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Climate Change



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

TRANSMISSION NUMBER: 202/395-5836
VERIFICATION NUMBER: 202/395-6827

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Name

Fax # X56958

To:

Michele Jolin

From:

Bob Tuccillo

Message:

Schaefer climate change Qs/As you requestedNumber of Pages to Follow: 28

Date:

11/5/97

Time:

4:55 pm



United States Department of State

Washington, D.C. 20520

SEP 30 1997

Dear Mr. Chairman:

In response to your August 22 request we are pleased to provide the enclosed materials, which include answers to the following questions: 1-18, 21, 24-25, 27-29, and 31. The remaining eleven questions will be sent to you as soon as possible, and are currently undergoing an expedited OMB interagency clearance process.

Responding to your questions is a top priority at the Department of State, and we hope to provide you with the remaining answers as soon as possible. We appreciate your continued patience.

Sincerely,

A handwritten signature in cursive script that reads "Barbara Larkin".

Barbara Larkin
Assistant Secretary
Legislative Affairs

Enclosure: As stated.

The Honorable
Dan Schaefer, Chairman,
Subcommittee on Energy and Power,
Committee on Commerce,
House of Representatives.

Questions for the Record Submitted by Chairman Schaefer to
Under Secretary of State Timothy Wirth
House Committee on Commerce
Energy and Power Subcommittee
July 15, 1997

1. Q: Please identify each member of the Interagency Analytical Team (IAT) from the date of its inception to the present time, any other participants inside or outside the Administration, and specify their responsibilities.

A: Attached is former Under Secretary Ehrlich's list of people to call regarding IAT meetings.

Members of the IAT had varying levels of participation and responsibility.

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2. Q: When was the IAT formed and what were the IAT's instructions? Please provide any documentation regarding the formation of the IAT and its mission, responsibilities, membership or assignments.

A: Previously, Agencies worked independently on climate change economic analysis.

Beginning in February 1996, however, the Department of Energy and the Environmental Protection Agency began to work together on global climate change analysis and called it the IAT. Their joint efforts provided the analytical foundation for the Springfield Global Climate Change Workshop in June 1996.

Former Under Secretary Ehrlich joined the climate change analysis effort shortly after the June 1996 Climate Analysis Workshop. He oversaw the analysis from mid 1996 to May 1997.

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3. Q: Please indicate the total costs of the IAT's efforts and the share paid annually by each Department or Agency that was involved and please identify the source of the funds within each Department or Agency.

A: Costs for the IAT were primarily for personnel. No effort was made to keep track of costs related to the IAT activities. DOE and EPA, which had primary responsibility for the analysis efforts, did have some contract costs for modeling.

**Questions for the Record Submitted by Chairman Schaefer to
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4. Q: Is the IAT still in existence? If so, what are its current responsibilities?

No IAT economic analysis of global climate change is underway.

Questions for the Record Submitted by Chairman Schaefer to
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5. Q: Please provide a copy of all drafts of the IAT report in addition to the May 16th and 30th, 1997 drafts, both earlier and later.

A: Enclosed with this response are photocopies of the May 12th, May 16th, and May 30th drafts of the IAT paper. The May 30th draft was released to the public on July 15th.

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6. Q: Please explain how the peer reviewers were selected? What instructions were those peer reviewers given? Please provide copies of any correspondence or instructions that were sent to the peer reviewers.

A: The peer reviewers were selected based on recommendations from senior IAT members.

Former Under Secretary Ehrlich made the final selection after consultation with the IAT and members from the White House Task Force on Climate Change.

Former Under Secretary Ehrlich sent letters and attachments to each of the reviewers as well as personally contacting each of them. The letter dated March 20th is a copy of the initial letter sent to Professor Jorgenson. Identical letters were sent to the other peer reviewers over a period of weeks. Enclosed with this letter was a technology note and information on the IAT models and baseline. The undated letter is a copy of the letter that was sent to all reviewers on May 16th with copies of the May 16th draft of the IAT report. Copies of materials sent to the reviewers are enclosed.

Questions for the Record Submitted by Chairman Schaefer to
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7. Q: If the IAT effort is in fact a "failed" project as indicated in Administration testimony at the Subcommittee hearing how will the Administration determine the appropriate level of future international climate change commitments for Kyoto and later?

A: The IAT effort generated useful information about how to model constraints on greenhouse gas emissions and their potential economic effects. However, the IAT process was unsuccessful in providing a definitive answer on the economic effects to inform the Administration's overall decision-making process. As part of the ongoing decision process on the issue of climate change, the Administration is using a range of analytic tools and analyses as guides to the likely effects of reducing greenhouse gas emissions.

Questions for the Record Submitted by Chairman Schaefer to
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8. Q: As late as last May when Dr. Ehrlich and others in the Administration held briefings on the then draft analysis and assessment there was no hint that the Administration considered this effort a failure and the models to be unreliable. What occurred since May that caused the Administration to apparently reach a different conclusion from that of Dr. Ehrlich?

A: When the Administration provided briefings on the work being done by the IAT, the focus was on determining baselines for emissions levels, economic growth, and other key variables, and for explaining the different models that were being used. As the work done by the IAT proceeded, the wide range of results and the concern raised by the peer reviewers called into question the applicability of continued work on these economic models to the development of the Administration position.

Questions for the Record Submitted by Chairman Schaefer to
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9. Q: The IAT draft Analysis referred to three scenarios which resulted in costs of future climate commitments of approximately \$200, \$100, or \$50 per ton carbon tax equivalent. Has the Administration concluded that a \$200 per ton carbon tax equivalent cost will not harm the U.S. economy, jobs, and global competitiveness? Has the Administration concluded that a \$100 per ton carbon tax equivalent cost will not harm the U.S. economy, jobs, and global competitiveness? Has the Administration concluded that a \$50 per ton carbon tax equivalent cost will not harm the U.S. economy, jobs, and global competitiveness. Please provide the basis for any of the above conclusions. If the Administration does not support any of the above costs, what analysis or other information does the Administration intend to rely on to support a different amount?

A: The implicit price of carbon for the United States reported by the IAT ranged from \$9 to \$145, depending on the assumptions and models used. The IAT found that the estimates of the costs to the U.S. economy of a carbon emissions reduction policy depended on several factors, including targets and timetables, the use of market based incentives, technology assumptions, the implementation of international emissions permit trading, and revenue recycling. As Dr. Janet Yellen remarked in her July 15, 1997, testimony to the House Commerce Subcommittee on Power, "It boils down to this: if we do it dumb, it could cost a lot, but if we do it smart, it will cost much less."

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10. Q: Is the paper prepared by the IAT both an analysis and an assessment? How does it relate to the "analysis and assess merit" referred to in Paragraph 4 of the Berlin Mandate? Has the Ad Hoc Group on the Berlin Mandate provided an analysis and assessment as required by the Berlin Mandate?

A: The Berlin Mandate states in part that the process for determining a next step "will include in its early stages an analysis and assessment, to identify possible policies and measures for Annex I Parties which could contribute to limiting and reducing emissions by sources and protecting and enhancing sinks and reservoirs of greenhouse gases. This process could identify environmental and economic impacts and the results that could be achieved with regard to time horizons such as 2005, 2010, and 2020." However, the Mandate does not stipulate that the AGBM will undertake the analysis itself. In the Administration's view, the IAT effort represents a level of analysis consistent with the intent of the Berlin Mandate, although the IAT work was in no way a direct response to the mandate text.

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11. Q: The IAT draft states that the central policy modeled for the analysis "is aimed at reducing carbon and other greenhouse gas emissions by stabilizing them at 1990 levels" and that policy would be "announced in 2000 and its restrictions are phased in over a ten year period, so that the policy would take full effect in 2010." Reports in the media after the Denver Summit that President Clinton attended also referenced this date of 2010. In light of EIA's projection of emissions 22% above 1990 levels by 2010, is the Administration considering a target and timetable that calls for stabilization at 1990 levels by 2010?

A: The IAT's analysis focused on a standard emissions target widely used in the academic literature for comparing model results. The Administration is in the process of determining its position on targets and timetables. The Administration's negotiating position is still in development.

Questions for the Record Submitted by Chairman Schaefer to
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12. Q: The Administration frequently cites the 2000 economists who say they support controlling greenhouse gases. Their statement supports as the mechanism either carbon taxes or emissions permits. In the past, the Administration has said it opposes the use of taxes. Is that still the Administration's position?

A: The Administration's position on implementation options and strategies relating to greenhouse gas emissions reductions is still under development. This position will be determined in conjunction with a position on targets and timetables, which is also under development.

Questions for the Record Submitted by Chairman Schaefer to
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13. Q: The IAT draft explains that these emissions reductions to achieve stabilization would be through "issuing tradable permits at the earliest point of energy production or when imported into the U.S." and that the permits "are initially auctioned in a way that is revenue neutral: i.e., all revenues generated would be recycled through the economy.". Would these revenues be deposited in the treasury as miscellaneous receipts under the Economy Acts? Would they then have to be recycled through changes in the tax laws or by appropriation? How would they be recycled?

A: The IAT considered a range of revenue recycling possibilities at a very abstract level. The IAT did not examine the specific framework under which these abstract options might be implemented in the United States.

Questions for the Record Submitted by Chairman Schaefer to
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14. Q: Does the Administration believe that permit auctions are the equivalent of a new tax? If not, please explain.

A: In general, they are not equivalent. Auctions focus on fixing quantities and leave prices free to fluctuate, while taxes focus on prices and allow quantities to adjust.

Questions for the Record Submitted by Chairman Schaefer to
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15. Q: The IAT draft states that "among fuels, demand for coal bears the brunt of greenhouse gas stabilization." What is the impact on the U.S. economy as a whole and on the relevant coal regions of this policy towards coal? What will be the job impact? Is the Administration adopting an anti-coal policy? How is the policy consistent with President Clinton's 1995 reply to Mr. Dingell that the U.S. will not agree to any protocol that harms our economy and jobs or our competitiveness?

A: The IAT analysis found that the implicit price of carbon would range from \$9 to \$145 per ton depending on the model and assumptions used and the specific scenario analyzed. Economic and job impacts would similarly span a range depending on several factors, such as the rate of technological change, targets and timetables, and international emissions permit trading.

It is important to stress that the IAT analysis is just that -- analysis -- and not policy, as the question suggests. The IAT examined a wide variety of different analytic scenarios as part of its work, and explicitly was not charged with making policy recommendations.

Questions for the Record Submitted by Chairman Schaefer to
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16. Q: How long after December 1997 does the Administration think it will take to obtain Senate advice and consent of any Kyoto agreement, to ratify that agreement, and to enact implementing legislation?

A: There is little information on which to judge the timeframe for the advice and consent process, or for the enactment of implementing legislation in the climate arena. The UN Framework Convention on Climate Change was ratified by the Senate in October 1992, only four months after it was signed by President Bush at the Earth Summit in Rio de Janeiro in June 1992. That Convention required no implementing legislation. However, other Conventions, such as the Law of the Sea, have yet to be ratified, more than a dozen years after signature.

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17. Q: Which agency or department would be responsible for implementing the provisions of any agreement reached in Kyoto, including provisions relating to joint implementation, emissions trading and advancing Article 4.1?

A: It is anticipated that several Departments and agencies would have a role in the implementation of provisions related to joint implementation, emissions trading and Article 4.1, including the Department of State, the Department of Energy, The Department of Justice, the Treasury Department, the Department of Agriculture, the Department of Transportation, the Agency for International Development, the Environmental Protection Agency, and possibly the National Oceanographic and Atmospheric Administration and the National Aeronautics and Space Administration. The precise role of each could only be determined once specific provisions had been decided upon.

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18. Q: What consideration has been given or plans made regarding passage of legislation necessary to implement any agreement reached in Kyoto?

A: While some consideration has been given to the activities required under various agreement provisions (particularly those introduced by the United States), the lack of general acceptance of any of these provisions in the international negotiations makes the development of any specific legislative proposals premature. The Administration would intend, as part of its package of material to be sent to the Senate, to include in it proposals for legislation that would be required to fully implement any agreement.

Questions for the Record Submitted by Chairman Schaefer to
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21. Q: Paragraph 2 of Article 5 of the U.S. draft Protocol mandates each Party to "strengthen its legal and institutional framework to advance implementation" of Article 4.1 commitments. What "framework" does the Administration have in mind? Does this suggest a new Federal or international agency or program? Would this be done through new legislation? If not, how would it be achieved in the U.S.?

A. The Berlin Mandate calls for the negotiating process to "continue to advance the implementation" of Article 4.1 commitments, which also apply to developing countries. The primary U.S. objective, in proposing paragraph 2 of Article 5, was to encourage developing countries with inadequate legal and institutional frameworks to strengthen such frameworks to the level of the U.S. and other countries. It was not intended as a proposal for a new international or U.S. institution.

Questions for the Record Submitted by Chairman Schaefer to
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24. Q: Article 16.1 of the Convention provides that "annexes shall be restricted to lists, forms, and any other material of a descriptive nature that is of a scientific, technical, procedural or administrative character." The U.S. draft protocol states, that it may not be "appropriate" to adopt the Article 16.1 Convention example. Please explain why. Does the U.S. support annexes that would be substantive and mandatory?

A: You correctly note that Article 16.1 of the Convention limits the use of annexes to certain types of material. This is not because there is any inherent reason why annexes should be so restricted. Rather, it is because Article 16 goes on to provide an entry-into-force procedure for annexes (and amendments to annexes) under which an annex (or amendment to an annex) enters into force for a Party unless a Party affirmatively does not accept it. (Other modifications to the Convention must be affirmatively accepted by Parties to be binding on them.)

In the context of the Convention, as well as other treaties, the U.S. insisted that the quid pro quo for such a "tacit" amendment procedure with an "opt-out" provision was that annexes be limited to material of a technical (scientific, etc.) nature. This view is consistent with views expressed by the Senate. The purpose of the U.S. comment with respect to the climate change protocol was to flag that annexes are not automatically entitled to "opt-out" procedures; rather, it depends on their context.

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25. Q: Article 9 of the U.S. draft provides that Parties "shall cooperate" in establishing a "long-term goal" regarding concentrations of gases. Article 10 calls for meetings at "regular intervals" to, among other things "periodically review the adequacy" of the Protocol and Article 8 calls for periodic review of the Protocol and guidelines "in light of evolving scientific knowledge related to climate change." Article 2 already suggests a minimum of two budget periods. Article 16 tells the parties to adopt "binding provisions" by [2005] for progressive "obligations." Does the State Department contemplate, over the next several decades a continuing process of meetings of both the protocol and Convention Parties annually and a series of IPCC assessments, special reports and technical papers leading to a series of protocols or other legal instruments that are likely to have significant economic impacts on the Parties and their people? Why is there a need for such frequent meetings and reviews?

A: The U.S. has proposed a periodic review of the agreement to insure that any changes in the science are fully taken into account by the Parties. Such flexibility insures that if new information emerges indicating a reduced need to act, the agreement could be modified; conversely, if additional actions needed to be taken to address the threat of climate change, appropriate action would not be delayed. The U.S. proposal also seeks to insure that Parties would be fully informed regarding the compliance of all other Parties -- thus removing a potential problem of one Party gaining a competitive advantage though not fully meeting its obligations, while other complying Parties might be penalized. Finally, the U.S. proposal, while setting specific commitments for developed countries, recognizes the need for all Parties to participate. It therefore calls for the negotiation of a new agreement by [2005] that would require all countries -- including developing countries -- to adopt legally binding limits on their emissions.

We assume that at each stage of the process, a full assessment of the costs and benefits of action would be taken prior to committing the United States to any new legal obligation.

The U.S. proposal for an agreement does not specify the frequency of IPCC Assessments. These reports (the third of which is anticipated to be released in late 2000 or early 2001), have so far been scheduled on a five year cycle – long enough to allow new scientific information to develop, but frequently enough to provide the policy community with regular updates on the state of knowledge regarding the climate change issue.

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27. Q: The EU proposal made recently in Denver was developed last March as an EU "negotiating position for the ongoing negotiations on the Berlin Mandate" and it includes burden-sharing of a 10% reduction among EU members of the "overall emission reduction objective by the Community as a whole." This appears to be a form of differentiation, a concept the U.S. is not supporting. The existing FCCC bubble applicable to the EU presumably only covers policies and measures and, when adopted, it only covered the 12 Parties that were members of the EU in 1992. Does the U.S. understand that the EU is seeking, by its submissions and discussion with the U.S. delegation, to extend a form of the FCCC bubble to a protocol and another legal instrument that may be adopted in Kyoto, to expand the bubble to cover any target and timetable or financial obligations and not just policies and measures, and to expand the bubble to include all present and future members of the EU, such as countries from Central and Eastern Europe? Why is such an expanded bubble in the economic and competitive interests of the U.S.?

A: The EU has made clear that it believes the bubble covers not only policies and measures, but also any target and timetable. IT has argued that it may use the bubble not only in meeting the non-binding aim of the Convention, but also in meeting any new obligations established under the protocol or other legal instrument. To date, the EU has not discussed with us whether it also covers financial issues. They have also indicated they have not yet determined how or under what circumstances the bubble would apply to new member states.

The United States believes it is the interest of a stable Europe that the European countries continue to develop economically, and has so far been disinclined to intervene in the domestic affairs of any European nation. However, in the context of any new agreement under the Climate Convention, we have not yet accepted that the European member states should be allowed to

"bubble" their obligations, nor would we support their doing so unless we were satisfied that such an agreement would not disadvantage the United States.

Questions for the Record Submitted by Chairman Schaefer to
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July 15, 1997

28. Q: What is the potential impact of such an expanded EU bubble on the U.S. proposal for international emissions trading? Would it ensure that the EU would get the benefit of any emissions deficit derived from such Central and Eastern European Members and deprive the U.S., Japan, Australia, and Canada of that deficit? Would the U.S. then have to rely primarily on Russia's emissions deficit in order to derive any of the benefits of trading?

A: The impact of an expanded EU on any emissions trading provisions is dependent on the level of the target, and the restrictions placed on a trading regime. If country targets or trading restrictions were set so that they required "real" reductions, no specific benefit would necessarily accrue to the European Union, and any reductions would entail real costs. Neither is it clear that the European Union would necessarily claim all the benefits of an expanded membership -- emissions trading should in theory equalize the price of reducing a unit of emissions regardless of whether it is in Europe or Russia or the United States. Most analysis does suggest that if the U.S. is to use emissions trading to substantially offset its domestic emissions, even the entirety of the Eastern European country emissions would not suffice; Russia is the only country large enough to accommodate our current levels.

Questions for the Record Submitted by Chairman Schaefer to
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29. Q: Article 22.3 of the FCCC requires that regional economic integration organizations must declare the "extent of their competence" with regard to obligations under the FCCC. Does the U.S. believe that the EU has the competence to carry out legally binding targets and timetables and to enforce any differentiated targets for its members if they fail to achieve them?

A: It is not yet clear how the EU competence will be applied in its implementation if any new obligations under a new legal instrument. We, along with others (e.g., Australia and Japan) have insisted that the issue of EU competence be made fully transparent and provisions for compliance be made acceptable to all Parties before we would agree to allow the EU to undertake its commitments as a single entity rather than individually through each member state.

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31. Q: Since 1992, the composition of the only "regional economic integration organization," namely the EU, has grown from 12 to 15 members and several countries want to expand it further. Under what circumstances would the U.S. agree to an EU bubble that is or could be expanded?

A: The U.S. has made it clear throughout these negotiations that there is no EU entitlement to a so-called "bubble" in the Kyoto agreement. Indeed, how a bubble would operate upon EU expansion is one of the many concerns that we and others (for example, the Japanese) have raised in connection with the EU proposal.



THE U.N. GLOBAL CLIMATE TREATY ISN'T GLOBAL

CHECK IT OUT FOR YOURSELF: 1-888-54FACTS or www.climatefacts.org

Americans Will Pay the Price

The United Nations is negotiating a climate treaty that will require severe restrictions on the amount of energy we use. And it puts the entire burden on the U.S. and a few other countries.



50 Cents More for Every Gallon of Gasoline

Economists predict that reducing our energy use by more than 20% will require price increases for most types of energy. Natural gas could go up 45%, electricity costs could increase by 20%, and gasoline prices could go up by 50 cents a gallon.

Most Countries Are Exempt

Americans will pay more for everything that requires energy to transport or manufacture, while 132 of 166 countries, including India, China and Mexico, are exempt.

It's Not Global and It Won't Work.

Excerpt from the President's speech at American University, 9/9/97

"And we also need people who have the confidence in our ability to break new technological and scientific barriers to stand up and say, you cannot make me believe that we can't reduce greenhouse gas emissions substantially and still grow the American economy. We could reduce them 20 percent tomorrow with technology that is already available at no cost if we just changed the way we do things."

The President's statement reflects the result of a study conducted by five Department of Energy research laboratories titled *Scenarios of U.S. Carbon Reductions*. This study, still in draft form, claims that carbon emissions can be reduced to 1990 levels in 2010 at "net costs to the U.S. economy [that] are near or below zero in this time frame [1998-2020]" (p. 16, chapter 1, 8/29/97 draft). The Council of Economic Advisers and the Department of Treasury have reviewed this report and found the economic analyses to be inadequate to support this assertion. The study suffers two serious flaws. First, it merely assumes "aggressive" and "invigorated" government policies to stimulate technology adoption, without a discussion of the political feasibility of these policies or whether these technologies would be voluntarily adopted by private parties. The study does not provide reliable estimates of the costs of government programs nor does it estimate the costs of extensive and intrusive new regulations implied, including stringent CAFE standards, national building codes, and very aggressive appliance standards. This country's experience with the Climate Change Action Program implies that the government costs of achieving this goal would be in the billions of dollars annually. Second, the analyses on individuals' and firms' adoption decisions do not assess economic behavior, but rather invoke a set of engineering assumptions that generate substantial underestimates of complete adoption costs. The study ignores likely individuals' behavioral responses to climate policy (e.g., people drive more miles when cars become more fuel efficient), implementation costs, and the costs of accelerating capital retirement, but assumes that individuals live in model houses, drive model cars, and purchase products manufactured in model factories. The economic literature on technology adoption indicates that the actual net costs of energy efficient technologies are much greater than predicted by engineering studies like this study. *Scenarios of U.S. Carbon Reductions* is an engineering study, not an economic study. Given these inadequacies, neither CEA nor Treasury has signed off on the report.

