.mn.us>, Lew Gayner  
11/29/01 03:31 PM <gaynerl@heritage.org>, "Lessly A. Goudarzi"  
<goudarzi@onlocationinc.com>, "Leslie G. Sarasin" <isarasin@affi.com>,  
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Laura Breillard Laroche <Feethealth@aol.com>, Larry Goulder  
<goulder@stanford.edu>, Lani Sinclair </sinclair@compuserve.com>,  
"Ladeene A. Freimuth" <Ladeene.Freimuth@mail.house.gov>, La tomate  
Italian Bistro <latomate@worldnet.att.net>, Kurt Hoffman  
<kurt.k.hoffman@si.shell.com>, Kris Nelson <knelson@climatetrust.org>,  
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<kip.lipper@sen.ca.gov>, "Kevin J. Coyle" <coyle@neetf.org>, "Kevin E.  
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<kkreidet@environet.org>, "K. R. Locklin" <klocklin@eifgroup.com>, June  
Taylor <taylorjune@aol.com>, Judith Holyoke Schoyer Rodd  
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CEQ 000413

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cc:  
Subject: Climate comments anyone?

Some of you might want to submit comments. These are commitments of sorts.

Keep me posted if you do anything.

David

Draft Electricity Daily article -

The Environmental Protection Agency is seeking public comments on a comprehensive review of U.S. climate change activities and programs. Officially titled the third Climate Action Report, the document is required under the 1992 United Nations Framework Convention on Climate Change. The United States submitted the first U.S. CAR to the UNFCCC Secretariat in 1994 and the second in 1997.

While the Bush administration has disavowed the Kyoto Protocol to the UNFCCC, the draft CAR makes clear that it still supports the Framework Convention. In fact the CAR is the most comprehensive statement of U.S. climate policy to date, providing clues to the likely outcome of the long awaited Cabinet level climate policy review.

Not surprisingly, the draft CAR emphasizes climate and energy research and development, saying "As envisioned by the Framework Convention, we are helping to develop technologies to address climate change. The President has pledged to reprioritize research budgets under the National Climate Change Technology Initiative so that funds will be available to develop advanced energy and sequestration technologies, and to measure and monitor greenhouse gas emissions accurately."

There is also heavy emphasis on increasing climate related foreign aid. The CAR says that "we plan to increase bilateral support for climate observation systems and to finance even more demonstration projects of advanced energy technologies in developing countries....In line with our commitments under the Convention, we have provided over \$1 billion in climate change-related assistance to developing countries over the last five years. All of this is just the beginning: we intend to strengthen our cooperation on climate science and advanced technologies around the world whenever and wherever possible."

Specific CAR chapters include a description of U.S. "national circumstances" related to potential climate change, identifying existing and planned policies and measures, indicating future trends in greenhouse gas emissions, outlining possible impacts and adaptation measures, and providing information on financial resources, technology transfer to other countries, research, and systematic observations. There is a lengthy review of U.S. efforts with developing countries to "assist with mitigation and sequestration strategies, build human and institutional capacity to address climate change, and facilitate the commercial transfer of technology."

However, even though comments are due by noon, December 17, the key chapter is still missing. This is Chapter 5 - Projections - which is

supposed to quantify the aggregate effects on greenhouse gas emissions of policies and measures implemented or planned from 1990 to 2020. According to administration sources this chapter is hung up due to the Cabinet level review, which in turn has been delayed by the anti terrorist campaign. They say it is unlikely the U.S. will have any specific "climate policies or measures planned to 2020" in the near future.

The draft CAR is at <  
<http://www.epa.gov/globalwarming/publications/natcomm.html>>.

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President, [Climatechangedebate.org](http://www.climatechangedebate.org)

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[http://www.john-daly.com/guests/un\\_ipcc.htm](http://www.john-daly.com/guests/un_ipcc.htm) is my latest report -- "The IPCC's Artful Bias".

The IPCC Third Assessment Reports are now available online, see:  
[http://www.grida.no/climate/ipcc\\_tar/](http://www.grida.no/climate/ipcc_tar/)  
If you read any of it, read  
[http://www.grida.no/climate/ipcc\\_tar/wg1/504.htm](http://www.grida.no/climate/ipcc_tar/wg1/504.htm)

<http://www.bydesign.com/powerision/resume.html> provides a Wojick bio and client list.







Breidenich.Clare@epamail.epa.gov  
12/03/2001 11:24:16 AM

Record Type: Record

To: Phil Cooney/CEQ/EOP@EOP  
cc:  
Subject: Re: Climate comments anyone?

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Yep - it just went up today. We're one business day behind schedule.

Phil\_Cooney@c  
eq.eop.gov To: Clare Breidenich/DC/USEPA/US@EPA  
cc: Kameran\_L\_Bailey@ceq.eop.gov  
12/03/01 Subject: Re: Climate comments anyone?  
11:02 AM

Clare, Thanks. Has the Projections chapter been posted yet for public review and comment? PHIL






Phil Cooney  
12/03/2001 11:37:24 AM

Record Type: Record

To: Breidenich.Clare@epamail.epa.gov

CC:

Subject: Re: Climate comments anyone? 

Excellent, thanks, PHIL