Office of Economic Policy

Department of the Treasury
Washington, D.C. 20220JY
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FAX

Date: 10/22/97
Number of pages including cover sheet: 26

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REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please comment



DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

October 22, 1997

MEMORANDUM TO: DEPUTY SECRETARY SUMMERS
FROM: JONATHAN GRUBER
RE: Responses to Your Questions on Climate Change

You had asked nine questions related to the economic analysis of the administration's climate change proposal:

Variation in Gas and Energy Prices Over Time

Depending on the ultimate rise in carbon permit prices, the increase in gasoline prices expected from the President's plan may be no larger than the normal month-to-month and year-to-year variation in these prices.

Retail gasoline prices vary considerably from one month to the next. For example, in November 1995, new rules requiring oxygenated fuels in the winter months went into effect in Washington and several other metropolitan areas. This caused the price of gasoline at the pump in the Washington area jumped by 10 cents per gallon overnight – an increase equivalent to a \$40 per ton carbon tax, yet few consumers noticed. In the same way, the seasonal increase in summertime demand raises gasoline prices by several cents per gallon for several months each year.

Year-to-year changes have often been greater than the price change expected to result from the President's plan. We attach to this memo (TAB A) a graph of gas and energy prices since 1970, as well as a printout of the underlying data points.

- The table shows: real gas prices; the year to year change; the energy price index; and the year to year percentage change in that index.
- The average of the absolute value of year to year changes since 1970 for gas prices is 11 cents; this is equivalent to the gas price increase from a \$42/ton price of carbon. There are five years over this period in which price changes exceeded 26 cents, or the equivalent of \$100/ton
- The average from 1983 to 1997 is 8 cents, equivalent to a \$31/ton price of carbon; there is only one large change over this period.
- The changes in overall energy prices is much less pronounced year to year, and does not seem to make the point as well.

Moreover, the effects of the President's plan would not all be felt in one year, further dampening

the effect on prices.

We should note, however, that this argument *appears to contradict the comparison you have drawn with the OPEC oil shocks throughout the internal Administration debate.*

Historical Perspective on Energy and Resource Utilization

After both oil shocks, we heard predictions of the catastrophes that lay ahead -- oil prices would continue to climb, and the economy would crash. For example:

- On March 31, 1979, President Carter said, "There is a dwindling supply of energy sources. Prices are going to rise in the future no matter which party occupies the administration in Washington, no matter what we do." Actually, prices then fell for five straight years, from 1981 through 1986. In 1982, the economy launched its longest postwar expansion, which continues today, 15 years later. The Clinton Administration's climate policy is not expected to have nearly the effect on energy prices than the oil shocks.
- The 1972 bestseller, *The Limits to Growth*, contained dire predictions of impending resource depletion: the world would run out of gold by 1981, mercury by 1985, tin by 1987, zinc by 1990, **petroleum** by 1992, and copper, lead, and natural gas by 1993. None of these predictions came true; indeed the real prices of natural resources have been steadily dropping.

We attach (TAB B) a list of other recent resource forecasts that turned out to be very wide of the mark.

Detailed Evaluation of the Emissions Implications of Electricity Restructuring

We attach to this memo (TAB C) a draft memo from the Energy Department on carbon emissions implications of restructuring, including the administration add-ons of the RPS, the Public Benefits Fund, and green marketing. Under pressure from EPA, the Energy Department has presented a broad estimate, ranging from an emissions increase of 20 MMT to an emissions reduction of 84 MMT. This consists of a narrower range of effects of retail restructuring itself (-25 to +33 MMT), along with modest impacts of administration add-ons (-36 to -13 MMT). The consensus among economics experts such as Paul Joskow is that the *best guess for the long run is a small emissions reduction* (on the order of 20-40 MMT).

Relative to trend emissions in this sector, *this consensus is plausible*. Current emissions in the electric sector are 506 MMT, projected to rise to 626 MMT in 2010. So the consensus estimate of a 20-40 MMT reduction represents a reduction in emissions growth of one-sixth to one-third; even the upper bound estimate would have emissions growing by almost 10% above today's level.

The Potential for Worldwide Trading

We attach to this memo (TAB D) a qualitative analysis describing the great potential of international cooperation for reducing carbon abatement costs. In particular, the attachment discusses how the energy inefficiency and greater expected growth of non-OECD countries make joint implementation (JI) and permit trading important avenues for reducing costs. We note in particular that a World Bank study suggests that emissions reductions in China before 2020 could save roughly as much in carbon emission as the U.S. would have to reduce to achieve 1990 levels by 2010. Anecdotal evidence describes the untapped potential for efficiency gains in developing and transitional economies and also highlights the success of JI pilot projects.

How do we Distinguish Our "Phase I" Plan from the Climate Change Action Plan?

Phase I of the president's plan calls for new technology spending of roughly \$1 billion per year, but no explicit price of carbon. The question is whether this represents a real step beyond the Climate Change Action Plan, which has been regarded by some as a failure. The White House has produced a good set of talking points on this issue, which we draw on and expand here:

- The President's plan includes substantially *more funding*: \$5 billion over 5 years--about 6 times as much funding as for the Climate Change Action Plan (Note on funding: the President's plan has about 3 times more funding than CCAP plus the Partnership for a New Generation of Vehicles).
- The President's proposal now includes *binding* targets. In expectation of these binding targets, firms and households will begin to adjust their behavior today -- a factor not present in the Climate Change Action Plan.
- To provide further incentives for firms to take action now, the President has indicated his strong support for developing an *early credit* program of appropriate rewards for those who take prompt early action.
- The President has indicated his support for environmentally-friendly *electricity restructuring*, which has the potential to reduce emissions significantly.
- The President has announced that the US will provide \$1 billion over the next 5 years to *help developing nations* and countries in transition to reduce the threat of climate change.

What are the Assumptions of the Models that Generate Small Economic Effects?

The White House talking points cite model results that suggest that with worldwide permit trading, the United States could reach 1990 emissions levels by 2010 with a permit price of \$25 in 2010, and a loss of only 0.1% of GDP.

These results come from Battelle's Second Generation Model (SGM), used in the IAT's work earlier this year. SGM is a 12-region model that includes 10 supply sectors (of which 8 are energy-related),

with capital modeled as "putty-clay". SGM includes 2 end-use sectors, households and government, which consume final products, provide labor, land, and capital to the markets, and determine the savings rate. The model allows regions to trade goods. SGM models energy as a depletable, graded resource for both fossil and non-fossil fuels.

Can Other Examples be Used to Demonstrate that our Assumptions are Overly Pessimistic?

As you know, a recent article in the American Prospect highlighted a number of other environmental control programs where the initial cost estimates turned out to be overly pessimistic. Unfortunately, most of their examples have fundamental flaws in one way or another. There are three examples that do bear scrutiny:

- *Cotton dust.* Actual costs were below estimated costs in part because estimates were based on models that did not include the effects of technical change in the industry, which was accelerated by the new standards.
- *Strip mining.* Early costs estimates referred to reclamation at mines in operation at the time. In response to the law, however, producers expanded operations at sites where reclamation costs were lower, often on flatter terrain.
- *Vinyl chloride.* Early estimates were based on static cost models, and did turn out to be too high.

A number of examples are not relevant, as discussed in the attached memo. In particular, you asked about CFCs. EPA's estimates for the cost of reducing CFC production fell from \$3.55 per kg (1988) to \$2.45 per kg (1996), with the latter price for a more stringent standard. But the well-publicized problem of CFC smuggling indicates that control costs at the margin, which is what counts, are much higher than these estimates. CFC-12, the most common form, now has a street value of about \$50/kg. By one estimate, 10 thousand tons of CFCs are now smuggled into the US every year; by comparison, legal production is 100 thousand tons this year.

We attach (TAB E) a memo that describes this conclusion in more detail, as well as the American Prospect article itself.

What Assumptions Underlie the Estimates of Massive Job Loss from the President's Plan?

The widely publized recent job loss estimates come from the EPI, a labor union think-tank, which projects job losses of 1.7 million by 2010. These estimates are implausible, for a number of reasons:

- Many IAT reviewers, including Nordhaus and Jorgenson, note that short-term macro models, such as the EPI-GRI model, are not appropriate for long-term predictions.
- The DRI model used in this study is very sensitive to changes in assumptions. In this study, DRI ran a short-term macro model with assumptions that would provide a worst-case result: a \$200 permit price, increased emissions baseline, and decreased rate of efficiency

improvements.

- The study also ignores Annex I trading, JI, or worldwide trading; worldwide trading has been estimated to lower costs by 50-75% in other models.
- A key contributor to the large unemployment effects appears to be large trade effects, which are inconsistent with other models and probably reflects weak trade modelling.
- It is worth noting that this is not the first time that EPI has staked out this position on job loss; their estimates of the effects of NAFTA have been proven to be wildly pessimistic.

We attach a detailed critique of the EPI-DRI study as TAB F.

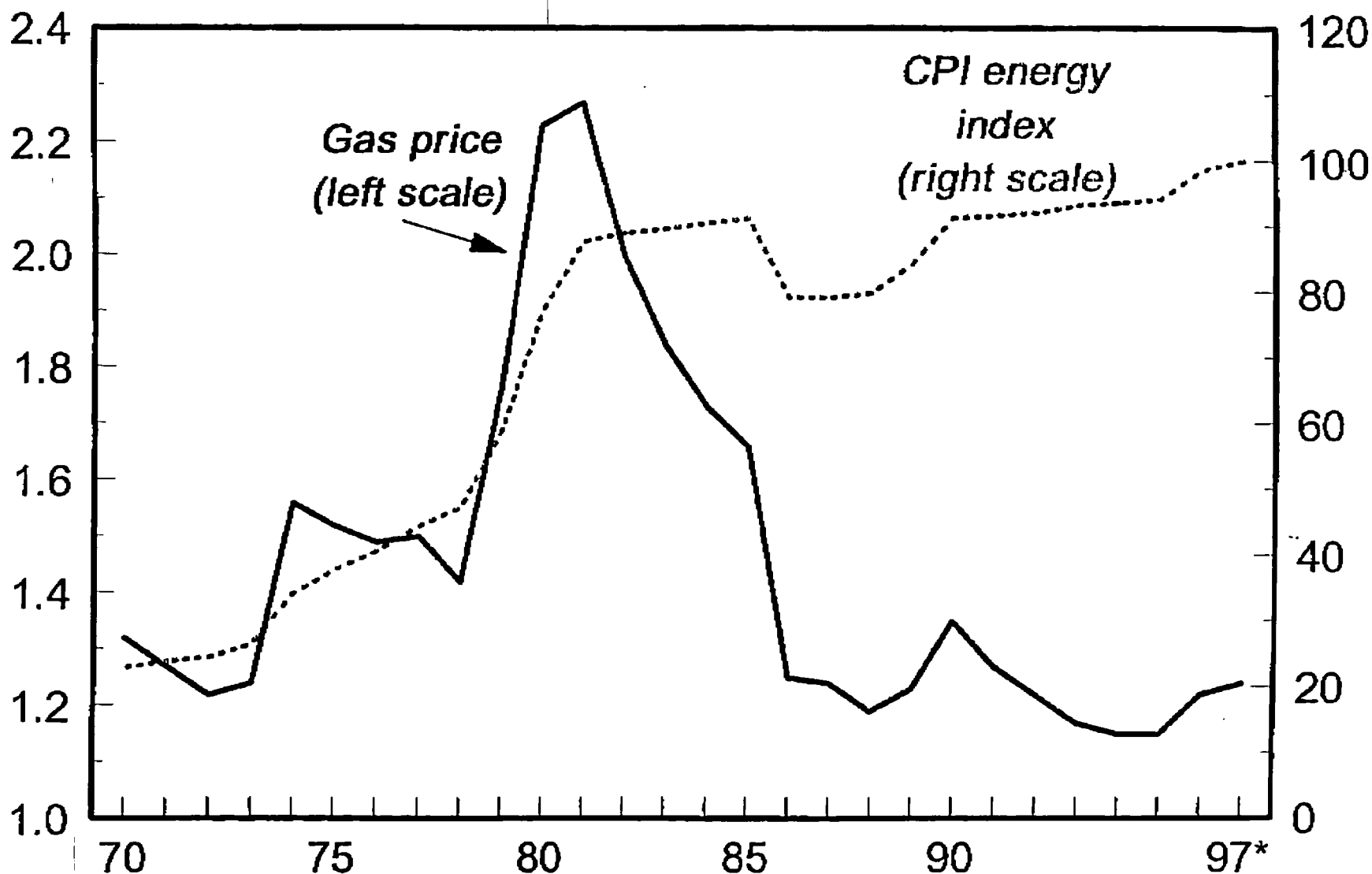
To What Extent can the Cost Savings from Electricity Deregulation Offset Price Increases Due to our Climate Change Plan?

- Electricity restructuring would reduce electricity prices by 0.5 to 1.1 cents per kw-hour; a carbon tax of \$30 to \$70 per ton would raise electricity prices by the same amount. This comparison is misleading, however, since the price reduction from electricity restructuring falls only on the electricity sector, while the price increase from a carbon tax would increase prices for other carbon-based fuels as well.
- Electricity restructuring is expected to save the average 4-person family about \$232-\$488 per year; a carbon tax of roughly \$15 to \$35 per ton would cost the average family about the same amount.

RETAIL ENERGY PRICES

97 dollars per gallon

Index, 97=100



* 1997 based on 7-month average

RETAIL PRICES OF GASOLINE AND TOTAL ENERGY

	Gasoline (1997 price per gallon)	Year-to-year change	Consumer energy price index (1997=100)	Percent Change
1970	1.32		22.911	
1971	1.27	-0.04	23.824	1.0
1972	1.22	-0.06	24.483	1.0
1973	1.24	0.02	26.453	1.1
1974	1.56	0.32	34.179	1.3
1975	1.52	-0.04	37.803	1.1
1976	1.49	-0.02	40.544	1.1
1977	1.50	0.01	44.385	1.1
1978	1.42	-0.08	47.207	1.1
1979	1.77	0.35	59.097	1.3
1980	2.23	0.46	77.321	1.3
1981	2.27	0.03	87.781	1.1
1982	2.00	-0.26	89.091	1.0
1983	1.84	-0.16	89.727	1.0
1984	1.73	-0.11	90.618	1.0
1985	1.66	-0.07	91.240	1.0
1986	1.25	-0.41	79.283	0.9
1987	1.24	-0.01	79.298	1.0
1988	1.19	-0.05	79.889	1.0
1989	1.23	0.04	84.419	1.1
1990	1.35	0.11	91.375	1.1
1991	1.27	-0.08	91.742	1.0
1992	1.22	-0.05	92.206	1.0
1993	1.17	-0.05	93.299	1.0
1994	1.15	-0.02	93.688	1.0
1995	1.15	0.01	94.227	1.0
1996	1.22	0.06	98.637	1.0
1997 (7-mo)	1.24	0.02	100.000	1.0

	Standard Deviation	Average of Absol. Value of Yr/Yr Change	Standard Deviation	Average of Absol. Value of Yr/Yr Change
1970-97	0.32	0.11	26.80	1.06
1983-97	0.22	0.08	6.28	1.01
1985-97	0.13	0.08	6.74	1.01

DIRE PREDICTIONS THAT WERE PROVED WRONG

1. In 1972, The Club of Rome published in *The Limits of Growth* dire predictions that the world would run out of gold in 1981, mercury in 1985, tin by 1987, zinc by 1990, petroleum by 1992, and copper, lead, and natural gas by 1993. None of these predictions came true. Indeed the real prices of natural resources have been steadily dropping. For example, the price of crude petroleum in 1992 dollars, as measured by the composite of domestic and imported crude oil refiners acquisition costs, was \$10.69 per barrel in 1972, rose with the oil price shock in 1974 to \$23.56, and reached a high of \$53.47 in 1981 before more or less steadily declining to \$18.82 in 1996. (See reference A.)

2. On March 31, 1979, President Jimmy Carter predicted "There is a dwindling supply of energy sources. The prices are going to rise in the future no matter which party occupies the administration in Washington, no matter what we do." Subsequently, prices fell for 5 straight years from 1981 through 1986. (See reference B.)

3. Secretary of Energy Schlesinger was quoted by the *U.S. News and World Report* on July 10, 1978: "What we face in the middle 1980s is a notional worldwide shortage of about 5 million barrels of oil a day." Instead, there was a crude petroleum glut and price collapse. (See reference B.)

4. Kenneth Arrow, quoted in *Forbes* magazine on February 4, 1980, predicted that "We're heading into a world of considerably higher prices. There will be a major impact on housing by 1983, and I'd be surprised if gasoline is less than \$2 per gallon plus whatever inflation adds." Housing prices actually dropped in the late 1980s and during the 1990s. The actual price of a gallon gasoline was about \$1.16 in 1983 and has not reached \$2 plus inflation since. (See reference B.)

5. In 1979, the Annual Report to Congress (ARC) forecast for oil prices per barrel for 1990 ranged from \$39.47 to \$64.32 (in 1987 dollars). All were substantially above the actual oil price in 1990. 1980 projections by the Energy Information Administration (AEI) were also badly off the mark: their 1985 projection was 70.9 percent too high; their 1990 projection was 194 percent too high; and their 1995 projection was an astounding 385 percent too high. Its 1985 projections for 1990 and 1995 were a little better, 71.7 percent and 239 percent too high, respectively.

A.) Joseph Blast, Peter Hill, and Richard Rue, *Eco-Sanity*, 19xx.

B.) Malcom Shealy of decision Focus Inc., *A Review of Energy Forecasts: What Have We Learned?* February 16, 1989.

Version That was
"almost" agreed to last
night

DRAFT**DRAFT**DRAFT**DRAFT

The Impact of Retail Restructuring and Federal Legislation on Carbon Emissions in 2010

An ad hoc agency staff group from DOE, EPA, and CEA considered the carbon reductions that are likely to occur in 2010 if DOE's proposed restructuring bill becomes law. Per discussion at the principals level, we attempt to separate the emissions effect of the explicit carbon friendly provisions of the DOE proposal from the effects of retail restructuring itself, which would be accelerated by, but is not entirely dependent on, Federal restructuring legislation. This memo reflects a quick-turnaround effort. Analyses are continuing at both agencies.

a. The Emissions Impact of Explicit "Carbon Friendly" Provisions of the DOE Proposal

There is agreement between DOE and EPA staff that the explicit "carbon friendly" provisions of the bill (Renewable Portfolio Standard, Public Benefits Fund, and Information Disclosure, the latter of which supports marketing of "green" power from renewable resources to interested customers. The estimated impact of these provisions is a carbon reduction of 13 to 36 million metric tons (MMT) of carbon in 2010 -- see summary table for components.

b. The Emissions Impact of Retail Restructuring Itself

Both DOE and EPA staff agree that substantial retail restructuring is likely to occur with or without Federal legislation. Indeed, major states such as California and Pennsylvania have already implemented retail competition, and other states are in various stages of developing such plans. The effect of retail competition on carbon emissions outside of the explicit "carbon friendly" provisions noted above is subject to considerable dispute, in part because the evolution of service offerings under incentives in the future competitive market are not presently known.

On the emissions-increasing side, retail competition should lower electricity prices, which will increase demand, and increase incentives for economically efficient dispatch, which could result in more use of existing coal plants in cases where capacity is available. Restructuring could also increase pressures for early retirements of nuclear power plants.

On the emissions-reducing side, retail competition will provide a financial incentive for generating plant owners to improve their heat rate, reducing the amount of fuel burned to generate each kilowatt-hour of electricity. In addition, competing retailers will likely increase value of their product to buyers by creating packages of electricity and efficiency services that take advantage of cost-effective efficiency opportunities (such as those identified in the recent "five lab" study), or by selling "green power" derived from renewable sources to environmentally-conscious consumers. Finally, some of the increased demand for electricity will reduce end-use consumption of primary fuels, reducing emissions outside the electric sector.

Given the number of factors involved, the ad hoc agency staff group settled on a range of estimates from an emissions reduction of 48 MMT to an emissions increase of 33 MMT in 2010 for all of the components discussed in the previous two paragraphs and included under headings "b1" and "b2" of the summary table. If, as EPA staff believes, no increase in efficiency services can be expected from differentiated product competition among competitive suppliers under any plausible circumstances (i.e. both the high and low estimate of this component are zero) then the range of estimates for emissions impacts due to restructuring are an emissions reduction of 25 MMT to an emissions increase of 33 MMT, as presented under heading "b1" of the summary table. In both cases, these emissions changes are "over and above" the reductions presented

"almost" agreed
p #2

above in section a of the memo and the summary table.

c. Caveats

There is considerable two-sided uncertainty regarding many of these estimates. For example, green power may be more attractive, heat rate improvements may be lower or greater than projected, and efficiency oriented marketing of electricity services may be greater or less than the range presented above. Notwithstanding these uncertainties, the ranges presented above reflect the best estimates of reasonable ranges of emissions impacts based on available information.

In addition, the distinction of "carbon friendly" provisions of the DOE bill and restructuring itself is somewhat fuzzy, given that the DOE bill is expected to speed the transition to retail competition. An indeterminate portion of the emissions impacts identified in Section (b) of this note are probably attributable to the DOE bill.

Summary Impacts of Restructuring and the DOE Bill on Carbon Emissions in 2010

Factor	Change in Carbon Emissions in 2010 (MMT)
a. Explicit "Carbon Friendly" Provisions, <i>including</i> :	-36 to -13
Renewable Portfolio Standard	-12 to -6
Public Benefits Fund	-11 to -4
Information Disclosure (supports "green marketing" -- reflects 1/2 of total green power estimate)	-13 to -3
b1. Retail Restructuring, <i>including</i> :	-25 to +33
Electricity Demand Increase / Fuel Mix Change	+25 to +32
Nuclear Unit Retirement due to Retail Competition	+3 to 10
Green Pricing (1/2 of total "green power" estimate)	-13 to -3
Generation Efficiency (heat rate) improvements	-15 to -5
Demand Reduction for Direct Use of Primary Fuels	-2 to -1
b2. Efficiency Marketing by Energy Service Companies	-23 to 0
SUM OF COMPONENTS (a + b1 + b2)	-84 to +20

The Potential Benefit from Worldwide Trading

Lesser-Developed Countries (LDCs) and Economies in Transition (EITs) offer low-cost opportunities for reducing carbon emissions. Joint implementation and international trading mechanisms can help the world mitigate global warming in the most efficient manner.

Great Potential Benefits

There are three fundamental reasons why non-OECD countries offer the world such great opportunities for reducing carbon emissions:

Energy Efficiency. LDCs and particularly EITs are much less energy efficient than OECD countries. In many cases, these relative inefficiencies provide *negative cost* opportunities to reduce carbon emissions. For example:

- Chinese coal-fired boilers are only 2/3 as efficient as US boilers. Retro-fitting Chinese plants with US boilers saves more money than it costs.
- Retrofitting Khrushchev-era Russian apartments saves 30% of heat use and saves more money than it costs. Many other negative cost efficiency improvements have been identified for Russian industry, including the use of quality insulation around steam piping, improved energy control systems, and more efficient motors.

Overall, the possibilities from energy efficiency improvements provide large opportunities for carbon reduction. For example, a \$2 million study conducted by the World Bank and Chinese officials found that China could reduce its carbon emissions nearly 15% from its projected 2020 levels through zero and negative cost energy efficiency improvements.

- That is, we could reduce total emissions by roughly 333 MMT through these low or no cost improvements; this amounts to roughly the reduction required by the U.S. to reach 1990 levels in 2010. Approximately 2/3 to 3/4 of these improvements would come as a result of market oriented restructuring, while the remainder would come from specific, technical projects.

New Capacity. Due to their high growth rates, developing countries have an advantage over the OECD in their ability to meet their reduction targets by installing new, carbon-efficient plants rather than by retrofitting existing plants.

- Loosely speaking, OECD countries will have to balance the costs of building new, natural gas plants against simply continuing to operate existing coal plants -- large coal price adjustments will clearly be required to make building the new natural gas plant the preferable option. Developing countries, however, will balance the costs of installing new natural gas plants against the costs of installing new coal capacity. For these countries, little if any coal price adjustment would be required to make natural gas the economic choice.

Energy Subsidies. Recent World Bank estimates indicate that developing countries could reduce carbon emissions by 7 - 9% by eliminating energy subsidies.

For all of these reasons, the cost of carbon reductions is much lower in developing and transitional economies. For example, if the US, instead of reducing its own emissions to 1990 levels by 2010, transferred its reduction burden in entirety to China, China could accomplish these reductions at only 35% of the costs (this result comes from the mainstream SGM model).

Tapping the Potential: Current Success in JI Pilot Projects

Since its foundation in 1993, the US Initiative on Joint Implementation (USIJI) has accepted 25 project proposals which help US firms tap the potential outside the OECD for low-cost carbon reduction. Some of these projects have already begun to reduce carbon concentrations by implementing new, carbon-efficient power plants, improving energy efficiency, or through other methods such as planting new forests. For example:

- A project in the Czech Republic converted a district heating plant from coal to natural gas and built a cogeneration plant to provide both steam and electricity. This project is projected to reduce carbon emissions by 165,000 tons over 25 years.
- A project in Costa Rica has replaced fossil-fuel burning power sources with a 20 MW wind farm which is expected to reduce carbon emissions by 72,000 tons over 15 years.
- A project in Russia planted 506 hectares of trees and is expected to reduce carbon concentrations by 35,000 tons over 60 years.

Other projects, in various stages of implementation, include:

- A large forest management project in progress in Bolivia combines forest regeneration and protection with the promotion of sustainable forest-product enterprises to reduce atmospheric carbon by an estimated 14.5 million tons over 30 years.
- A project in Russia will improve heating efficiency in Zelenograd simply by installing new heat exchangers, pumps, and control equipment. This project can reduce carbon emissions by 440,000 tons over 30 years.

Joint Implementation, while very valuable in helping to efficiently reduce carbon emissions, can serve other useful purposes including: the opening of overseas markets, the wider dissemination of advanced technologies, and the creation of local health and environmental benefits.

Tapping the Potential: The Future

The success of JI pilot projects shows that they can work. Once countries face binding

emissions limits -- and are allowed to acquire offsets from other countries -- JI and more general mechanisms for international cooperation will become essential in meeting common goals at the least cost. Many analysts believe that international permit trading and JI can reduce costs by 50% or more.

If LDCs and EITs sign on to binding agreements, international permit trading will allow the world to focus its carbon reduction efforts in the most efficient places. A portion of the easy reductions possible in developing and transitional economies stem from possible market oriented reforms and the elimination of energy subsidies. Reductions through these means will be of great benefit to other countries in an international permit trading regime, but will be difficult to tap in a project-oriented joint implementation setting. Insofar as developing countries and others choose to remain outside an international agreement -- so that they could not take part in a permit trading program -- JI will be relied on to play an important role.

The World Bank is exploring the possibility of a carbon investment fund to act as a market intermediary for JI projects. The fund, on behalf of its investors, would undertake JI type projects and sell the resulting carbon offsets to make a profit. Such a fund would improve on the efficiency of today's bilateral JI pilot projects by reducing transaction and search costs, providing efficient administration, and pooling risk. The Bank is continuing to investigate this and other mechanisms to help in international carbon offset trading.

October 21, 1997

MEMORANDUM FOR DEPUTY SECRETARY SUMMERS

FROM: Jonathan Gruber
Deputy Assistant Secretary (Economic Policy)

SUBJECT: Do we always overestimate environmental control costs?

In "Polluted Data: Overestimating Environmental Costs," (*The American Prospect*, Nov/Dec 97), Eban Goodstein and Hart Hodges argue that most pollution control programs turn out to be far less costly than had been estimated beforehand. They claim that "reducing pollution emissions at the source ... is almost certain to be (substantially) cheaper than we think it will be." But why, one might ask, are the experts always wrong -- and always in the same direction? "The reason, of course, is technology forcing," answer the authors. "When industry is required to lower pollution output, it usually doesn't just slap a new filter on an existing process; it often invents new technology."

The authors give a list of environmental programs in which, they claim, technical innovation came to the rescue and dramatically reduced costs, compared to initial estimates. Some of these examples lend credence to the authors' thesis, but many do not.

Convincing Examples:

Cotton dust. Actual costs were below estimated costs in part because estimates were based on models that did not include the effects of technical change in the industry. As the standards were introduced, the textile industry was about to replace its older capital stock with new machines that, among other things, markedly reduced the amount of cotton dust in the air. The standard accelerated this change.

Strip mining. The authors quote compliance cost estimates in the range of \$6 to \$12 per ton of coal, as against actual costs of 50 cents to \$1 per ton. Early costs estimates referred to reclamation at mines in operation at the time. In response to the law, however, producers expanded operations at sites where reclamation costs were lower, often on flatter terrain. Thus, these early "static" estimates overstated costs.

Vinyl chloride. The authors say that control cost estimates fell from about \$100 million per year to \$20 million per year. John Morrall of OIRA reports that the earlier estimates, which were based on static cost models, did turn out to be too high. We should note, however, that the authors also claim that the 1 ppm standard was met with a price increase of only about 6 percent. The US vinyl chloride market today is about \$1 billion, so 6 percent implies \$60 million annually.

Prepared by Ray Squitieri

in direct control costs, undercutting their \$20 million estimate.

Problematic Examples

Asbestos. The paper says that one study by a consulting firm in the early 1970s estimated control costs that turned out to be too high by a factor of two. This refers only to the earliest estimates, done in support of OSHA's proposal in the early 1970s. Two later OSHA cost estimates, in the late 1980s and early 1990s, did not substantially overestimate control costs, according to John Morrall, now a branch chief at OIRA, who was responsible for reviewing all three sets of estimates.

Benzene. The paper cites a process that substituted other chemicals for benzene, "and virtually eliminated control costs." Benzene is one of the most widely used organic chemicals, with over \$2 billion in sales last year. The new process alluded to (using maleic anhydride) replaced benzene in only a small portion of its uses.

CFCs. The paper correctly quotes EPA's price estimates for reducing CFC production, which fell from \$3.55 per kg (1988) to \$2.45 per kg (1996); the latter price was for a more stringent standard. On the other hand, the well-publicized problem of CFC smuggling indicates that control costs at the margin, which is what counts, are much higher than these estimates. When the US ceased CFC production in January 1996, a CFC smuggling industry was already in place. CFC-12, the most common form, now has a street value of about \$50/kg. By one estimate, 10 thousand tons of CFCs are now smuggled into the US every year.

Coke ovens. The paper quotes a 1974 study that gave a range of \$200 million to more than \$1 billion, and says that a later study by the Council on Wage and Price Stability (COWPS) estimated the actual cost of the standard at \$160 million. The author of the COWPS estimate, John Morrall of OIRA, says that he did not make an independent estimate, but simply took the low end of the industry estimate that OSHA was using, on the grounds that industry had an incentive to overstate control costs. He also says that the authors' range (\$200 million to more than \$1 billion) appears to be the range in the industry study he used, with \$160 million rounded upward to \$200 million. Moreover, the OSHA standard was never met.

More General Critique

The authors are correct in their general claim that many cost estimates come from models that do not factor in technical innovation. But their argument is incomplete, and sometimes wrong.

First, analysts are often mistaken about the costs of environmental controls, but not just on the high side; this article has clearly selected its examples to illustrate its point, downplaying examples which cut the other way. For example:

- The National Ambient Air Quality Standards (NAAQS), set by the original Clean Air Act (CAA) of 1970, were estimated to be achievable in 7 years. Twenty-seven years later, we

Prepared by Ray Squitieri

still do not know how, when, or even if the original goals will ever be met. At the time EPA tightened the ozone NAAQs earlier this year, 75 areas did not even meet the standard then in place, which is looser than the original standard set a quarter century ago. These non-attainment areas contain 75 million people, and include most of the country's major cities: Los Angeles, Houston, Dallas, St. Louis, Chicago, Pittsburgh, Cleveland, Boston, New York, Philadelphia, Baltimore, Washington, and Atlanta.

- The Clean Air Act Amendments of 1990 established a program for "clean-fuel vehicles" in California, with a target of 150,000 vehicles to be purchased annually in model years 1996, 1997, and 1998, and 300,000 vehicles (about 25% of sales) in model years 1999 and after. The writers of this technology-forcing law seriously underestimated the cost of producing this vehicle. As of now, there appears to be no way to produce this car at a price consumers will accept, and EPA has, in effect, allowed the program to lapse.
- The authors make a false distinction between controlling pollution and the source, and treating soil and water after it has been contaminated. They concede that some programs, such as Superfund and the Clean Water Act, have been far more costly than anticipated. But they assert that this occurred because cleaning up existing contamination is not subject to the same forces of innovation as preventing pollution at the source. The authors offer no support for this claim.

Second, most ex-post cost estimates, including all those cited by the authors, include only direct compliance costs. Indirect costs, which are borne elsewhere in the economy, are harder to measure, but no less real. An often-cited 1990 study by Kopp and Hazilla of Resources for the Future estimates that indirect costs of environmental rules are roughly equal to direct compliance costs. In a 1993 study of the paper, oil refining, and steel industries, Gray and Shadbegian estimate that for every \$1 in compliance costs, total factor productivity is reduced by \$3 to \$4. In a series of papers this decade, Jorgenson and Wilcoxon calculated that environmental regulations have reduced the US capital stock by 4.3 percent, increased the cost of capital by 5.5 percent, and reduced real GDP by more than 3 percent annually, with indirect costs accounting for most of this burden.

Third, the authors do not support their claims about technology forcing. They quote Michael Porter, who has written that environmental regulations often yield "innovation offsets." But they try to prove their case with anecdotes. Anecdotes alone do not prove an assertion, because we have no guarantee that the speaker has not selected only those that support his position. Moreover, we have survey evidence that runs the other way. When the BEA conducted its surveys of environmental compliance costs, it asked about "product offsets," resulting from compliance with the regulation in question. In contrast to Porter's claims, only two percent of respondents identified any "product offsets."

Fifth, the same market forces that drive down compliance costs also drive down benefits. For example, several years ago OSHA estimated very large benefits for its new rules intended to control the spread of tuberculosis. But at the same time that OSHA's program was being put in

place, tuberculosis rates were falling, as the Centers for Disease Control (CDC) increased its focus on tuberculosis. This slowed the spread of the disease and reduced the benefits of OSHA's program. Similarly, OSHA's recent rules on blood-borne pathogens aimed to limit transmission of AIDS and, especially, hepatitis-B. The recent vaccine for hepatitis-B has considerably lowered the value of OSHA's rule.

More fundamentally, program costs can get wildly out of control when EPA takes a program with modest goals, and sweeps into it activities that were not intended to fall into its purview. Superfund is an example of this driftnet approach. Superfund began life as a program to clean up a few big sites on the order of Love Canal, but metamorphosed into "a behemoth, towering over American environmental policy, gobbling vast quantities of public and private cash and management time." [Francis Cairncross, environment editor of *The Economist*, in her book *Costing the Earth*]. On a smaller scale, EPA's rule on toxicity characteristics provided a way that a waste stream could be designated as hazardous. The agency estimated its cost in the low hundreds of millions of dollars per year. These estimates failed to anticipate that EPA would then insist on regulating many items posing low or negligible risk, including fluorescent light bulbs and telephone poles; as a result, the rule has been far more expensive than anticipated in these initial estimates.

BEHIND THE NUMBERS

BEN GOODSTEIN AND HART HODGES

Polluted Data: Overestimating Environmental Costs

In July, Carol Browner, chief of the Environmental Protection Agency, issued new regulations reducing permissible levels of smog and particulate (fine soot) pollution. The political battle leading up to the decision was fierce, even within the administration. One staff member on the Council of Economic Advisers maintained that the regulations would cost a whopping \$60 billion—a figure quickly seized upon by industry opposition. The EPA's own cost estimate was much more modest, between \$6 billion and \$8 billion. In making her case for the new regulations, however, Browner publicly disavowed even her own agency's cost estimates. She argued that industry would find a way to do it cheaper.

Whom to believe? Confronted with conflicting estimates, most lay people either throw up their hands or choose sides ideologically. But history provides a basis for evaluating these estimates. Not only do industry lobbyists wildly overestimate the costs of proposed environmental regulations. More surprisingly, academic and government economists consistently do too—and for an equally surprising reason. When forecasting the costs of new environmental regulations, economic analysts routinely ignore a primary economic lesson: Markets cut

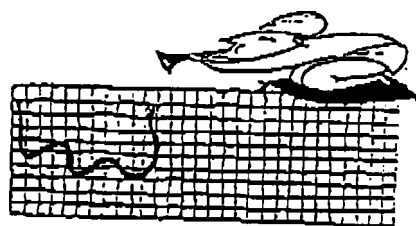
costs through innovation. And innovation can be promoted through regulation. This history is worth bearing in mind as we approach the most important environmental controversy to date—how to deal with the crisis of global warming.

THE ABCs OF OVERESTIMATION

In every case we have found where researchers have calculated actual regulatory costs and then compared them to *ex ante* estimates, the estimate exceeded the actual cost. We have uncovered a dozen such efforts, ranging from A (asbestos) to V (vinyl chloride). In all cases but one, the initial estimates were at least double the actual costs.

Asbestos. When the Occupational Safety and Health Administration (OSHA) instituted regulations covering exposure to asbestos in the early 1970s, they hired a consulting firm to estimate the cost of compliance. Two later studies found that the original prediction for the cost of compliance was more than double the actual cost, because of overly static assumptions.

Benzene. In the late 1970s, the chemical industry predicted that controlling benzene emissions would cost \$350,000 per plant. Shortly after these predic-



tions were made, however, the plants developed a process that substituted other chemicals for benzene and virtually eliminated control costs.

Chlorofluorocarbons (CFCs). In 1988, reducing CFC production by 50 percent within 10 years was estimated by the EPA to cost \$3.53 per kilogram. By 1993, the goal had become much more ambitious: complete elimination of CFC production, with the deadline moved up two years, to 1996. Nevertheless, the estimated cost of compliance fell more than 30 percent, to \$2.45 per kilogram. And where substitutes for certain CFCs had not been expected to be available for eight or nine years, industry was able to identify and adopt substitutes in as little as two years.

CFCs in automobile air conditioners. In 1993 car manufacturers estimated that the price of a new car would increase by \$630 to \$1,200 due to new regulations limiting the use of CFCs. In 1997 the actual cost was estimated to be \$40 to \$400 per car.

Coke ovens. The original OSHA estimate for the cost of complying with the 1976 coke

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THE AMERICAN PROSPECT

NOVEMBER-DECEMBER 1997

even standard was more than five times higher than estimates of actual costs. OSHA's contract suggested that complying with the standard would cost from \$200 million to more than \$1 billion. However, a Council on Wage-Price Stability study later estimated the actual cost of the standard to be \$160 million. The OSHA consultant estimated that three steel firms in their sample would spend \$93 million on capital equipment and \$34 million in annual operating costs to comply with the regulations. A later study by Arthur Andersen determined that the three firms actually spent between \$5 million and \$7 million in 1977 to comply with the standard, and only \$1 million to \$2 million on capital expenditures. Ultimately, firms were able to meet the standard without incurring all of the capital costs in the first year, and actual compliance costs were dramatically lower than originally predicted. In the late 1980s, coke production again came under regulatory scrutiny, this time by the EPA. In 1987, the agency estimated that the cost of controlling hazardous air pollution from coke ovens would be roughly \$4 billion. By 1991 that estimate fell to between \$250 million and \$400 million. Cotton dust. In 1976, OSHA proposed a maximum permissible exposure limit of 0.2 milligrams per cubic meter for cotton dust, and its consultant estimated that compliance costs would be approximately \$700 million per year. The standard promulgated in 1978 actually allowed for higher exposure levels in some sections of the textile industry, but the small changes in the standard do not fully explain the decrease in estimated compliance costs; in 1978 the estimate fell to \$205 million per year. Moreover, a new study conducted in 1982, after the Reagan administration called for a review of the standard, concluded that compliance costs were \$83 million per year. Hialons. In 1989 members of the United Nations Environmental Program's Hialons Technical Opinions Committee disagreed on whether direct balloon replacements could be found and whether a phase-out was possible. However, in 1993 the committee concluded that a phase-out of hialons, a substance found in fire extinguishers that destroys the ozone layer faster than chlorofluorocarbons, would be both technologically and economically feasible by 1994. Strip mining. Prior to the passage of the 1978 Surface Mining Control and Reclamation Act, estimates for compliance costs ranged from \$6 to \$12 per ton of coal. Actual costs for eastern coal operations have been in the range of 50 cents to 51 per ton. After the regulations were adopted, the market switched away from coal deposits with high reclamation costs. Ready substitutes included surface-minable coal in flatter areas with lower reclamation costs), and underground deposits. Vinyl chloride. OSHA's vinyl chloride standard, set in 1974, provides a final example of wildly excessive cost projections. The agency's consultant estimated that it would cost \$22 million per year to meet the permissible exposure limit of 2 to 5 parts per million (ppm) in the vinyl chloride monomer sector, and \$57 million per year to meet the 10 to 15 ppm exposure limit in the polyvinyl chloride sector. In addition, the consultant argued that the 1 ppm permissible exposure limit simply could not be attained. The president of Firestone's plastics division said that a standard of 1 ppm "puts the vinyl plastics industry on a collision course with economic disaster." In spite of these protests, OSHA did adopt the strict permissible exposure limit of 1 ppm. A study conducted several years later by researchers from the Wharton School of Business estimated that the total cost of compliance for both sectors had been about \$20 million per year. A 1976 congressional research paper also indicated that the actual cost of compliance was dramatically less than the original prediction. The early claims that the 1 ppm standard could not be met evaporated; instead, the regulatory action led to about a 6 percent rise in polyvinyl chloride prices. While costs have been consistently overestimated for emission reduction, they have been underestimated for environmental cleanup. For example, when the Clean Water Act was enacted in 1972, the EPA estimated that \$12.6 billion was needed to provide secondary sewage treatment systems. According to the American Engineering Council, actual spending for sewage treatment between 1972 and 1981 exceeded \$160 billion. Costs for the Superfund program have also mushroomed. When first launched, people expected the muddled cleanup to apply to a small handful of Love Canals. However, the pro-



gram has expanded dramatically, now covering far more than a thousand sites. In addition, cleanup has proved far more costly than predicted: The average cost overrun on cleanup expenditures at Superfund sites has been 44 percent.

The message from these cases is clear. On the one hand, treating already polluted water, cleaning dirty soil, and scrubbing oily rocks costs a lot of money, (much) more than expected. On the other, when it comes to reducing pollution emissions at the source, it is almost certain to be (substantially) cheaper than we think it will be. Updating *Poor Richard's Almanack*, an ounce of prevention is clearly worth a pound of cleanup.

Why were the estimated costs of reducing emissions at the source so inflated? The reason, of course, is "technology-forcing." When industry is required to lower pollution output, it usually doesn't just slap a new filter on an existing process; it often invents new technology. Frequently the new technology turns out to have higher productivity benefits, which help to offset the cost of the regulation. To see this, it is worth looking in detail at two high-profile cases where markets have responded to regulation by cutting costs.

COKE BREAK

Robert Hahn, a well-known environmental economist, is currently a resident scholar at the American Enterprise Institute and an adjunct research fellow at Harvard's Kennedy School of Government, and is a former

senior staff member of Bush's Council of Economic Advisers. In 1990 he and a co-author wrote a report for the U.S. Business Roundtable predicting the impact of the proposed Clean Air Act amendments on employment. These amendments had the dual purpose of cleaning up both acid rain and so-called "air toxics" from industrial plants.

The executive summary of Hahn's report leaves "no doubt that, across the Clean Air Act Amendments studied, there are a minimum of several hundred thousand jobs at various levels of severity of risk—even with the more moderate [Bush] Administration proposals." Hahn's absolute minimum prediction was 20,000 jobs directly lost, mostly from the closing of coke ovens in the steel industry. Hahn and his co-author viewed this as "truly a limiting, rock-bottom estimate" for several reasons. Important among them was that it considered only job losses arising from one portion of the bill—control of air toxics.

The amendments did pass later in 1990. The bill was in most respects more restrictive on air toxics than the one on which Hahn's study based its minimum job loss estimates. The legislation also authorized retraining funds of \$50 million per year for displaced workers, which gives a nice way to track job impacts.

In the almost seven years since passage of the legislation, fewer than 7,000 workers have received aid because their jobs were affected by the Clean Air Act amendments. And the vast majority of these have been eastern, high-sulfur-coal miners, who have been laid off due not to the air toxics

provision, but to the acid rain amendment. (The same legislation has in fact led to a boom in the western, low-sulfur-coal industry.) No workers from shut-down coke oven plants have received adjustment assistance. And between 1992 and 1995, production in the coke and (closely related) blast furnace industries actually increased, from \$1.74 billion to \$1.95 billion.

Hahn was consulting for industry here, so it is not surprising that his numbers were a bit on the high side. Corporate America, when faced with new regulations, has never been shy about claiming that the sky is falling. But Hahn is not a hired gun; he has very solid academic credentials. How could he have gotten it so wrong?

It turns out that Hahn's overestimation of regulatory impacts, while extreme, is not unusual. In fact, as we have seen in every case for which we have been able to track down data, academic and government economists have routinely overestimated the costs of reducing pollution emissions—by at least 30 percent, and generally by more than 100 percent.

THE ACID TEST

The EPA's acid rain program is another dramatic case in point. Since 1995, electrical utilities have been required to hold permits for each ton of sulfur dioxide they emit. These permits, in limited supply, are distributed to firms each year by the government. The innovative feature of the program is that the permits can then be bought and sold. Given this, permit prices roughly reflect per ton pollution control costs. This is true because a firm generally wouldn't buy an extra

permit if the cost of doing so exceeded the cost of reducing sulfur emissions by a ton.

When the tradable permits market was being designed in the early 1990s, credible industry estimates of permit prices (and thus control costs) were \$1,500 per ton; the EPA was predicting \$750. In 1997, permits were in fact selling for around \$100 a piece.

Part of the current low permit price is due to a higher than expected initial supply of permits, but real compliance costs have in fact been two to four times lower than the EPA expected, and four to eight times below industry estimates.

THE VIRTUE OF MARKETS

When environmental economists figure their cost estimates, one particular lapse is quite startling. Economists have tended to grossly underestimate a virtue of markets they readily preach elsewhere: flexibility. When pollution regulation makes a certain type of production more expensive, markets adjust—in fairly rapid order, uncovering substitute methods of production, and developing cheaper cleanup technologies. This fact, while not completely ignored by economists, is seldom factored into their cost estimates. Instead analysts tend to predict future costs statically, as if firms would continue to use existing practices and technologies.

So, for example, the much lower than expected costs for the acid rain program can be explained in retrospect by the increased flexibility that firms were given to achieve their mandated reductions in sulfur dioxide emissions. Rather than install

expensive scrubbers (or buy extra permits), many more firms than expected have met their sulfur dioxide targets by switching to low-sulfur coal, or developing new fuel-blending techniques. Railroad deregulation, along with economies of scale, led to an unexpected decline in low-sulfur-coal prices. And with the increased competition from coal, scrubber prices fell by half from 1990 to 1995.

All this is easy to see after the fact, but would have been very hard to predict. Hahn got his 20,000 lost jobs from air toxics regulation following this same practice—ignoring innovative market responses. While parenthetically noting that "technological improvements could reduce the direct economic impacts," the study explicitly ignores the possibility "because of the difficulties in predicting how technology will evolve." Because in the mid- to late 1980s, available control technologies for coke ovens seemed to be quite expensive, Hahn assumed that regulating air toxics would simply shut down much of the industry.

However, as we saw above, the EPA's own estimates of control costs for coke ovens were plummeting even as Hahn was writing his report. By 1991, they were down by a factor of ten or more from the 1987 forecasts. Hahn may not have been aware of the EPA's work; instead he cites an industry source to justify his claim that "there is widespread agreement that coke ovens will be required to close down, with an estimated loss of 15,000 jobs."

A secondary reason for the overestimates is that in implemen-

tation, legislation is never as draconian as it appears on paper. In practice, timetables get stretched out, compliance dates get extended, and waivers are granted. Eventually the regulations begin to bite, but industry is usually given a fair amount of time to adjust. Most cost estimates assume high degrees of near-term compliance.

Pettering into the future is hard work. It is, in fact, close to impossible for economists to predict the specifics of how technology will evolve. This is especially true since much of the information about potential innovations consists of closely held trade secrets, which industry has little incentive to reveal. But basing cost predictions on scenarios that assume no technical evolution is guaranteed to produce gross overestimates. Innovation is indeed something at which markets are very good. When given a narrowly defined task—to produce commodity *x* emitting less of pollutant *y*—short-term substitutions and long-term shifts in technology guarantee large cost reductions over current practice.

INFLATING COSTS, IGNORING BENEFITS

In the late 1980s, when the international phase-out of ozone-destroying CFCs got underway, a company called Nortel began looking for substitutes. The company, which had used the chemicals as a cleaning agent, invested \$1 million to purchase and employ new hardware. Once the redesigned system was in place, however, Nortel found that it actually saved \$4 million in chemical waste-disposal costs and CFC purchases.

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EPI Review of DRI study of the Economic and Employment Impact of Climate Change Policies

On September 17, EPI released the results of its review of a study conducted by DRI on the economic and employment effects of climate change policy on the US economy. The results present a doom and gloom scenario largely because the model used by DRI is not appropriate for long term forecasting and because many of the assumptions tend to exacerbate the negative impacts.

WEFA has announced a study estimating the impacts of climate change policies. The only copy of their report that we have for review is methodologically bankrupt. However, the estimated permit price is similar to the EPI-DRI price and many of the results are of a similar magnitude. This attachment will focus on the EPI-DRI report because there is a detailed explanation of their methodology.

The model used in the DRI/McGraw-Hill study is a short-run forecasting model with an fixed coefficient, input-output-based structure. The shortcomings of this model for forecasting the impact of potential climate change policies are:

- Long-term climate policies are likely to alter significantly the structure of the economy and encourage fuel switching and capital-energy substitution. The model used by EPI-DRI fails to capture any of these changes because it relies on fixed, historical estimates and cannot adequately predict future production, investment, and labor supply/consumption decisions.
- This type of model tends to distort the adjustment behavior of the economy. As a result, errors due to the rigidity of the model are magnified as the time horizon of the forecast is lengthened. In other words, the forecasts for 2020 are less reliable than those for 2010, and the model is really only built to be able to produce reliable forecasts for two or three years in the future, in the present case the year 2000.
 - "[The DRI model] is highly inappropriate [for long-term predictions] and has some important limitations that are well-known to the community of economic forecasters. For example, the DRI long-term predictions are extremely sensitive to assumptions about energy prices." Jorgenson and Nordhaus from a memo to the IAT, April 24, 1997.
 - The DRI model used fixed proportions of inputs to outputs which fails to capture any energy conservation of carbon emissions reductions. Therefore, "it is clearly unrealistic for periods of a decade or more." Jorgenson and Nordhaus.

As noted above, this type of model is very sensitive to changes in the assumptions such as energy prices. In many cases, the EPI-DRI modelers choose assumptions that would exacerbate any negative economic and employment effects resulting from climate change policies. For example, the EPI-DRI review:

- Assumes that the permit prices will be between \$180 - \$190 per mmtC (1995 dollars) in 2010. This permit price is approximately twice as high as found by the Interagency Analytic Team on the Economic Effects of Global Climate Change Policies (IAT) which estimated permit prices between \$80 - \$100 for the same scenario. As a result, energy price increases are much greater in the EPI-DRI review. These higher prices are a result of two modeling decisions:
 - The EPI-DRI model assumes slightly lower baseline improvements in energy efficiency (1% versus 1.25%). This also has an effect on baseline carbon emissions growth.
 - The EPI-DRI model assumes smaller price and substitution elasticities than used by the IAT; again, this is a result of the limitations of the model which does not handle substitution and fuel switching well.
- Overstates the amount of carbon emission in 2010 and 2020. Baseline carbon emissions estimates are greater for 2010 and 2020 in the EPI-DRI scenario than in either the Energy Department's AEO97 baseline or the IAT report.
 - For example, in 2010 the EPI-DRI report baseline case predicts 1,746 million metric tons (mmt). The Energy Department predicts 1,722 mmt, and DRI in the IAT report predicts 1,693 mmt in the reference case.
 - In 2020, EPI-DRI predicts 1,894 mmt while DRI predicts only 1,805 in the IAT.
- Ignores international emissions trading and the role of JI or worldwide trading, which other models predict can lower permit prices by 50% or more.
- Exaggerates impact of climate change policies on international trade and the trade deficit, multiplying the unemployment figures.
 - The EPI-DRI model predicts substantial increases in the trade deficit from our climate change policy. This largely reflects poor modelling of the trade sector in the DRI model, which is not built to handle international trade. In fact, other models (such as the SGM model) which more appropriately reflect international trading suggest only minimal impacts on the trade deficit.
 - Two-thirds of all carbon emissions are from "non-tradable" sectors: residential and transportation.
 - On average, energy costs account for only about 2% of input costs for the industrial sector. In other words, 98% of production costs are non-energy related.
 - A recent CEA analysis states that the bottom line is that the evidence is

against the view that the exclusion of LDCs would have a substantial adverse effect on the overall US trade position.

- These increases in the trade deficit contribute substantially to the high unemployment numbers, since the DRI model simply multiplies the deficit to get trade-related unemployment.
- In 1992, EPI conducted a similar review of potential economic and employment estimates of the proposed NAFTA treaty. EPI stated that the available models were flawed and job losses would result from a NAFTA.
 - EPI highlighted the results of a 1991 Economic Strategies Institute study found that, as a result of increased Mexican imports to the US, there would be a net job loss of 900,000 by 1999.
 - EPI continues to assert that NAFTA has cost the US jobs. In two recent issue briefs, EPI states that NAFTA has resulted in a net loss of 394,835 jobs in the US in its first three years.
 - In fact, after taking in account slowing US economic performance, Mexico's balance-of-payments crisis and 1995 recession, and US implementation of MFN tariff cuts mandated by the Uruguay Round, several studies, including ones from DRI and the Federal Reserve Bank of Dallas, generally conclude that NAFTA in isolation has had a modest positive effect on the US economy. The Administration has recently announced an increase of 311,000 jobs supported by exports to Canada (189,000) and Mexico (122,000) since 1993.

Comments on Schaefer Q&As

1. Insert period after "meetings".
3. Change "accumulate" to "account for".
7. Rewrite second sentence to read: "However, the IAT process was unsuccessful in providing a definitive answer on the economic effects to support the Administration's overall decision-making process." The range of results, as specified in the draft, are less of a concern (especially since the range is in part a function of the different trading, AEEI, and revenue recycling assumptions). Of more importance are the flaws raised by the peer reviewers.
8. Rewrite second sentence to read: "As the work done by the IAT proceeded, the concerns raised by the peer reviewers called into question the benefits of continued IAT work on these economic models, given the many other competing claims on agency resources."
8. Delete from the last sentence: "given the many other competing claims on agency resources."
9. Change "models" after "situations" to "modeled".
9. The range of the IAT results are incorrect. If the context is all permit prices for all runs reported, the highest permit price is \$207 in the year 2020 with Markal Macro under the 1990 - 10% case. If the context is the highest 1990 permit price, then the highest permit price is \$200 with DRI under the 1990 -10% case. The \$145 value only applies to the 1990 in 2010 case.
9. The third sentence should be rewritten to read: "The IAT found that the estimates of the costs to the U.S. economy of a carbon emissions reduction policy depended on several factors, including targets and timetables, the use of market based incentives, technology assumptions, implementation of international emissions permit trading, and revenue recycling."
9. Delete from the last sentence: "and indeed could produce net benefits in the long run."
10. Delete "wide" in first sentence.
11. Rewrite first sentence to read: "The IAT's analysis focused on a standard emissions target widely used in the academic literature for comparing model results."
12. Replace "or" with "and" in first sentence.
14. Delete from the last sentence: "to changed price levels."
15. Rewrite answer based on revised answer 9 (permit price range, inserting factors affecting costs).
18. Make "it" possessive in last sentence.

18. Switch “fully” and “implement” in last sentence.

25. Do we want to state that a “full assessment of the costs and benefits of action would be taken prior to committing the United States to any new legal obligation” at the end of the first paragraph?

28. Should our discussion of international emissions trading be couched in more uncertainty, given that under some targets and timetables, we are actually a net seller of permits? Further, any JI might affect the conclusion drawn at the end of this answer.

Question 7 *Substitute for entire answer*

Economic models cannot give definitive answers on the economic impacts of climate policy, only ranges of possible outcomes. The IAT effort provided much useful information, and reinforced how all economic modeling results - both inside and outside the government - depend critically on underlying assumptions about how the economy works and how policies are implemented.

The Administration continues to believe that climate policies can be crafted which will preserve the environment, meet our international responsibilities, meet our responsibilities to our children and grow the economy at the same time. As part of the ongoing Administration decision process, we are drawing on a number of different economic, engineering and other analyses to gauge the likely effects of policies to reduce greenhouse gas emissions.

Question 8

Substitute for second sentence:

The dependence of economic outcomes on modeling assumptions called into question the benefits of continued IAT work on economic models, given the many other competing claims on agency resources.

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From: The Honorable Dan Schaefer

Date: October 8, 1997

Number of Pages (including cover sheet): 10

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U.S. House of Representatives
Committee on Commerce
 Room 2125, Rayburn House Office Building
 Washington, DC 20515-6115

October 8, 1997

The Honorable Janet Yellen
 Chair
 Council of Economic Advisors
 Old Executive Office Building
 Washington, D.C. 20502

The Honorable Timothy E. Wirth
 Under Secretary for Global Affairs
 U.S. Department of State
 2201 C Street, N.W.
 Washington, D.C. 20520

Dear Ms. Yellen and Under Secretary Wirth:

Last week I received your initial responses to a series of questions I sent to the Department on August 22, 1997. On behalf of the Energy and Power Subcommittee, I have attached the questions, and once again, commend them to your attention. Not only is the joint submission I have received from your offices late and incomplete, but most of the responses are wholly inadequate.

In the past weeks, you were apprised by my staff as to the time-sensitive nature of our correspondence. An extension was requested by your staff, which I granted on the promise that the extension would allow for a more complete and responsive submission. I hardly need to emphasize the urgency with which the Congress views preparation for the final negotiating session on the future climate change treaty. As the last negotiating meeting grows nearer, we are justifiably anxious to have whatever benefit can be derived from the Administration's thinking on this issue. Any agreement that the Administration signs could bind the U.S. well into the next century and have a profound impact on U.S. industry, jobs, and lifestyle. Thus, I believe you will understand my disappointment at the responses that were received yesterday.

To highlight all of the specific examples from your letter that I find incomplete, would be counterproductive. I shall only point out two instances where the Administration appears to obfuscate and obscure rather than use the opportunity to clarify its position on climate change which was my intention and the goal of the Subcommittee with respect to these follow-up questions.

The Honorable Janet Yellen
The Honorable Timothy Wirth
October 8, 1997
Page 2

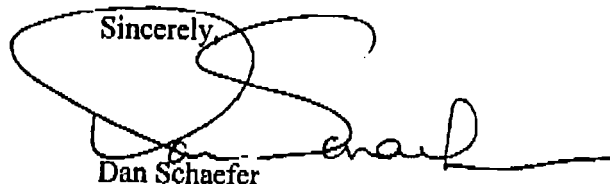
For example, in response to Question 12, addressing whether the Administration still opposed the use of taxes to address climate change. You can understand my frustration, and that of the Subcommittee Members, upon reading a response that essentially said the Administration was still developing its policy. This is disturbing not only because it may indicate a change in Administration position on this issue, but also because we now don't know what the Administration position is on this critical issue less than eight weeks away from the start of the final negotiating meeting.

Similarly, when asked the cost of the Interagency Analytical Team the response was "no effort was made to keep track of costs..." and the Administration "did have some contract costs for modeling." The question asked "what were the costs?" not, "did the Administration keep track of the costs?"

I am hopeful that you will attend to this matter as a priority and that more complete responses will be forthcoming at your earliest convenience. To that end, I ask that your staff meet as soon as possible with Commerce Committee majority and minority staff to specify the questions that need more complete responses. I would like all of your amended responses prior to the start of the next negotiating session in Bonn, Germany which is scheduled for October 20, 1997.

Thank you for your prompt attention to this matter.

Sincerely,



Dan Schaefer
Chairman
Subcommittee on Energy and Power

Attachment

cc: The Honorable Tom Bliley, Chairman
The Honorable John Dingell, Ranking Member
The Honorable Ralph Hall, Ranking Member
Subcommittee on Energy and Power

SUBCOMMITTEE ON ENERGY AND POWER
HEARING ON GLOBAL CLIMATE CHANGE
FOLLOW-UP QUESTIONS

Interagency Analytical Team Report

1. Please identify each member of the Interagency Analytical Team (IAT) from the date of its inception to the present time, any other participants inside or outside the Administration, and specify their responsibilities.
2. When was the IAT formed and what were the IAT's instructions? Please provide any documentation regarding the formation of the IAT and its mission, responsibilities, membership or assignments.
3. Please indicate the total costs of the IAT's efforts and the share paid annually by each Department or Agency that was involved and please identify the source of the funds within each Department or Agency.
4. Is the IAT still in existence? If so, what are its current responsibilities?
5. Please provide a copy of all drafts of the IAT report in addition to the May 16 and 30, 1997 drafts, both earlier and later.
6. Please explain how the peer reviewers were selected? What instructions were those peer reviewers given? Please provide copies of any correspondence or instructions that were sent to the peer reviewers.
7. If the IAT effort is in fact a "failed" project as indicated in Administration testimony at the Subcommittee hearing how will the Administration determine the appropriate level of future international climate change commitments for Kyoto and later?
8. As late as last May when Dr. Ehrlich and others in the Administration held briefings on the then draft analysis and assessment there was no hint that the Administration considered this effort a failure and the models to be unreliable. What occurred since May that caused the Administration to apparently reach a different conclusion from that of Dr. Ehrlich?
9. The IAT draft analysis referred to three scenarios which resulted in costs of future climate commitments of approximately \$200, \$100 or \$50 per ton carbon tax equivalent. Has the Administration concluded that a \$200 per ton carbon tax equivalent cost will not harm the U.S. economy, jobs, and global competitiveness? Has the Administration concluded that a \$100 per ton carbon tax equivalent cost will not harm the U.S. economy, jobs, and global competitiveness? Has the Administration concluded that a \$50 per ton carbon tax equivalent cost will not harm the U.S. economy, jobs, and global competitiveness. Please provide the basis for any of the above conclusions. If the Administration does not support any of the above costs, what analysis or other information does the Administration intend to rely on to support a different amount?

10. Is the paper prepared by the IAT both an analysis and assessment? How does it relate to the "analysis and assessment" referred to in Paragraph 4 of the Berlin Mandate? Has the Ad Hoc Group on the Berlin Mandate provided an analysis and assessment as required by the Berlin Mandate?
11. The IAT draft states that the central policy modeled for the analysis "is aimed at reducing carbon and other greenhouse gas emissions by stabilizing them at 1990 levels" and that policy would be "announced in 2000 and its restrictions are phased in over a ten year period, so that the policy would take full effect in 2010." Reports in the media after the Denver Summit that President Clinton attended also referenced this date of 2010. In light of EIA's projection of emissions 22% above 1990 levels by 2010, is the Administration considering a target and timetable that calls for stabilization at 1990 levels by 2010?
12. The Administration frequently cites the 2000 economists who say they support controlling greenhouse gases. Their statement supports as the mechanism either carbon taxes or emission permits. In the past, the Administration has said it opposes the use of taxes. Is that still the Administration's position?
13. The IAT draft explains that these emission reductions to achieve stabilization would be through "issuing tradable permits at the earliest point of energy production or when imported into the U.S." and that the permits "are initially auctioned in a way that is revenue neutral: i.e., all revenues generated would be recycled through the economy." Would these revenues be deposited in the treasury as miscellaneous receipts under the Economy Acts? Would they then have to be recycled through changes in the tax laws or by appropriation? How would they be recycled?
14. Does the Administration believe that permit auctions are the equivalent of a new tax? If not, please explain.
15. The IAT draft states that "among fuels, demand for coal bears the brunt of greenhouse gas stabilization." What is the impact on the U.S. economy as a whole and on the relevant coal regions of this policy towards coal? What will be the job impact? Is the Administration adopting an anti-coal policy? How is this policy consistent with President's Clinton 1995 reply to Mr. Dingell that the U.S. will not agree to any protocol that harms our economy and jobs or our competitiveness?

Kyoto Agreement

16. How long after December 1997 does the Administration think it will take to obtain Senate advice and consent of any Kyoto agreement, to ratify that agreement, and to enact implementing legislation?
17. Which Agency or Department would be responsible for implementing the provisions of any agreement reached in Kyoto, including provision relating to joint implementation, emissions trading, and advancing Article 4.1?

18. What consideration has been given or plans made regarding passage of legislation necessary to implement any agreement reached in Kyoto?

U.S. Draft Protocol

19. Article 17.4 of the Framework Convention on Climate Change (FCCC) specifies that only "Parties to the Convention may be Parties to a protocol." However, there is no assurance that all or even a majority of the 167 Parties to the FCCC will deposit instruments of ratification, acceptance, approval or accession to any protocol adopted by the Parties by consensus or otherwise in Kyoto. What assurances does the U.S. now have that most, if not all, developing country Parties to the FCCC will become Parties to a Kyoto protocol? Why is it in the U.S. interest to agree, without such assurances, to a protocol that proposes to set legally binding post-2000 targets and timetables for Annex I Parties only and also imposes on the U.S. new and legally binding commitments to advance implementation of Article 4.1. of the FCCC, such as those prescribed in paragraph 1, 2, 3, and 4 of Article 5 of the U.S. draft protocol?
20. In a July 18, 1994 letter to the then House Committee on Energy and Commerce, [the State Department] said:
- We agree that there are substantial commitments beyond 2000 for all parties to the Framework Convention under Article 4. Article 4.1 (applicable to both developed and developing countries) contains commitments that are not limited by any specific timetable.
- a) Is there any evidence to date that the U.S. is not abiding by these Article 4.1 commitments? If there is none, why should the U.S. voluntarily agree to reaffirm, as required by Article 5.1 of the June draft, to what the U.S. already agreed to when it ratified the FCCC in 1992?
- b) Is the U.S. asserting that other Annex I Parties are not abiding by such commitments? If so, please identify those Parties.
21. Paragraph 2 of Article 5 of the U.S. draft Protocol mandates each Party to "strengthen its legal and institutional framework to advance implementation" of Article 4.1 commitments. What "framework" does the Administration have in mind? Does this suggest a new Federal or international agency or program? Would this be done through new legislation? If not, how would it be achieved in the U.S.?
22. Article 5.3 requires that each Party take "measures to facilitate investment in climate-friendly technologies." What "measures" does the Administration contemplate? How would they be implemented in the U.S.? What are their regulatory and budgetary implementations?
23. Article 16 of the draft provides that the Parties "shall adopt, by [2005], binding provisions so that all Parties have quantitative greenhouse gas emissions obligations and so that there

is a mechanism for automatic application of progressive greenhouse gas emissions obligations to Parties, based upon agreed criteria."

- a) Does this mean that there could be a second protocol or another legal instrument by [2005] which is only 7 years after the December meeting in Kyoto?
 - b) Do the words "all Parties" in this Article mean that only the "Parties" to the U.S. draft protocol would be required to "adopt" by 2005 such an instrument? Unless developing country Parties to the FCCC, such as China, India and Brazil, become Parties to the Kyoto instrument (as proposed by the U.S.) prior to [2005], how does this Article address the issue of greenhouse gas emission growth by all non-Annex I Parties?
 - c) Could such a new instrument adopted by [2005] impose new and additional obligations on the U.S. beyond those proposed to be adopted in Kyoto? Why is that possibility a good result for the U.S. economy, trade, and competitiveness?
 - d) What "mechanism for automatic application of progressive greenhouse gas emissions obligations" does the Administration contemplate by this proposal? What are its implications for the U.S., including its sovereignty?
24. Article 16.1 of the Convention provides that "annexes shall be restricted to lists, forms, and any other material of a descriptive nature that is of a scientific, technical, procedural or administrative character." The U.S. draft protocol states, that it may not be "appropriate" to adopt the Article 16.1 Convention example. Please explain why. Does the U.S. support annexes that would be substantive and mandatory?
25. Article 9 of the U.S. draft provides that Parties "shall cooperate" in establishing a "long-term goal" regarding concentrations of gases. Article 10 calls for meetings at "regular intervals" to, among other things, "periodically review the adequacy" of the Protocol and Article 8 calls for periodic review of the Protocol and guidelines "in light of evolving scientific knowledge related to climate change." Article 2 already suggests a minimum of two budget periods. Article 16 tells the Parties to adopt "binding provisions" by [2005] for progressive "obligations." Does the State Department contemplate over the next several decades a continuing process of meetings of both the Protocol and Convention Parties annually and a series of IPCC assessments, special reports, and technical papers, leading to a series of protocols or other legal instruments that are likely to have significant economic impacts on the Parties and their people? Why is there a need for such frequent meetings and reviews?
26. The Global Climate Coalition sent a letter to the Department of State on February 14, 1997 raising a number of questions about the January 17, 1997 version of the U.S. draft protocol, particularly in regards to trading. The Administration has not yet responded to those questions. Please respond to them as part of your reply to this inquiry.

EU Bubble

27. The EU proposal made recently in Denver was developed last March as an EU "negotiating position for the ongoing negotiations on the Berlin Mandate" and it includes burden-sharing of a 10% reduction among EU members of the "overall emission reduction objective by the Community as a whole". This appears to be a form of differentiation, a concept the U.S. is not supporting. The existing FCCC bubble applicable to the EU presumably only covers policies and measures and, when adopted, it only covered the 12 Parties that were members of the EU in 1992. Does the U.S. understand that the EU is seeking, by its submissions and discussion with the U.S. delegation, to extend a form of the FCCC bubble to a protocol and another legal instrument that may be adopted in Kyoto, to expand the bubble to cover any target and timetable or financial obligations and not just policies and measures, and to expand the bubble to include all present and future members of the EU, such as countries from Central and Eastern Europe? Why is such an expanded bubble in the economic and competitive interests of the U.S.?
28. What is the potential impact of such an expanded EU bubble on the U.S. proposal for international emissions trading? Would it ensure that the EU would get the benefit of any emissions deficit derived from such Central and Eastern European Members and deprive the U.S., Japan, Australia and Canada of that deficit? Would the U.S. then have to rely primarily on Russia's emissions deficit in order to derive any of the benefits of trading?
29. Article 22.3 of the FCCC requires that regional economic integration organizations must declare the "extent of their competence" with regard to obligations under the FCCC. Does the U.S. believe that the EU has the competence to carry out legally binding targets and timetables and to enforce any differentiated targets for its members if they fail to achieve them?
30. The State Department's September 9, 1996 reply to the Committee stated that the U.S. did not agree to an "EU Bubble in Berlin" and that the U.S. delegation "successfully opposed including language in the Berlin Mandate which might have suggested that any country or group of countries could "bubble" in the post-2000 period." The reply then said:

Clearly, the question of "bubbling" with respect to post-2000 commitments is complex, and one that will be closely scrutinized and carefully considered as negotiations progress. The Administration has consistently and continuously consulted with Congress, as well as with U.S. industry and U.S. NGOs, on all aspects of the negotiations concerning post-2000 commitments and will continue to do so.

The Administration has not yet held meaningful discussions with this Committee on the issue of the EU bubbling to "meet and target and timetables," its implications for the U.S., its merits, or its complexities. Given the fact that negotiations are just approaching a conclusion in Bonn and Kyoto, when do you plan to consult us on this aspect of the negotiations?

31. Since 1992, the composition of the only "regional economic integration organization," namely the EU, has grown from 12 to 15 members and several other countries want to expand it further. Under what circumstances would the U.S. agree to an EU bubble that is or could be expanded?

EU Amendment to Convention

32. The EU has proposed an amendment to the Convention to provide for a vote to adopt all future protocols by three-fourths if all efforts at consensus are exhausted. The proposed amendment would appear to have a retroactive effect for Kyoto.
- a) Under this proposal, is it possible that three-fourths of the FCCC Parties could vote to "adopt" any Protocol that imposed new obligations for Annex I and/or non-Annex I Parties and then decide not to deposit an instrument of ratification, etc.?
 - b) Does the U.S. support such an amendment to the Convention?
 - c) Has the U.S. position changed from its June 19, 1996 response to this Committee in regards to any of these matters? Would the Administration agree to a resolution of one of these matters, namely voting on a protocol, without a resolution of the financial and budget matters for both the Convention and all future protocols?

Emissions Trading

33. Does the Administration intend that any international emission trading program would apply in the same way and to the same extent to public and private entities internationally and in the U.S.? For example, would it apply to local governments and to defense or other agencies of each Party and to the emissions of such entities? What will be the impact on the U.S. Defense Department of an international, or, for the matter, a domestic, emissions trading program?
34. Greenhouse gases not covered by the Montreal Protocol are not pollutants within the meaning of the Clean Air Act and are not subject to the command and control provisions of the Act or other environmental laws. It is our understanding that although the U.S. has cited (in a September 9th reply to this Committee) authority to implement the Climate Change Action Plan with voluntary measures, the U.S. draft protocol, because it may call for mandatory measures, could not be given full effect in the U.S. without the enactment of new legislation by Congress. Do you share that understanding? Is the Administration considering a domestic emission trading legislative program patterned on the 1990 Clean Air Act?

General

35. I understand that the Administration has recently established the White House Climate Change Task Force, a Deputies Group and an Assistant Secretaries group. Please explain the role and purpose of each in regards to the development of the Administration's position and policies for the international negotiations for a protocol or another legal instrument in 1997 and for the development of implementing legislation in the U.S. Please identify the members of each group. Please provide any documents regarding the formation of these groups, their membership, mission, tasks, and/or assignments.
36. Please provide a table of all contracts, cooperative agreements, grants, and interagency agreements and any extensions thereof (hereinafter referred to as "agreements") entered into with any individual, agency, or public or private entity (foreign or domestic) by or through any federal Department or Agency, including the Departments of State, Commerce and Energy, and the Environmental Protection Agency, for the period beginning July 1, 1994 to the present that relates to, or includes, (directly or indirectly) climate change matters or issues of any kind. These should include matters relating to (a) domestic or international emission trading, including economic and other analysis of such trading, the administration and verification of such trading in the U.S. and elsewhere, (b) public outreach, general and specific public education, grass roots, community outreach, workshops, (c) transportation efficiency, alternative fuels, transportation generally, utilities, impact on pollutants like ozone and particulate matter, and (d) any legal analysis of these matters and of the Convention or of any statutes concerning climate change or trading. Each table should identify the date of the agreement, the agreement recipient, the amount of Federal funds, the term, including extensions, a brief description, the product and whether it is publicly available, and the status. Please include with each table the applicable "Statement of Work", including any revision thereof, for each such agreement.

FINAL

PRESIDENT WILLIAM J. CLINTON
REMARKS ON CLIMATE CHANGE POLICY
THE NATIONAL GEOGRAPHIC SOCIETY

October 22, 1997

Six years ago tomorrow, shortly after I announced my intention to run for President, I returned to my alma mater, Georgetown, and challenged America to envision a bold course for our country in the 21st Century -- to make the American Dream come alive for every person responsible enough to work for it, to keep our country the world's strongest force for peace and freedom and prosperity, to bring our people together across all the lines that divide us, into one America.

Together, we have made real progress. America stands at the threshold of that new century stronger than we have been in many years. Our economy is thriving, our social fabric is mending, and we have helped lead the world to an era of growing peace and cooperation.

This happened in no small measure because we have changed the role of government -- it is smaller, more focused, more oriented toward giving people the tools and conditions to solve their own problems and working in partnerships with our citizens.

More important, it happened because we made tough choices, but not false ones -- on the economy, to balance the budget and invest in our people and our future; on crime, to be tough and smart about prevention; on welfare, to require work and support children; on families, to help parents find more and better jobs and have necessary time and resources for their children; on the environment, to clean our air, water, land, and improve our food supply and grow the economy.

This common-sense approach, rooted in our most basic values, and our enduring optimism about the capacity of free people to meet the challenges of every age, must be brought to bear on the work that remains to pave the way for our people and the world to a new century and a new millennium.

Today, we have a clear responsibility and a golden opportunity to conquer one of the most important challenges of the 21st Century -- the challenge of global climate change -- with an environmentally sound and economically strong strategy to achieve meaningful reductions in greenhouse gas emissions here in the United States and throughout the industrialized and developing world.

It is a strategy that will create a wealth of new opportunities for entrepreneurs at home, uphold our leadership abroad, and harness the power of free markets to free our planet from an environmental risk.

This strategy is consistent with our commitment to reject false choices. America can stand up for our national interest -- and stand up for the common interest of the international community. Most important, America can build on our prosperity today -- and ensure a healthy planet for our children tomorrow.

In so many ways, the problem of climate change reflects the new realities of the new century.

Many previous threats could be met within our own borders; global warming requires an international solution. Many previous threats came from single enemies; global warming derives from millions of sources. Many previous threats posed clear and present dangers; global warming is far more subtle, warning us not with roaring tanks or burning rivers, but with invisible gases, slow changes in our surroundings, and increasingly severe climatic disruptions that, thank God, have not yet hit home for most Americans.

But make no mistake: The problem is real and if we do not change course now, the consequences sooner or later will be destructive for America and the world.

The vast majority of the world's climate scientists have concluded that if the countries of the world do not work together to cut the emission of greenhouse gases, temperatures will rise and will disrupt the global climate. In fact, most scientists say this process has already begun.

Disruptive weather events are increasing, disease-bearing insects are moving to areas that used to be too cold for them, average temperatures are rising, glacial formations are receding. Scientists don't yet know what the precise consequences will be.

But we know enough to know that the industrial age has increased greenhouse gases in the atmosphere by 30%, where they take a century or more to dissipate, and that this process must be slowed, then stopped, then reduced if we want to continue economic progress and preserve the quality of life in the United States and throughout our planet.

We know what we must do. Greenhouse gas emissions are caused mostly by the inefficient burning of coal and oil for energy. Roughly a third of these emissions come from industry, a third from transportation, a third from commercial and residential buildings.

In each case, the conversion of fuel to energy use is extremely inefficient and could be made much cleaner with existing technologies or those already on the horizon, in ways that will not weaken the economy but in fact will add to our strength in new business and job opportunities, if we do this properly. We will not jeopardize our prosperity. We will increase it.

With that principle in mind, I am announcing the instructions I am giving our negotiators as they pursue a realistic and effective international climate change treaty. And I am announcing a far-reaching proposal that provides flexible, market-based, and cost-effective ways to achieve meaningful emissions reductions here in America.

We cannot wait until the treaty is negotiated and ratified to act. We must begin now to take out our insurance policy on the future.

In the international climate negotiations, the United States will pursue a comprehensive framework that includes three elements, which, taken together, will enable us to build a strong and robust global agreement.

First, the United States proposes that at Kyoto we commit to the binding and realistic target of returning emissions to 1990 levels between 2008 and 2012. And we should not stop there. We should commit to reduce emissions below 1990 levels in the five-year period thereafter.

The industrialized nations tried to reduce emissions to 1990 levels once before with a voluntary approach, but regrettably most of us fell short. We must find new resolve to achieve these reductions, and to do that we simply must commit to binding limits.

Second, we will embrace flexible mechanisms for meeting these limits. We propose an innovative “joint implementation” system that allows a firm in one country to invest in a project that reduces emissions in another country and receive credit for those reductions at home. And we propose an international system of emissions trading.

These innovations will cut worldwide pollution, keep costs low, and help developing countries protect their environment, too, without sacrificing their own economic growth.

Third, both industrialized and developing countries must participate in meeting the challenge of climate change. The industrialized world must lead, but developing countries must also be engaged. The United States will not assume binding obligations unless key developing nations meaningfully participate in this effort. As President Carlos Menem stated forcefully last week when I visited Argentina, “a global problem such as climate change requires a global answer.”

If the entire industrialized world reduces emissions over the next several decades but emissions from the developing world continue to grow at their current pace, concentrations of greenhouse gases in the atmosphere will continue to climb. Developing countries have an opportunity to chart a different energy future -- that is consistent with their growth potential and their legitimate aspirations. What Argentina, with projected growth approaching 8%, recognizes is true for other developing countries as well. We can and must work together on this problem in ways that benefit us all.

Here at home, we must move forward by unleashing the full power of free markets and technological ingenuity to meet the challenge of climate change.

I propose a sweeping plan that will provide incentives and lift roadblocks to help our companies and citizens to find new and creative ways of reducing greenhouse emissions.

First, we must enact tax cuts and make research and development investments worth up to \$5 Billion over the next 5 years -- targeted incentives that will encourage energy efficiency and the use of cleaner energy sources.

Second, we must urge companies to take early actions to reduce emissions by ensuring that they receive appropriate credit for showing the way.

Third, we must create a market system for reducing emissions wherever they can be achieved most inexpensively, here or abroad -- a system that will draw on our successful experience with acid rain permit trading.

Fourth, we must reinvent how the federal government, the nation's largest energy consumer, buys and uses energy. Through new technology, renewable energy sources, innovative partnerships with private firms, and assessments of greenhouse gas emissions from major federal projects, the federal government will play an important role in helping the nation meet its goals. Today, as a down payment on our million solar roof initiative, I commit the federal government to have 20,000 systems on federal buildings by 2010.

Fifth, we must unleash competition in the electricity industry, to remove outdated regulations and save Americans Billions of dollars. We will do it in a way that leads to even greater progress in cleaning our air and delivers a significant down payment in reducing greenhouse gas emissions. Today, two thirds of the energy used to provide electricity is squandered in waste heat. We can do much better.

Sixth, we must continue to encourage key industry sectors to prepare their own greenhouse gas reduction plans. There are ways the federal government can help industry achieve meaningful reductions voluntarily, and we will redouble our efforts to do so.

This plan is sensible and sound. Since this is a long-term problem requiring a long-term solution, my plan will be phased in over time. But we want to get moving now. We will start with our package of strong market incentives, tax cuts, and cooperative efforts with industry. We want to stimulate early action and encourage leadership.

And as we reduce our emissions over the next decade with these efforts, we will perform regular reviews to see what works best for the environment, the economy, and our national security. After we have accumulated a decade of experience, a decade of data, a decade of technological innovation, we will launch a broad emissions trading initiative to ensure that we hit our binding targets.

Some might say that a decade from now we won't be ready. I think they're wrong. But one thing that is clear is that if we don't get started now, our challenge will be much greater and our choices much more difficult.

And remember, the plan plays to our strengths -- innovation and creativity. In the past few months, I have been overwhelmed by the tremendous environmental technologies our companies are developing and the kind of common-sense solutions our people are putting to use. Just yesterday, Secretary Pena announced a dramatic breakthrough in fuel cell technology that will clear the way toward developing cars that are twice as efficient as today's models and reduce pollution by 90%.

This breakthrough was made possible by 2 American companies in our pathbreaking partnership to create a new generation of vehicles.

And I must stress that it doesn't take years of additional research and development to achieve dramatic energy benefits. We simply have to take advantage of what's already available. In the town of West Branch, Iowa, a science teacher named Hector Ibarra challenged sixth graders to apply their classroom experiments to making their school more energy-efficient. The class obtained a \$14,000 loan from a local bank and put in place easily available solutions. These students cut energy use by nearly 70%. Their savings were so impressive that the bank decided to upgrade its own energy efficiency.

Our industries have produced a large group of efficient new refrigerators, computers, washer/dryers, and other appliances that use far less energy, save money, and cut pollution. If over the next 15 years everyone were to buy only those energy-efficient products marked in stores with EPA and the Department of Energy's distinctive "Energy Star" label, we could shrink our energy bills by a total of about \$100 Billion over the next 15 years and drastically cut our greenhouse gas emissions.

Despite these win-win innovations and commitments that are emerging literally every day, I know full well that some will criticize our targets and timetables as too ambitious. And, of course, some will claim we have not gone far enough.

But before this debate begins in earnest, let us remember that over the past generation, we have produced tremendous environmental progress -- at far less expense than anyone could have imagined -- and built whole new industries in the process.

In the past three decades, while our economy has grown, we have raised, not lowered, the standards for the water our children drink. While our factories have been expanding, we have required them to clean up their toxic waste. And while we have record numbers of new homes, our refrigerators save more energy and money for our consumers.

In 1970, when smog was choking our cities, the federal government proposed new standards for tailpipe emissions. Many environmental leaders claimed that the standards would do little to head off catastrophe. Industry experts predicted that the cost of compliance would devastate the industry.

Both sides were wrong. Both underestimated the ingenuity of the American people. Automakers comply with today's much stricter emissions standards for far less than half the cost they predicted -- and new cars emit, on average, only 5% of the pollutants of the cars built in 1970.

We have seen this pattern over and over again. We saw it when we joined together in the 1970s to restrict the use of the carcinogen vinyl chloride.

Some in the plastics industry predicted massive bankruptcies, but chemists discovered more cost-effective substitutes and the industry thrived. We saw this when we phased out lead in gasoline. And we see it with our acid rain trading program-- now well ahead of schedule and well below even the most optimistic cost projections.

The lesson here is simple: Environmental initiatives, when designed sensibly, when implemented flexibly, cost less than expected and provide unforeseen economic opportunity. So while we recognize that the challenge we take on today is larger than any environmental mission we have accepted in the past, we know that when Americans work together we can solve problems that seem utterly intractable.

We have heard the dire predictions of pessimists before. In every age, America has proved them wrong -- and we will do so again here. I have great faith in America.

And let us remember that our challenge today is not just about targets and timetables. It is also about our most fundamental values and our deepest obligations.

Later today, I will have the honor of meeting with Ecumenical Patriarch Bartholomew I, the spiritual leader of 300 million Orthodox Christians and a man who has always stressed the deep obligations inherent in God's gift of the natural world. He reminds us that the first part of the word "ecology" derives from the Greek word for "house."

In his words, “In order to change our behavior toward the house we all share, we must rediscover spiritual linkages that may have been lost and reassert human values.” He is absolutely right. It is our solemn obligation to move forward, with courage and foresight, to pass on this beautiful home to our children and future generations.

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THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

October 22, 1997

REMARKS BY THE PRESIDENT
ON GLOBAL CLIMATE CHANGE

National Geographic Society
Washington, D.C.

2:57 P.M. EDT

THE PRESIDENT: Thank you very much. Mr. Murphy, Mr. Vice President, to all of you who are here. I thank especially the members of Congress who are here, the leaders of labor and business who are here, all the members of the administration, and especially the White House staff members that the Vice President mentioned and the Secretary of Energy, the Administrator of the EPA, and the others who have helped us to come to this moment.

On the way in here we were met by the leaders of the National Geographic, and I complimented them on their recent two-part series on the Roman Empire. It's a fascinating story of how the Empire rose, how it sustained itself for hundreds of years, why it fell, and speculations on what, if any, relevance it might have to the United States and, indeed, the West.

And one of the gentlemen said, well, you know, we got a lot of interesting comments on that, including a letter referencing a statue we had of the bust of Emperor Vespasian. And one of our readers said, why in the world did you put a statue of Gene Hackman in a piece on the Roman Empire? (Laughter.) And I say that basically to say, in some senses, the more things change, the more they remain the same. (Laughter.)

For what sustains any civilization, and now what will sustain all of our civilizations, is the constant effort at renewal,

the ability to avoid denial and to proceed into the future in a way that is realistic and humane, but resolute. Six years ago tomorrow, not long after I started running for President, I went back to my alma mater at Georgetown and began a series of three speeches outlining my vision for America in the 21st century -- how we could keep the American Dream alive for all of our people, how we could maintain America's leadership for peace and freedom and prosperity, and how we could come together across the lines that divide us as one America.

And together, we've made a lot of progress in the last nearly five years now that the Vice President and I have been privileged to work at this task. At the threshold of a new century, our economy is thriving, our social fabric is mending, we've helped to lead the world toward greater peace and cooperation.

I think this has happened, in no small measure, in part because we had a different philosophy about the role of government. Today, it is smaller and more focused and more oriented toward giving people the tools and the conditions they need to solve their own problems and toward working in partnership with our citizens. More important, I believe it's happened because we made tough choices but not false choices.

On the economy, we made the choice to balance the budget and to invest in our people and our future. On crime, we made the choice to be tough and smart about prevention and changing the conditions in which crime occurs. On welfare, we made the choice to require work, but also to support the children of people who have been on welfare. On families, we made the choice to help parents find more and better jobs and to have the necessary time and

resources for their children. And on the environment, we made the choice to clean our air, water, and land, to improve our food supply, and to grow the economy.

This kind of commonsense approach, rooted in our most basic values and our enduring optimism about the capacity of free people to meet the challenges of every age must be brought to bear on the work that remains to pave the way for our people and for the world toward a new century and a new millenium.

Today we have a clear responsibility and a golden opportunity to conquer one of the most important challenges of the 21st century -- the challenge of climate change -- with an environmentally sound and economically strong strategy, to achieve meaningful reductions in greenhouse gases in the United States and throughout the industrialized and the developing world. It is a strategy that, if properly implemented, will create a wealth of new opportunities for entrepreneurs at home, uphold our leadership abroad, and harness the power of free markets to free our planet from an unacceptable risk; a strategy as consistent with our commitment to reject false choices.

America can stand up for our national interest and stand up for the common interest of the international community. America can build on prosperity today and ensure a healthy planet for our children tomorrow.

In so many ways the problem of climate change reflects the new realities of the new century. Many previous threats could be met within our own borders, but global warming requires an international solution. Many previous threats came from single enemies, but global warming derives from millions of sources. Many previous threats posed clear and present danger; global warming is far more subtle, warning us not with roaring tanks or burning rivers but with invisible gases, slow changes in our surroundings, increasingly severe climatic disruptions that, thank God, have not yet hit home for most Americans. But make no mistake, the problem is real. And if we do not change our course now, the consequences sooner or later will be destructive for America and for the world.

The vast majority of the world's climate scientists have concluded that if the countries of the world do not work together to cut the emission of greenhouse gases, then temperatures will rise and will disrupt the climate. In fact, most scientists say the process has already begun. Disruptive weather events are increasing. Disease-bearing insects are moving to areas that used to be too cold for them. Average temperatures are rising. Glacial formations are receding.

Scientists don't yet know what the precise consequences will be. But we do know enough now to know that the Industrial Age has dramatically increased greenhouse gases in the atmosphere, where they take a century or more to dissipate; and that the process must be slowed, then stopped, then reduced if we want to continue our economic progress and preserve the quality of life in the United States and throughout our planet. We know what we have to do.

Greenhouse gas emissions are caused mostly by the inefficient burning of coal or oil for energy. Roughly a third of these emissions come from industry, a third from transportation, a third from residential and commercial buildings. In each case, the conversion of fuel to energy use is extremely inefficient and could be made much cleaner with existing technologies or those already on the horizon, in ways that will not weaken the economy but in fact will add to our strength in new businesses and new jobs. If we do this properly, we will not jeopardize our prosperity -- we will increase it.

With that principle in mind, I'm announcing the instruction I'm giving to our negotiators as they pursue a realistic and effective international climate change treaty. And I'm announcing a far-reaching proposal that provides flexible market-based and cost-effective ways to achieve meaningful reductions

here in America. I want to emphasize that we cannot wait until the treaty is negotiated and ratified to act. The United States has less than 5 percent of the world's people, enjoys 22 percent of the world's wealth, but emits more than 25 percent of the world's greenhouse gases. We must begin now to take out our insurance policy on the future.

In the international climate negotiations, the United States will pursue a comprehensive framework that includes three elements, which, taken together, will enable us to build a strong and robust global agreement. First, the United States proposes at Kyoto that we commit to the binding and realistic target of returning to emissions of 1990 levels between 2008 and 2012. And we should not stop there. We should commit to reduce emissions below 1990 levels in the five-year period thereafter, and we must work toward further reductions in the years ahead.

The industrialized nations tried to reduce emissions to 1990 levels once before with a voluntary approach, but regrettably, most of us -- including especially the United States -- fell short. We must find new resolve to achieve these reductions, and to do that we simply must commit to binding limits.

Second, we will embrace flexible mechanisms for meeting these limits. We propose an innovative, joint implementation system that allows a firm in one country to invest in a project that reduces emissions in another country and receive credit for those reductions at home. And we propose an international system of emissions trading. These innovations will cut worldwide pollution, keep costs low, and help developing countries protect their environment, too, without sacrificing their economic growth.

Third, both industrialized and developing countries must participate in meeting the challenge of climate change. The industrialized world must lead, but developing countries also must be engaged. The United States will not assume binding obligations unless key developing nations meaningfully participate in this effort.

As President Carlos Menem stated forcefully last week when I visited him in Argentina, a global problem such as climate change requires a global answer. If the entire industrialized world reduces emissions over the next several decades, but emissions from the developing world continue to grow at their current pace, concentrations of greenhouse gasses in the atmosphere will continue to climb. Developing countries have an opportunity to chart a different energy future consistent with their growth potential and their legitimate economic aspirations.

What Argentina, with dramatic projected economic growth, recognizes is true for other countries as well: We can and we must work together on this problem in a way that benefits us all. Here at home, we must move forward by unleashing the full power of free markets and technological innovations to meet the challenge of

climate change. I propose a sweeping plan to provide incentives and lift road blocks to help our companies and our citizens find new and creative ways of reducing greenhouse gas emissions.

First, we must enact tax cuts and make research and development investments worth up to \$5 billion over the next five years -- targeted incentives to encourage energy efficiency and the use of cleaner energy sources.

Second, we must urge companies to take early actions to reduce emissions by ensuring that they receive appropriate credit for showing the way.

Third, we must create a market system for reducing emissions wherever they can be achieved most inexpensively, here or abroad; a system that will draw on our successful experience with acid rain permit trading.

Fourth, we must reinvent how the federal government, the nation's largest energy consumer, buys and uses energy. Through new technology, renewable energy resources, innovative partnerships with private firms and assessments of greenhouse gas emissions from major federal projects, the federal government will play an important role in helping our nation to meet its goal. Today, as a down payment on our million solar roof initiative, I commit the federal government to have 20,000 systems on federal buildings by 2010.

Fifth, we must unleash competition in the electricity industry, to remove outdated regulations and save Americans billions of dollars. We must do it in a way that leads to even greater progress in cleaning our air and delivers a significant down payment in reducing greenhouse gas emissions. Today, two-thirds of the energy used to provide electricity is squandered in waste heat. We can do much, much better.

Sixth, we must continue to encourage key industry sectors to prepare their own greenhouse gas reduction plans. And we must, along with state and local government, remove the barriers to the most energy efficient usage possible. There are ways the federal government can help industry to achieve meaningful reductions voluntarily, and we will redouble our efforts to do so.

This plan is sensible and sound. Since it's a long-term problem requiring a long-term solution, it will be phased in over time. But we want to get moving now. We will start with our package of strong market incentives, tax cuts, and cooperative efforts with industry. We want to stimulate early action and encourage leadership. And as we reduce our emissions over the next decade with these efforts, we will perform regular reviews to see what works best for the environment, the economy, and our national security.

After we have accumulated a decade of experience, a

decade of data, a decade of technological innovation, we will launch a broad emissions trading initiative to ensure that we hit our binding targets. At that time, if there are dislocations caused by the changing patterns of energy use in America, we have a moral obligation to respond to those to help the workers and the enterprises affected -- no less than we do today by any change in our economy which affects people through no fault of their own.

This plan plays to our strengths -- innovation, creativity, entrepreneurship. Our companies already are showing the way by developing tremendous environmental technologies and implementing commonsense conservation solutions.

Just yesterday, Secretary Pena announced a dramatic breakthrough in fuel cell technology, funded by the Department of Energy research -- a breakthrough that will clear the way toward developing cars that are twice as efficient as today's models and reduce pollution by 90 percent. The breakthrough was made possible by our path-breaking partnership with the auto industry to create a new generation of vehicles. A different design, producing similar results, has been developed by a project funded by the Defense Advanced Research Products Agency and the Commerce Department's National Institute of Science and Technology.

The Energy Department discovery is amazing in what it does. Today, gasoline is used very inefficiently in internal combustion engines -- about 80 percent of its energy capacity is lost. The DOE project announced yesterday by A.D. Little and Company uses 84 percent of the gasoline directly going into the fuel cell. That's increased efficiency of more than four times traditional engine usage.

And I might add, from the point of view of all the people that are involved in the present system, continuing to use gasoline means that you don't have to change any of the distribution systems that are out there. It's a very important, but by no means the only, discovery that's been made that points the way toward the future we have to embrace.

I also want to emphasize, however, that most of the technologies available for meeting this goal through market mechanisms are already out there -- we simply have to take advantage of them. For example, in the town of West Branch, Iowa, a science teacher named Hector Ibarra challenged his 6th graders to apply their classroom experiments to making their school more energy efficient. The class got a \$14,000 loan from a local bank and put in place easily available solutions. The students cut the energy use in their school by 70 percent. Their savings were so impressive that the bank decided to upgrade its own energy efficiency. (Laughter.)

Following the lead of these 6th graders -- (laughter) -- other major companies in America have shown similar results. You have only to look at the proven results achieved by companies like Southwire, Dow Chemical, Dupont, Kraft, Interface Carpetmakers, and

any number of others in every sector of our economy to see what can be done.

Our industries have produced a large group of efficient new refrigerators, computers, washer/dryers, and other appliances that use far less energy, save money, and cut pollution. The revolution in lighting alone is truly amazing. One compact fluorescent lamp, used by one person over its lifetime, can save nearly a ton of carbon dioxide emissions from the atmosphere, and save the consumer money.

If over the next 15 years everyone were to buy only those energy-efficient products marked in stores with EPA's distinctive "Energy Star" label, we could shrink our energy bills by a total of about \$100 billion over the next 15 years and dramatically cut greenhouse gas emissions.

Despite these win-win innovations and commitments that are emerging literally every day, I know full well that some will criticize our targets and timetables as too ambitious. And, of course, others will say we haven't gone far enough. But before the debate begins in earnest, let's remember that over the past generation, we've produced tremendous environmental progress, including in the area of energy efficiency, at far less expense than anyone could have imagined. And in the process, whole new industries have been built.

In the past three decades, while our economy has grown, we have raised, not lowered, the standards for the water our children drink. While our factories have been expanding, we have required them to clean up their toxic waste. While we've had record numbers of new homes, our refrigerators save more energy and more money for our consumers.

In 1970, when smog was choking our cities, the federal government proposed new standards for tailpipe emissions. Many environmental leaders claim the standards would do little to head off catastrophe. Industry experts predicted the cost of compliance would

devastate the industry. It turned out both sides were wrong. Both underestimated the ingenuity of the American people. Auto makers comply with today's much stricter emissions standards for far less than half the cost predicted, and new cars emit on average only 5 percent of the pollutants of the cars built in 1970.

We've seen this pattern over and over and over again. We saw it when we joined together in the '70s to restrict the use of the carcinogen, vinyl chloride. Some in the plastics industry predicted massive bankruptcies, but chemists discovered more cost-effective substitutes and the industries thrived. We saw this when we phased out lead and gasoline. And we see it in our acid rain trading program -- now 40 percent ahead of schedule -- at costs less

than 50 percent of even the most optimistic cost projections. We see it as the chlorofluorocarbons are being taken out of the atmosphere at virtually no cost in ways that apparently are beginning finally to show some thickening of the ozone layer again.

The lesson here is simple: Environmental initiatives, if sensibly designed, flexibly implemented, cost less than expected and provide unforeseen economic opportunities. So while we recognize that the challenge we take on today is larger than any environmental mission we have accepted in the past, climate change can bring us together around what America does best -- we innovate, we compete, we find solutions to problems, and we do it in a way that promotes entrepreneurship and strengthens the American economy.

If we do it right, protecting the climate will yield not costs, but profits; not burdens, but benefits; not sacrifice, but a higher standard of living. There is a huge body of business evidence now showing that energy savings give better service at lower cost with higher profit. We have to tear down barriers to successful markets and we have to create incentives to enter them. I call on American business to lead the way, but I call upon government at every level -- federal, state, and local -- to give business the tools they need to get the job done, and also to set an example in all our operations.

And let us remember that the challenge we face today is not simply about targets and timetables. It's about our most fundamental values and our deepest obligations.

Later today, I'm going to have the honor of meeting with Ecumenical Patriarch Bartholomew I, the spiritual leader of 300,000,000 Orthodox Christians -- a man who has always stressed the deep obligations inherent in God's gift to the natural world. He reminds us that the first part of the word "ecology" derives from the Greek word for house. In his words, in order to change the behavior toward the house we all share, we must rediscover spiritual linkages that may have been lost and reassert human values. Of course, he is right. It is our solemn obligation to move forward with courage and foresight to pass our home on to our children and future generations.

I hope you believe with me that this is just another challenge in America's long history, one that we can meet in the way we have met all past challenges. I hope that you believe with me that the evidence is clear that we can do it in a way that grows the economy, not with denial, but with a firm and glad embrace of yet another challenge of renewal. We should be glad that we are alive today to embrace this challenge, and we should do it secure in the knowledge that our children and grandchildren will thank us for the endeavor.

Thank you very much. (Applause.)

END

3:24 P.M. EDT



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10/22/97 03:50:00 PM

Record Type: Record

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THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

October 22, 1997

PRESS BRIEFING

BY

**CHAIR OF THE NATIONAL ECONOMIC COUNCIL GENE SPERLING,
ASSISTANT TO THE PRESIDENT FOR INTERNATIONAL ECONOMIC POLICY
DAN TARULLO,
DEPUTY NATIONAL SECURITY ADVISOR JIM
STEINBERG,**

**STAFF SECRETARY TODD STERN,
CHAIR OF COUNCIL ON ENVIRONMENT QUALITY KATIE MCGINTY,
AND DEPUTY SECRETARY OF TREASURY LARRY SUMMERS**

The Briefing Room

1:15 P.M. EDT

MR. MCCURRY: We are bringing before you a parade of administration officials, harmoniously and vigorously united together -- brown and green alike, they march out, and all colors in between.

The President's global climate change team is here with you, including all of the following and more: Gene Sperling, Assistant to the President for Economic Policy, Chair of the National Economic Council; Dan Tarullo, Assistant to the President for International Economic Policy; Jim Steinberg, Deputy Assistant to the President for National Security Affairs; Todd Stern, Assistant to the President and Staff Secretary and really the shepherd of all of our global climate folks at the White House; Katie McGinty, the Chair of the Council on Environmental Quality; and Larry Summers, Deputy

Secretary of the Treasury.

They are here at your disposal, but we are going to do the following. We'll start with Gene giving a little overview of the policy directions the President has now put in place as we head to Kyoto. Katie will tell you a little bit, expand a little bit on the specifics of the policy. And I guess Jim and Todd can talk about the negotiating process that we foresee looking ahead to Kyoto.

Mr. Sperling.

MR. SPERLING: The President, the Vice President and everyone in the administration who has worked on this issue feels very strongly that this is perhaps the major environmental challenge of our generation. All of us believe strongly that the science compels action; that the science, based on the scientists that came together from over 150 countries, makes clear that there has been a discernable human influence on the climate with potentially disruptive effects for our future; and that the United States must play a leadership role in addressing this environmental challenge.

The President today puts forward an ambitious, but sensible and sound approach for addressing this. He sets timetable and targets of reaching 1990 levels by the period of 2008 to 2012. Our policies will be based on five fundamental principles, that we be, one, guided by the science; two, that our approach be market-based and common sense; three, that we should first look for the win-win, positive solutions that exist before us; fourth, that there must be global participation, that this is a global problem that requires a global solution; and, fifth, recognizing the uncertainty in engaging on a long-term we need to have common sense, economic and scientific review periodically.

The President puts forward a proposal today that one can see in three stages. The first stage is where the President says, here are the things America can do without waiting, without, we think, conflict in addressing this problem. And if you look on the materials we've handed out, on the third page, it runs through the specific items from the tax incentives to the industry action to the early credit. These are the things this President is committed to doing as soon as possible. This is what we can do without waiting. This is what we can do right now to utilize the opportunities that are before us. And it very much fits the principle that to the degree there are under-utilized energy efficiencies that exist right now, it would be irresponsible for us to not first do everything within our power to make sure that our industries and our people utilize those efficiencies and get the gains that are before us.

The second period would be, in having a five-year review, would be to look at 2004, to evaluate what has worked; to do more of what is being effective; to take account of what new things

we have learned on the science, the environment and the economics; and to go forward and to start planning for the third stage, the binding stage, between 2008 and 2012. It is at this stage we would call for a broad-based emissions trading system, both domestically and internationally, that we believe would ensure that we hit the binding targets that the President has set out.

I should stress that by the time a President and the Congress would have to implement this, we would have under our belt a decade of experience, a decade of innovation, a decade of technology, a decade of science and economic review. So this is a strong approach, but it is handled in a sound and sensible way that recognizes both the uncertainties we face, but both -- that we have an imperative to reach the binding target that the President is setting forward.

If you look in the materials we have, we try to give some examples as you go through on some of the places where the President feels very strongly in the area of electricity, in the area of cogeneration, others where there is, we think, significant waste and, therefore, significant opportunities using existing technologies and energy efficiency, and our hopes for where there can be innovation and breakthroughs, the type that you heard Secretary Pena talk about yesterday, that can put us on a path.

There will be many people who will suggest that down the road, in 2008, that this would be difficult to implement. But as with so many other issues -- entitlement reform and others -- the thing we know for sure is that if we act early we make it easier to deal with a long-term problem. It is only when we wait too long and too late that the choices become too difficult. We have before us the opportunity to deal with these things in a way that this country is best at -- through innovation, through technology, through mobilizing this country, through using the powers of the market. And this President is committed, that without waiting, he is going to try to mobilize those forces to go forward and do our part in dealing with our generational responsibility in addressing this environmental issue.

MS. MCGINTY: Thanks to my partner, Gene. Good afternoon. I just want to underscore a few of the points that Gene made, maybe elaborate briefly.

First of all, today President Clinton is exercising strong leadership in putting forth a bold plan to take on the challenge of global climate change. Four points that I think are worth underscoring and emphasizing: The President's exercise of leadership today will, first and foremost, get this country moving today to begin to secure the opportunities we have before us to reduce emissions, to improve the environment and to seize economic opportunity in doing that.

How? One, through a very innovative new initiative on tax incentives to encourage investments in energy-efficiency,

renewable energy, in encouraging the turnover of older, less efficient capital stock -- things like that. Second, through a program of designing and affording credit to industries who are willing to step up to the plate and take action early -- earlier than any of the periods that are being discussed in the international arena. The President will want to work in partnership with industry, affording them credit for taking early action to reduce emissions, through new investments in the important technologies that the United States can develop and has the opportunity to lead the world in developing.

And, fourth, and importantly, by unleashing the forces of competition in the electricity markets. Today, electricity generation and transmission is governed by rules that in some instances are 70 years old. That antiquated system has stifled some of the most efficient and effective technologies we have that can dramatically reduce greenhouse gas emissions from the electricity sector. The President is putting that forward today, something we can begin to move forward on that can help us to reduce emissions and seize tremendous economic opportunity.

The President has underscored in previous statements on this issue that today we throw out two-thirds of the energy we generate. These policies are about capturing those inefficiencies, enhancing the economy and the environment at the same time. So the first principle, through the President's leadership, we are getting to work today.

Second, the President's leadership increases our ability to bring the entire world to a binding, but realistic and achievable set of goals in reducing greenhouse gas emission -- binding first. Why? Because our experience since 1992, the Rio Earth Summit, shows us that simply voluntary actions aren't sufficient to meeting this challenge. The voluntary actions have achieved some reductions, but not enough, and we have continued to see emissions grow.

So the President is saying it's time to give the issue the seriousness it merits; binding reductions are very important. But those reductions should be realistic and achievable. What the issue really demands is action, not the pie in the sky kind of rhetoric we've heard, nor the doomsday scenarios we've heard, either -- 1990 levels by the year 2008 to 2012 is significant, first; it represents a reduction in U.S. emissions on the order of 28 percent from where we would otherwise be in the year 2010. But it's realistic and achievable. As Gene underscored, the President is seizing on this decade of opportunity we have from 1998 to 2008 to find those ways to harness market forces to help us get this job done.

That leads to the third principle. The President's leadership here is about harnessing market forces to help us to achieve environmental objectives in a cost-effective way and in a way that helps us build new industries. We have great experience in this country in using market forces to reduce the costs of achieving

environmental goals.

The Clean Air Act has provided us with a wonderful example. We've reduced the emissions that cause acid rain by more than 40 percent of what was required under the law for less than a tenth of the price that was predicted. How? Because we used innovative means, a marketable permit scheme, where firms can trade among themselves the right and the obligations to reduce emissions. We've reached targets that way, but in a much more cost-effective manner. So the President is exerting leadership here by saying we will put those market forces to work to help us take on this objective.

Fourth and finally, the President's leadership is also about recognizing that climate change is a global challenge and it, therefore, requires a global solution. The United States has put proposals on the table that can help encourage the participation of developing countries -- our initiative on joint implementation, for example, where U.S. businesses can act in partnership with developing countries jointly to reduce emissions.

And today the President will emphasize this important principle again and underscore that for the U.S. to undertake binding obligations, we will secure the participation of developing countries in this effort as well. And as you saw last week, the President has made this a priority as he has spoken to leaders around the world, and was joined last weekend by President Menem as President Menem recognized also that developing countries have to be part of the solution as well.

So with these four principles, the President is putting us on the road today to take on this challenge in a way that will significantly reduce U.S. greenhouse gas emissions, that offers us the promise of seeking and achieving a global agreement on this issue, and that will unleash market forces so that we can secure new and important economic opportunities as we pursue our goals.

Thank you.

MR. STERN: Let me say just a couple of things briefly on the international context. Gene and Katie have already alluded to a number of the more salient factors involved in the negotiation. As you know, international attention to climate change did not begin last month, and it won't end at Kyoto. As important as Kyoto is, this is part of an ongoing process that the world community is going to have to engage in over the course of the coming decades.

I think what has changed in the relatively recent past is the attention that the leaders of the world themselves are paying to this issue. It has, over the course of the last six months, been a topic of conversation in numerous presidential meetings, of our President with his counterparts from around the world. As Katie alluded, in just the last few days, the President has been on the phone with a number of his colleagues from other industrialized

countries talking about Kyoto, about the approach that we are all taking. He has also, I might add, been consulting in follow-ups to the climate change conference with industry leaders, environmentalists, and others to discuss how we move forward in a realistic fashion.

The second point I would make is factual. As you probably are aware, our negotiators are in Bonn this week and will be there next week in the final set of formal discussions before the Kyoto Conference itself. The positions that the President announces this afternoon will be tabled by our negotiators and they will pursue those positions over the course of the next week and a half.

Third, I just wanted to re-emphasize some of the key negotiating instructions, position, what we have laid out as our position this afternoon, which are relevant for the international negotiations.

First, Gene mentioned the target and timetable itself, the 2008 to 2012 period returning to 1990 levels of emissions.

Secondly, as I think Katie mentioned, flexibility is of key importance. It is an essential component of the President's domestic agenda on climate change; it must be an essential component of the international agenda on climate change. That means international emissions trading; it means international joint implementation proposals and mechanisms so that the most cost-effective means of reducing emissions are available to all the countries of the world to seize.

Third, the President will say this afternoon, as I think both my colleagues have mentioned, that the United States cannot assume binding obligations in this area without developing country participation. The developing countries of the world will, over the course of the next couple of decades, become the most significant, in quantitative terms, emitters of greenhouse gases. That is notwithstanding the fact that, to date, the developed countries have been. Thus, as a matter of science as well as policy, we simply cannot solve this problem without the participation of developing countries.

Now, in pursuit of that, we have made quite clear, Katie alluded to the President's discussions with President Menem -- this has been the subject of numerous consultations at a staff and ministerial level as well, and this will be an important component of our negotiators' positions taken in Bonn and all the way to Kyoto.

I think I'll stop there. Who is running the questions here?

Q The word "bold" isn't very -- the environmentalists don't think this is very bold. You haven't mentioned -- emissions. It's a real retreat, is it not?

MS. MCGINTY: Let me say, first of all, that many in the environmental community have spoken very favorably, especially to the President's insistence that we are going to get to work now. The President's idea that we will offer incentives to industry to step up to the plate and take early actions to reduce emissions is a proposal that is very important to the environmental groups and that they support wholeheartedly.

Would they like to see additional reductions, reductions on the order of what the European countries and others have been talking about? Certainly. Would some in the business community like to have seen less reductions? Certainly. But what the President has put together here is an ambitious plan that will reduce U.S. emissions by 28 percent in the year 2010. It's an aggressive plan to move us forward.

Q -- on developing countries -- you talk in terms of assuring that developing countries must participate in whatever regime results. But I don't hear you saying that there would have to be some point at which they accept binding obligations. Would there be, perhaps at a later date, perhaps on a case-by-case basis different standards, but are you going to propose in Kyoto that there be binding totals and limits on the developing nations?

MR. STERN: As I said a moment ago, our position is one of the indispensability of participation. The nature of that participation is to be defined obviously in the course of negotiations. I think it is useful, however, to refer to President Menem's own observations on the subject last week where he did make reference to the need for developing countries to take on obligations on emissions as well.

Q How is this package tailored to meet the requirements on the Hill and to win the ratification you'll need for anything coming out of Kyoto?

MR. STERN: That's the next briefing. (Laughter.)

MR. SPERLING: Well, I think that there is no question that, despite what some, for honorable reasons in the environmental community might have preferred, I think in what was considered the range of potential options the President did pick will probably be perceived on the Hill as the most ambitious within that range.

But the President is also I think providing people assurance that what he is going to be presenting to Congress -- what we will present in our budget in detail further -- is the type of things that we think the country should be able to rally behind, which is the focus on R&D and technology, tax incentives to encourage more use of renewable energy sources. I think that this is the type of mobilization that I think many people would consider win-win, market-based solutions. And the fact that there is review in

different stages I think reflects the concern that people would have that we would, in the year 1997, seek to say that we knew exactly how a decade from now exactly what would be the right -- what energy prices would be, where the technology would have been. I mean, most people, if we were to look back 13 years wouldn't look very good at predicting the Internet and other things.

So I think when you're trying to deal with something like this and have binding targets, it is a sensible approach to assure people that you are going to try to do all of the positive things that people can rally around first, and see how far you can get there and assure people that you are going to be reviewing the science and the economics periodically, so that when the time comes that you do put forward an emissions trading program you do have a decade of experience and review behind us.

And, ultimately, Congress and the President, at a later time, will ultimately have to pass things and have that judgement. So I think the President has put a sensible path that I think should also be reassuring to people on the Hill that we are taking a sensible path. I don't know what the specifics the President has put forward, people should find particularly objectionable.

Q Gene, you make it sound as if this plan, 30 percent reductions, is almost entirely painless.

MR. SPERLING: Well, let me go back five years on our budget. There were people who said at that point that if we did not do something dramatic -- dramatic reduction on Medicaid or Medicare, dramatic increase on discretionary budget -- if we didn't do those things we would never get near balance.

Now, we put forward what we thought at the time was a prudent plan to go forward, under the notion that it would not make sense to rush to do things that may not be necessary, that you should try to do things in a prudent, sensible, market-based way. As it's turned out, that plan and the subsequent growth of the economy has led us to arrive at a goal. Looking back five years, having done more controversial, more painful things would not have made sense when we were able to reach that goal.

The President takes the approach here that there is tremendous -- as Katie described, tremendous inefficiencies out there. There is tremendous potential to alert the American public and to work with industry to capitalize on the inefficiencies that are out there. And by alerting the public and making the public more conscious, you do start to create the market for more people to think that there is profit to be made and reason to research and to do more. And to give you a chance to have a positive cycles.

Now, in the years 2008-2012, when you're in that binding period and you have emissions trading, that is the period where there could be arguments as to what the possible impacts would be on energy. But the truth is, it's pretty hard for any of us to know.

And so I think the President, in providing a sensible path, in going forward and making sure that we are doing all of the win-win, positive things first, that down the road Congress and the President will have to evaluate whether those have been enough and whether we have to take more strenuous steps.

Q So no increase in energy prices?

MR. SPERLING: The plan that we have as you look forward does not include increased energy prices. I think that one has to acknowledge that one you enter the emissions trading period in 2008, that there will probably be costs, those emissions. But how much and what the price of energy will be and what kind of success we've had at having other efficiencies by then is, again, very hard to predict. I doubt people would have predicted the tremendous real decrease in gasoline oil prices we've had.

Q Do you have a target for the five-year period after 2012 for those reductions?

MS. MCGINTY: The President will indicate that the United States proposal includes both a binding target of reaching 1990 levels emissions between the year 2008 and 2012; and that then in the next five-year period of years, that emissions should be reduced below 1990 levels. And the extent to which they should be reduced is an issue that we will take up in the international arena and have discussions there.

MR. SPERLING: I'm just going to let Larry follow up on mine, and then we'll take the next question.

DEPUTY SECRETARY SUMMERS: Thank you, Gene.

If I could just add, this is a helping-hand approach, rather than a heavy-handed approach to working to reduce energy consumption. It doesn't provide for mandated increases in prices on energy over the next decade. And it does contain a number of provisions that are likely to work to reduce energy costs.

Those provisions include measures that will support the introduction of technologies that will increase fuel efficiency, such as vehicles that have more miles per gallon. Those provisions include measures that by encouraging energy conservation will reduce demand for energy, which will tend to reduce its price worldwide. And those provisions include electricity restructuring, which by harnessing competition in an important network industry has the potential to bring down the costs of energy to consumers, just as we've seen in telecommunications and in airlines, and that on fairly conservative estimates could mean as much as \$20 billion to households.

So this is an approach that is, as Gene has emphasized, one that is very much focused on doing all we can over the next decade to exploit win-win solutions that can come from harnessing

market forces to do things that are both good for the economy and good for the environment.

Q Can I stay on this question of cost for a second?

What you guys are saying is we're kind of hazy in this 2008 to 2012 period, we can't know for sure. But I seriously doubt that the administration's economic team would have signed off on these 1990 levels without doing a hard analysis that said, based upon our knowledge now we predict that this scheme would mean energy cost of X by the year 2008 or 2010 or 2012. Are you saying you don't and haven't done that? Or if you have, what are the numbers?

MR. SPERLING: First of all, I think we were pretty clear that, as Larry said, there is not a mandated energy price increase between the year 1998 and 2008. We're acknowledging that in the binding -- in the emissions trading period that it can't be ruled out that there could be some effect on energy prices. We're saying that part of that is going to depend on what the success of the variety of different efforts, many of the nine steps that the President has had there.

Q Well, what I'm saying is, haven't you guys done an analysis that say best case scenario it's X, worst case scenario it's Y. And if you have, won't you share that with us?

MR. SPERLING: I think I'll let Larry speak. First of all, there is -- you know, I've been around here five years. If you want an econometric model to show you something 13 years out, you can do anything you want. You can show anything that you want. What we're trying to do is --

Q We'll keep that in mind the next time you --
(laughter.)

MR. SPERLING: What's that? The next time that we predict what a particular policy right now will be 13 from now with an econometric model, you can be free to show that to me, and I would say you'd have a hard time showing a time in the past that we've tried to predict 13 years out in that sense. But we have certainly been locked in doing a tremendous amount of economic analysis. When you look at the things there, you will see, for example in the five-lab study, that there is, from the Energy Department, there is very careful analysis on what the potential is for reducing metric million tons of carbon through the efficiencies in the three main sectors --the building, the transportation, and the industrial sectors.

As Larry said, and this really is the first time today that the President will be and is announcing that he will be supporting an electricity restructuring proposal, there is certainly in that area a tremendous amount of waste because there is not incentives to capture the full amount of energy that is used.

We have gone through all of this analysis, but I think

that what we have tried to do, and I think what the economic team has worked to stress, was to recognize where there is really is uncertainty, that rather than to try to pretend that you can draw a road map from here to Los Angeles with every street and turn in it over the next 13 years, is to try to have a process where we have the ability to incorporate what we are learning, what we are seeing, what works. That is, I think, the soundest and most realistic approach for us going forward.

We clearly think that if things -- if this country mobilizes the right way, that we can get there without having a significant price increase, even after the year 2008. One of the things that will be a key element, and I can let Larry speak to that, is the success of having a truly international system with international trading. Where you allow for the most market efficiencies, where people have the ability to seek out the places where there is the greatest capacity to reduce carbon greenhouse gas emissions at the lowest price, that will be one of the most key elements in determining how much we can do this in a cost-effective way.

And that's one of the points one has to understand in climate change. When you reduce a million metric tons of carbon, when you reduce carbon emissions anywhere in the globe, it has the same impact. And so having a system develop over time that allows that to happen will be absolutely critical and vital to what the costs are. If you assume that that will work very well, extremely well, then you can have very, very, very, very low cost impacts. If you assume that it won't, then it would be more difficult.

And I think, again, what we've tried to do is incorporate a process where we can constantly review that and where the country can make adjustments accordingly.

Q I just want to get back to something you didn't finish. Do you have a targeted number, or any range --

MS. MCGINTY: We're not specifying a number at this time.

Q At what point would you get around to specifying a number?

MS. MCGINTY: To hearken back to what Gene has outlined, at this point the President is outlining a very clear plan that takes us, not from today to tomorrow, but a clear plan for the next decade, for the five years that follow that decade, in that five years to hit 1990 levels on average between 2008 and 2012, and beyond, to say we need then to move to reduce emissions below 1990 levels. We're not going to specify that specific target today.

Q When will the period come when you begin to specify?

MS. MCGINTY: It's still under discussion.

Q Is it within the next year or is it --

MR. STERN: The point I think that Katie just made is we're not going to start negotiating in public. That's why we have negotiators who go to Bonn and then to Kyoto.

Q How does the \$5 billion in tax cuts on R&D break down? And over what period of time would that be? And when you might get something like that before Congress?

MR. SPERLING: That will be in our fiscal year 1999 budget. We met, the team working on this, with the budget team, including Frank Raines, and we tried to almost do an early budget review so that we could make sure that we have room in our budget for a significant initiative. And so what we are comfortable doing this time is announcing that there will be a \$5 billion, or at least a \$5 billion in R&D and tax incentives. What the exact composition is of those will be announced with the rest of our budget.

Q Over what period of time will that \$5 billion --

MR. SPERLING: That's \$5 billion over five years. So at least \$1 billion a year of additional funds beyond -- or tax incentives beyond what we have currently.

Q If I could follow up, Gene, you said that most of those ideas, or many of them, will come from this report -- from the President's committee on science and technology. So could you at least outline a few or highlight a few from that report that are likely to be in your package?

MR. SPERLING: We are announcing almost, as you see, almost every element we have now. It is not our intention to announce the specifics of every single thing we're going to do now, quite honestly. This is something the President cares very deeply about. He wants to return to this, and we will roll out the details of our plan periodically. But also, you have to understand, we do our budget review in the first two weeks of December, and so we will have time and opportunity to spell out in detail as we present our budget the exact specifics. Certainly, the -- recommendations will be highly considered and certainly many of those will make it into our budget.

Q How flexible, Gene, are you going to be in the negotiations this week, next week, up to Kyoto, with regard to your binding target proposal for the industrialized world? Is this a take it or leave it proposal from the United States, or are you flexible enough in these pending negotiations to perhaps strengthen the binding targets the President outlined today?

MR. SPERLING: This is our position; this is a position that the President has worked on himself. He has developed this plan

himself. He took this from a variety of different recommendations, all of this, gave him -- he pulled different pieces and put together a strategy that he feels comfortable with. This is our position. And when I say that we're not seeing anymore, I'm not commenting one way or the other on what would happen in negotiations. This is our position and this is where we stand.

Q Gene, what has happened since the time the President set the year 2000 as the goal? What's changed since then?

MS. MCGINTY: I think this is an important point. We have a lot of attention to this issue now because Kyoto is on the horizon, but the fact is that the President has been hard at work on this issue since 1993. First, he reversed the position of the previous administration and signed the United States up to the goal of reducing emissions to 1990 levels by the year 2000. He followed that immediately with a 50-point plan to help us to achieve that goal.

Now, that plan has delivered very significant reductions in emissions from where they otherwise would have been. Did it get us or are we on track to get to the year 2000? As we articulated more than a year and a half ago, we are not on track to do that. Why? One, economic growth has been quite robust and more robust than even we had anticipated in the beginning of 1993. Two, oil prices have proven to be lower than were anticipated in early 1993. But, three, and most compellingly and importantly, is that the Congress had as part of its anti-environmental agenda, had not funded the President's initiatives in energy efficiency and renewable energy. Now, despite those three factors, the President's efforts have delivered significant emissions reductions from where we otherwise would have been, on the order of about -- for the jargon -- on the order of about 40 million metric tons of carbon emissions.

You will see today major utilities in the United States standing up and saying that the President has outlined today a very sensible and very strong policy to move forward on reducing greenhouse gas emissions. Many of those utilities have been working in partnership with us since 1993, with the President's leadership. They have signed up voluntarily and have voluntarily reduced their emissions significantly.

So we have been at this consistently since 1993. Kyoto presents us an opportunity with taking this issue now to the next steps where we can join together with the world community, looking beyond the year 2000 and the steps that have to be taken then.

Q Are the utilities that began participating in '93 going to get credit for those reductions?

MS. MCGINTY: One of the points that the President wants to emphasize today is that we will build a program to provide credit for those who will take early action. As part of our effort to do this, to undertake this effort in partnership with industry, we will

work with them, we will work with members of the environmental community to put the details of that initiative together.

But the idea is simple: We want to incentivize industry to take action now to reduce emissions -- not to wait until the year 2008 to begin. If we have a marketable permit scheme in the year 2008, for example, then what we would be talking about here is working with industries so that they could get credits to play in that tradeable permit scheme that would be set up in the year 2008 for the actions that they take to reduce emissions now. That's one of the ideas we would pursue.

Q Does that have budgetary impact, the provision of credits --

MS. MCGINTY: Budgetary in what sense?

Q Does it cost any money off the budget? Is it a tax incentive? I don't understand your credit.

MS. MCGINTY: No. The notion of a marketable permit system is that you provide permits to various actors in the economy and they have a choice: They can reduce their emissions to the level required, or if it's more cost effective for them, they can purchase permits from other players in the economy who have not only met their target, but gone over and above it. And the idea is simply that those who take actions now won't be penalized for having taken action early, and that those reductions in emissions that they achieve will be recognized when the binding period comes into play.

Q -- this document, it does indicate here, we reject the European proposal for more stringent early reductions. Would you remind us of the reasons for that rejection?

MS. MCGINTY: Well, I'll first of all remind you of what the European policy is. Overall, the European Union has called for a 15 percent reduction from 1990 levels by the year 2010. Now, the reasons that that approach is not appropriate for the United States, that we feel is not realistic or achievable, is also related to why we believe our plan is significant, but realistic and achievable.

The President's plan will reduce U.S. emissions by 30 percent from where they otherwise would be in the year 2010. That's an ambitious undertaking. To go further and add to it 10 or 15 percent additional reductions, we don't believe is realistic or achievable in the time period that we are looking at. It just underscores the fact that what we've tried to do here is a very significant and ambitious plan, but one that is built on the opportunities that we know that are out there, that can enable us to get started now and seize some economic opportunities; that's what the President's target represents.

Q What's the number now, from this point to back to 1990 levels? I've heard between 15 percent and 20 percent. What is it from today's date?

MS. MCGINTY: Well, in the year 2000, business as usual, it would be 13 percent. But do we know today -- I think it's about 7.5 percent -- 7.5 percent. Today I think we are on the order of about 7.5 percent above 1990 levels of emissions.

Q -- you expect emissions in the United States to start --

Q What's the point of having an economic review of how we're doing five years out if we're committing to binding targets? I mean, if you're saying we absolutely will meet these by this date, and your economic review says, geez, you know what, it's going to cost a lot more money than we thought it would? There's no opt out, is there?

MS. MCGINTY: The notion of economic reviews as scientific reviews is just common sense. We are putting forward here some very ambitious ideas that we think can deliver both environmental and economic results. But we want to make sure we are seizing all the best opportunities that are out there, and the point of that review is to make sure that all the best ideas are ideas that we are implementing.

Q If you don't envision a clause that lets you out -- is what I'm asking, is there any clause that lets you out of this? If it says this is going to cost a lot more than we thought and we can opt out or not, is it really binding?

MS. MCGINTY: It is a binding treaty and it's very important to the President and a principle that he has consistently put forward is that we are now moving into a period where binding emissions reductions are absolutely required, certainly.

Q So there's no -- if five years from now we say it's going to cost a lot more money --

MS. MCGINTY: Look, there's no treaty in the world that would require a country to bankrupt itself. And this treaty is no different than any other treaty in the world in that respect.

Q When does the United States expect to stop increasing its greenhouse gas emissions and start decreasing them? How will we know if we're not performing, because the track record so far is one of saying you are going to meet targets and then missing them, saying you were going to review them and then postponing them. When are we going to actually turn the corner and start cutting down?

MS. MCGINTY: Well, let me just say that the whole point

of the series of efforts that we have announced today is to enable us not to wait until the year 2008, but to move forward now. We are going to do our level best through providing the tax incentives we've spoken about, by designing a program that affords credit to industries for taking early action, by investing in new technologies to begin to turn those curves just as soon as we can. But we are moving as ambitiously and as aggressively as we can toward that target period.

Q When do you expect U.S. greenhouse gas emissions to start going down?

MS. MCGINTY: From where they would otherwise be, we would hope --

Q To stop going up. They're going up. It's a very simple question.

MS. MCGINTY: You may be on a level of technical detail that I can't provide.

Q Can anybody say when the emissions are going to start going down?

Q The EU has put forward a much stricter proposal and the developing countries in Bonn just signed a statement saying they support the EU proposals. So how good do you think the chances are of getting a treaty out of Kyoto?

MS. MCGINTY: Well, let me underscore, this is a very difficult undertaking, and the President is addressing it with tremendous seriousness of purpose, as was referred to here before. He has worked this issue very hard with leaders from around the world. Now, I just say and underscore that U.N. processes operate

often, and this one does, on the basis of consensus proposals and moving forward on a consensus basis.

What we are trying to do here is not only hear the voices who want to go much quicker, much further, much faster, but recall that there are many voices out there, too, many countries who are saying much less, much slower, if not, nothing at all. And what we are trying to do is provide that leadership that can hopefully take those two extremes of the debate and find that common ground that would enable the world to move forward in a reasonable and effective way in the years post-2000.

Q I don't understand the global thing. Could I just ask for clarification on what the President today envisages in the treaty with regard to global obligations from the developing countries? Would it necessarily be binding targets and timetables, or could it take another form?

MR. MCCURRY: That's been asked and answered.

Q That's not been answered.

MR. MCCURRY: It's been answered as well as it's going to be answered.

Q The previous proposals on developing countries, do they still stick? That is, some may -- that the large developing countries should graduate into commitment, into binding targets? What's been going on the last six months, does that still hold?

MR. STERN: Well, I'm not sure exactly what you're referring to, but what I think you are bringing up is the nature of the problem, which as I said earlier, there is general agreement that the problem of global warming, of global climate change, is not going to be resolved without the participation of developing countries. What, when and exactly what participation will mean is obviously what our guys are going to be doing in Kyoto, and therefore, it is premature to indicate exactly what that means.

What we can say, and what the President will say this afternoon is we will not assume binding emission reduction obligations without the participation of the developing countries.

Q On the post-2012 role, you all are saying you are not taking a specific target. But yesterday environmental groups say that they were told there would be a five percent reduction as a goal and then that was abandoned last night. Can you say why that -- the President backed off that as a specific target?

MS. MCGINTY: That is a number that some of the environmental community have suggested. We just have not arrived at a number and are not prepared to discuss one right now.

Q They said the administration told them that. That's not true?

MS. MCGINTY: It's a number that I've heard them discuss.

Q But you all never told them that?

MS. MCGINTY: No.

THE PRESS: Thank you.

END 2:04 P.M. EDT

Message Sent To: _____

WHITE HOUSE STAFFING MEMORANDUM

DATE: 10-22-97 ACTION/CONCURRENCE/COMMENT DUE BY: ImmediateSUBJECT: Remarks on Climate Change Policy

	ACTION	FYI		ACTION	FYI
VICE PRESIDENT	☒	☐	McCURRY	☐	☒
BOWLES	☒	☐	McGINTY	☒	☐
McLARTY	☒	☐	NASH	☐	☐
PODESTA	☒	☐	RADD	☐	☐
MATHEWS	☒	☐	REED	☐	☐
RAINES	☒	☐	RUFF	☐	☐
BLUMENTHAL	☒	☐	SMITH	☐	☐
BERGER	☒	☐	SOSNIK	☐	☐
ECHAVESTE	☒	☐	SPERLING	☒	☐
EMANUEL	☒	☐	STREETT	☐	☐
GIBBONS	☒	☐	TARULLO	☒	☐
HILLEY	☒	☐	VERVEER	☐	☐
IBARRA	☐	☐	WALDMAN	☐	☐
KLAIN	☒	☐	<u>YELLEN</u>	☒	☐
LEWIS	☐	☐	BEGALA	☒	☐
LINDSEY	☐	☐	_____	☐	☐
MARSHALL	☐	☐	_____	☐	☐
			_____	☐	☐

REMARKS: Comments to Lowell Weiss - ASAP.

RESPONSE: _____

Draft 10/22/97 3:15am

**PRESIDENT WILLIAM J. CLINTON
REMARKS ON CLIMATE CHANGE POLICY
THE NATIONAL GEOGRAPHIC SOCIETY
October 22, 1997**

Six years ago tomorrow, shortly after I announced my intention to run for President, I returned to my alma mater, Georgetown, and challenged America to envision a bold course for our country in the 21st Century -- to make the American Dream come alive for every person responsible enough to work for it, to keep our country the world's strongest force for peace and freedom and prosperity, to bring our people together across all the lines that divide us, into one America.

Together, we have made real progress. America stands at the threshold of that new century stronger than we have been in many years. Our economy is thriving, our social fabric is mending, and we have helped lead the world to an era of growing peace and cooperation. We must now use our momentum to propel us forward to meet new challenges -- to rise to our obligation to the future and to pass on to our children the home that God gave us -- restored and flourishing.

Today, we have a golden opportunity to conquer one of the most important challenges of the 21st Century -- the challenge of global climate change. In a few moments, I will present an environmentally strong and economically sound strategy to reach a goal that everyone can share: achieving meaningful reductions in greenhouse gas emissions here in the United States and throughout the industrialized and developing world. It is a strategy that will create a wealth of new opportunities for entrepreneurs at home, uphold our leadership abroad, and harness the power of free markets to free our planet from an environmental risk.

It is time to reject the false choices posed by those who doubt America. America can stand up for our national interest -- and stand up for the common interest of the citizens of the world. America can improve the health of our environment -- and expand the vibrant growth of our economy. Most important, America can build on our prosperity today -- and ensure a healthy planet for our children tomorrow.

America has earned its exceptional place in history not only because of the power of our ideals, but also because we have always risen to overcome challenges that time and chance have placed before us. Global warming is one of the greatest challenges of our time. And in so many ways, it encompasses the new realities of the new century. Many previous threats could be met within our own borders; global warming requires a global solution. Many previous threats came from single enemies; global warming derives from millions of sources. Many previous threats posed clear and present dangers; global warming is far more subtle, warning us not with roaring tanks or burning rivers, but with invisible gases and climatic disruptions that, thank God, have not yet hit home for most Americans.

But make no mistake: If we do not change course now, global climate change will be a disturbing -- and, at times, dangerous -- reality for all of us. The vast majority of the world's

climate scientists have concluded that if the countries of the world do not work together to cut the emission of greenhouse gases, temperatures will rise and will disrupt the global climate. In fact, most scientists say this process has already begun. They don't yet know what the precise consequences will be -- for example, how much global warming will speed the spread of disease or how much more often our cities will suffer severe heat waves. But given what they do know, it would be a grave mistake for us to avert our gaze, hoping that by ignoring reality we will never have to deal with it. The time is now for America to act. The time is now for America to lead.

We know what we must do. And we now know how we must do it. America's growing economy is the wellspring of opportunity for our families. We will not apologize for our prosperity; we will not jeopardize our prosperity. We will capitalize on our prosperity to meet and master this global challenge.

With that principle in mind, I am announcing the instructions I am giving our negotiators as they pursue a realistic and effective international climate change treaty. And I am announcing a far-reaching proposal that provides flexible, market-based, and cost-effective ways to achieve meaningful emissions reductions here in America.

In the international climate negotiations, the United States will pursue a comprehensive framework that includes three elements, which, taken together, will enable us to build a strong and robust global agreement. First, the United States proposes that at Kyoto we commit to the binding and realistic target of returning emissions to 1990 levels between 2008 and 2012. And we should not stop there. We should commit to reduce emissions below 1990 levels in the years that follow. The nations of the world tried to reduce emissions to 1990 levels once before with a voluntary approach, but regrettably most of us fell short. We need to find new resolve to achieve these reductions, and to do that we simply must commit to binding limits.

Second, we will embrace flexible mechanisms for meeting these limits. We propose an innovative "joint implementation" system that allows a firm in one country to invest in a project that reduces emissions in another country and receive credit for those reductions at home. And we propose an international system of emissions trading. These innovations will cut worldwide pollution, keep costs low, and help developing countries protect their environment, too.

Third, all countries must participate in meeting the challenge of climate change. The United States will not assume binding obligations unless key developing nations meaningfully participate in this effort. As President Carlos Menem stated forcefully last week when I visited Argentina, "a global problem such as climate change requires a global answer" -- and I commend him for his leadership. We both recognize that if the entire industrialized world reduces emissions over the next several decades but emissions from the developing world continue to grow at their current pace, concentrations of greenhouse gases in the atmosphere will continue to climb. I believe that developing countries have an opportunity to chart a different energy future -- one based on clean and cheap technologies. We can and must work together on this problem in ways that benefit us all.

Here at home, we must move forward by unleashing the full power of free markets and technological ingenuity to meet the challenge of climate change. I propose a sweeping plan that will provide incentives and lift roadblocks to help our companies to find new and creative

ways of reducing greenhouse emissions.

First, we must enact tax cuts and research and development investments worth up to \$5 Billion over the next 5 years -- targeted incentives that will encourage energy efficiency and the use of cleaner energy sources.

Second, we must urge companies to take early actions to reduce emissions by ensuring that they receive appropriate credit for showing the way.

Third, we must create a market system for reducing emissions wherever they can be achieved most inexpensively, here or abroad -- a system that will draw on our successful experience with acid rain permit trading.

Fourth, we must reinvent how the federal government, the nation's largest energy consumer, buys and uses energy. Through new technology, renewable energy sources, innovative partnerships with private firms, and assessments of greenhouse gas emissions from major federal projects, the federal government will play an important role in helping the nation meet its goals.

Fifth, we must unleash competition in the electricity industry, to remove outdated regulations and save Americans Billions of dollars. We will do it in a way that leads to even greater progress in cleaning our air and delivers a significant down payment in reducing greenhouse gas emissions.

Sixth, we must encourage key industry sectors to prepare their own greenhouse gas reduction plans. If there are ways the federal government can help industry achieve meaningful reductions voluntarily, we want to know how.

This plan is sensible and sound. Since this is a long-term problem requiring a long-term solution, my plan will be phased in over time. But we want to get moving now. We will start with our package of strong market incentives, tax cuts, and cooperative efforts with industry. We want to stimulate early action and encourage leadership.

And as we reduce our emissions over the next decade with these efforts, we will perform regular reviews to see what works best for the environment, the economy, and our national security. After we have accumulated a decade of experience, a decade of data, a decade of technological innovation, we will launch a broad emissions trading initiative to ensure that we hit our binding targets. Some might say that a decade from now we won't be ready. I think they're wrong. But one thing that is clear is that if we don't get started now, our challenge will be much greater and our choices much more difficult.

And remember, the plan plays to our strengths -- innovation and creativity. In the past few months, I have been overwhelmed by the tremendous environmental technologies our companies are developing and the kind of common-sense solutions our people are putting to use. Just yesterday, Secretary Pena announced a dramatic breakthrough in fuel cell technology that will clear the way toward developing cars that are twice as efficient as today's models and reduce pollution by 90%. This breakthrough was made possible by our pathbreaking partnership with the auto industry

And let us remember that our challenge today is not just about targets and timetables. It is also about our most fundamental values and our deepest obligations. Later today, I will have the honor of meeting with Ecumenical Patriarch Bartholomew I, the spiritual leader of 300 million Orthodox Christians and a man who has always stressed the deep obligations inherent in God's gift of the natural world. He reminds us that the first part of the word "ecology" derives from the Greek word for "house." In his words, "In order to change our behavior toward the house we all share, we must rediscover spiritual linkages that may have been lost and reassert human values." He is absolutely right. It is our solemn obligation to move forward, with courage and foresight, to pass on this beautiful home to our children and future generations.

#

- Yvonne -
- Notebooks
 - Need to bring paper + pencils
 - Need to sit down
 - Need to follow rest of class
 - Need to turn in work
 - Need to tutoring

Reggie - Need to turn in homework
Assignments

~~Friday~~ AFH - 3:30

MJ

Questions and Answers on President's Climate Change Proposal
DRAFT -- 11:30 a.m. October 22, 1997

Q: Don't economic models suggest that this effort will cost more than 1.5 million jobs and tank the economy?

A: Some models may suggest that, but only by ignoring several key elements of the President's plan:

1. They ignore the President's \$5 billion package of tax cuts and Federal R&D: To spur energy efficiency and the development of lower-carbon energy sources, the Administration supports a major new package of tax cuts and R&D spending amounting to \$5 billion over five years.

2. They ignore the potential for increased use of existing energy-efficient products: As the Department of Energy's 5-Labs study illustrates, many existing technologies produce win-win solutions to reducing carbon emissions -- but nonetheless are still not widely used. The President is committed to expanding their reach. The models referenced assume little change in the penetration rate of existing energy-efficient equipment.

3. They ignore the President's Federal energy initiative: To reduce greenhouse gas emissions from Federal sources, the Department of Energy will spearhead a comprehensive effort that includes expanded performance contracting to make Federal buildings more energy-efficient, improved Federal procurement practices, establishment of a new level of excellence for Federal building construction and renovation, and partnerships to improve the energy efficiency of Federal aircraft, ships and vehicles.

4. They ignore electricity restructuring: To spur further efforts to clean our air and deliver a down payment on greenhouse gas emission reductions, while saving consumers billions, we will pursue a bold plan to restructure the energy sector. It is time to change the rules that are often more than 70 years old -- stifling innovations that can save money and impede newer, cleaner technologies.

5. They ignore international emissions trading. Two key components of the President's plan are his support for an international system of emissions permit trading, and his commitment that developing countries must participate in the international effort. International trading can substantially reduce the costs of emissions reductions.

6. They ignore the economic costs associated with climate change itself. Climate change will lead to increased flooding, sea-level rise, and other dislocation. So looking just at the impact of reducing emissions on GDP is misleading.

Finally, we all must admit there is much uncertainty over cost projections that are a decade or more in the future -- after all, a decade ago, we could never have predicted that we would now have an unemployment rate below 5 percent, core inflation below 2.5 percent, and a budget deficit substantially under \$50 billion. That's why the President has proposed a graduated, three-stage approach with regular reviews -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and followed by an evaluation period before the internationally binding period. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.

Q: Didn't the 5-labs study conclude that carbon prices would have to rise by \$50 to reach 1990 levels by 2010, and isn't that on the optimistic side?

A: The 5-Labs study examined a scenario in which there was no international trading and no electricity restructuring legislation, and concluded that the permit price would have to be \$50 to reduce emissions to 1990 levels by 2010 without such elements. But the President's plan emphasizes international trading and developing country participation, and includes a commitment to properly crafted electricity restructuring. [A DOE analysis that combines international permit trading and electricity restructuring with the results of the 5-Labs study suggests that a permit price of \$25 or lower in 2010 would allow the country to meet its target and timetable.]

Q: Doesn't the President's plan amount to the largest energy tax increase in history -- \$200 billion a year or more?

A: Not at all. The President's plan includes tax *cuts*, not tax increases. It does not involve tax increases at all.

Follow: but isn't a permit system just like a tax?

A: No. There are several critical differences between a permit system and a tax. [For example, a permit system provides insurance that a given quantitative target will be met, whereas a tax does not.] In any case, the permit system does not begin until we have accumulated ten years of experience with tax incentives, R&D, Federal energy efforts, early credit, and the other components of the President's initial action plan.

Q: How can you possibly reduce emissions to 1990 levels by 2008-2012 without imposing excessive costs on the economy?

A:

- The President believes that climate change is a critical challenge facing the country, and that if we make this a top priority, we can accomplish significant emissions reductions at low cost. In this effort, it would be irresponsible not to explore all possible avenues for low-cost emissions reductions. That's why the President has

proposed a graduated, three-stage approach -- starting with a period of early credit, tax incentives, R&D, and Federal efficiency improvements, and followed by an evaluation period around 2004. He has proposed regular economic reviews, to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.

Q: Won't this plan lead to massive shifts of U.S. industry and jobs abroad?

- A:
- No. The President has made very clear that we will not assume binding obligations without the participation of developing countries.
 - I would also note that non-tradeable sectors account for a substantial share of carbon emissions. Transportation and buildings, for example, account for roughly two-thirds of U.S. emissions. For these sectors, the "competitiveness" argument seems largely irrelevant.
 - In most manufacturing sectors, furthermore, energy costs are a small percentage of total costs. According to the 1995 Annual Census of Manufactures, energy costs - for manufacturing industries averaged just 2.2 percent of total costs.

Q: How is the president's initial action plan different from the Climate Change Action Plan that the Administration has already adopted?

A: The first stage of the President's climate change proposal differs from the Climate Change Action Plan in four critical ways:

- It includes substantially more funding. The President's proposal includes funding for carbon-reducing activities of \$5 billion over 5 years -- substantially more than current funding for the climate change action plan. Activities under the Climate Change Action Plan are estimated to reduce CO2 emissions by 95 million metric tons in 2010 -- and doubling the funding should lead to more reductions. [Total reductions needed in 2010 are 390 million metric tons.]

[Funding for the Climate Change Action Plan in FY 1995 was \$184 million, in FY 1996 \$158 million, and in FY 1997 \$163 million. Total funding for climate-related activities is somewhat higher -- but still less than \$500 million per year -- because items such as PNGV are not included in the Climate Change Action Plan definition.]

- Crucially, the President's proposal now includes binding targets. In expectation of these binding targets, firms and households will begin to adjust their behavior today -- a factor that was not present in the climate change action plan.

- To provide further incentives for firms to take action now, the President has indicated his strong support for developing an early credit program of appropriate rewards for those who take prompt early action.
- Finally, the President has indicated his support for environmentally-friendly electricity restructuring, which has the potential to reduce emissions.

Q: Hasn't the climate change action plan failed to reduce emissions?

A: Total emissions are higher than anticipated when the Climate Change Action Plan was adopted several years ago, because of stronger economic growth, lower energy prices, and reduced funding for Congress. But the *partial* effect of the activities under the current Climate Change Action Plan is still estimated to be a reduction in CO2 emissions of 32 million metric tons in 2000 and 95 million metric tons in 2010 (and *all* greenhouse gas emissions of 76 million metric tons in 2000 and 169 million metric tons in 2010). The President's three-stage plan includes substantially more funding than the Climate Change Action Plan -- and thus could produce substantially more reductions in carbon emissions. [390 million metric tons of CO2 reductions are needed in 2010 to move from business-as-usual to 1990 emissions levels.]

Q: Will you submit any agreement reached at Kyoto to the Senate for its advice and consent?

A: • We honor and respect the U.S. Senate's important role in providing advice and consent to the ratification of treaties. We would anticipate the need for Senate advice and consent to any international agreement adopted in Kyoto that would impose binding commitments on the U.S. to control emissions.

Q: Will the President or Vice-President go to Kyoto?

A: • We have not made final decisions about the membership of our delegation in Kyoto.

Q: What is the President proposing that developing countries do as part of his proposal?

A: • Today, the President emphasized that the United States will not assume binding obligations under the climate treaty without developing country participation.

• The President believes we can engage developing countries on this issue in ways that are good for them and good for us. He believes that developing countries have an opportunity to chart a different energy future -- one based on clean and cheap technologies.

- The President spoke about this issue in each country he visited in Latin America last week. Throughout his trip, he shared his conviction that we can and must work together on this problem, in ways that benefit us all. He plans to raise this issue with Jiang Zemin next week.

Q: Why did the U.S. propose such a modest target and timetable, which is weaker than any of the proposals to date, including from the European Union and Japan?

- A:
- The President has put forward a strong target that is realistic, achievable and pragmatic, not just rhetorical. We have backed up those proposals with a three-stage domestic implementation plan. And we have called for a comprehensive international framework that will ensure that all countries participate in a global effort to reduce emissions at the least cost.
 - Keep in mind that some of these other targets aren't all they seem to be. The EU derives enormous benefits from a 1990 baseline -- Germany, for example, gets to claim credit for all the cheap reductions that were a fortuitous consequence of reunification.
 - With regard to Japan, a careful examination of their proposal shows that we are not so far apart.

Q: Isn't it true that this proposal doesn't actually reduce emissions at all but instead just stabilizes them at a certain level?

- A:
- No. Our proposal involves real and meaningful reductions. Consider that under a business-as-usual scenario, U.S. emissions are predicted to be 28% above 1990 levels by 2010.
 - We also stipulate that further reductions, below the 1990 baseline, would be achieved in a second emissions budget period.

Q: Given how far apart countries seem to be in their stated positions, is it realistic to expect any kind of agreement in Kyoto?

- A:
- We are hopeful that all countries will come to Kyoto with an open mind, prepared to negotiate an agreement that provides real and achievable gains.
 - No agreement is better than a bad agreement. The U.S. will continue to insist that any international framework include realistic, achievable targets; flexible implementation mechanisms like emissions trading and joint implementation; and

the meaningful participation of developing countries.

Q: What happens if there is no deal in Kyoto?

- A:
- We are hopeful that all countries will come to Kyoto with an open mind, prepared to negotiate an agreement that provides real and achievable gains.
 - Even if we cannot reach agreement in Kyoto, climate change will remain a top priority issue for this President. The U.S. will continue to work on building support for a comprehensive international framework that involves all countries in a common effort to meet this important challenge.
 - And we will get busy on the elements of the President's plan that we can start right away.

Q: Does the climate change science justify near-term action? Aren't the uncertainties still too great?

- A:
- No. The fundamental science of climate change is clear. Greenhouse gas concentrations in the atmosphere are rising as a result of human actions. These increased concentrations are warming the planet, and unless we reduce our emissions, the effects on our climate are likely to become increasingly severe.
 - Uncertainties do remain. We are not sure exactly how fast the planet will warm or which regions of the world will suffer the worst impacts. Yet what we do know is more than enough to justify taking the kinds of sensible actions the President has proposed.
 - As for the skeptics who would have us do nothing, they represent a tiny fraction of the scientific community. On the other hand, the Intergovernmental Panel on Climate Change, including 2,000 of the world's premier climate experts, has underscored the seriousness of the climate change problem and the need for action.
 - As part of his proposal, the President has called for additional scientific studies focused on key areas, including a call to the National Academy of Sciences to examine the issue of establishing a long-term goal for stabilizing atmospheric concentrations of greenhouse gases.

PRESIDENT CLINTON'S CLIMATE CHANGE PROPOSAL

October 22, 1997

Global climate change is the premier environmental challenge and opportunity of the 21st century, and the risks it poses justify sensible preventive steps. Addressing this issue is one of the United States' greatest imperatives, for this and future generations. Recognizing the solid foundation of climate science, President Clinton is committed to strong and sensible action to reduce greenhouse gas emissions -- including realistic and binding emissions targets.

Key elements of President Clinton's climate change proposal include:

- **Binding Targets to Reach 1990 Emissions Levels by 2008-2012 and Reductions Below 1990 Levels in the 5-Year Period That Follows.** A critical component of the President's comprehensive framework is a realistic, achievable, and binding target of reducing greenhouse emissions to 1990 levels by 2008-2012 and reductions below 1990 levels in the 5-year period that follows.
- **\$5 Billion Program of Tax Cuts and R&D for New Technologies.** To spur energy efficiency and the development of new technologies, the President proposes a major new package of tax cuts and R&D spending amounting to \$5 billion over five years.
- **Industry-by-Industry Consultations and Early Credit.** The Administration challenges key industries to prepare plans over the next 9 months on how they can best reduce emissions. To provide an incentive for near-term actions to cut emissions, the President is committed to ensuring appropriate rewards for firms that act early.
- **Developing Countries Must Participate.** Climate change is a global problem, and requires a global solution. That's why the United States has spear-headed joint implementation projects, and the President has committed that the United States will not adopt binding obligations without developing country participation.
- **Broad-Based Domestic and International Emissions Trading System Begins After A Decade of Experience Has Accumulated.** The President is committed to a market-based emissions trading system, both domestically and internationally, that will harness the power of the market to reduce emissions to 1990 levels by 2008-2012. The trading system would begin after a decade's worth of experience with tax incentives, R&D, early credit, electricity restructuring, Federal efforts, and other measures.

BINDING TARGETS: The U.S. binding target is realistic: It seeks to return U.S. emissions to 1990 levels in the period 2008-2012 and reduce them further thereafter. We reject the European proposal for more stringent early reductions, as well as the "do-nothing" approach of some interests. The target is achievable: By providing incentives for early action to reduce emissions, attacking domestic energy inefficiencies, and putting in place a market-based emissions trading system, we can reach 1990 levels in the proposed time frame with minimal economic costs. And it is meaningful: Achieving 1990 levels in the period 2008-2012 would amount to almost a 30 percent reduction off a business-as-usual path, an important first step on the road toward stabilizing greenhouse gas concentrations in the atmosphere.

SOLID PRINCIPLES: The President's five climate change principles include: that the policies should be guided by science, rely on market-based, common-sense tools, that we should seek win-win solutions, that global participation is essential to addressing the global problem of climate change, and that we must have regular common-sense reviews of the economics and science of climate change.

SOUND AND SENSIBLE THREE-STAGE APPROACH: Reflecting his five key principles, the President's plan includes three stages: Stage 1 includes priming the pump through programs such as R&D, tax incentives, incentives for early action, and Federal leadership, and industry consultations. Stage 2 builds upon the first stage by including a review and evaluation in preparation for the permit trading system. Stage 3 -- which does not occur for a decade -- involves meeting binding targets through a domestic and international emissions trading program. The President is committed to working with labor and Congress to insure that we give proper assistance to any workers dislocated by the changes in energy usage inherent in any climate change plan.

INITIAL ACTION PLAN: The President's immediate action plan includes 9 elements:

1. *\$5 Billion in Tax Cuts and Federal R&D:* To spur energy efficiency and encourage the development and deployment of lower-carbon energy sources, the Administration supports a major new package of tax cuts and R&D spending amounting to \$5 billion over five years.
2. *Credit for Early Action:* To provide an immediate incentive for near-term actions, the President is committed to ensuring that firms acting early are rewarded appropriately.
3. *Industry-by-Industry Consultations:* The Administration challenges key industry sectors to prepare plans over the next 9 months on how they can best reduce emissions.
4. *Encouraging the Use of Energy-Efficient Products:* The President will complement his tax incentives, commitment to early action credit, and industry consultations by engaging in a broad-based effort to expand the use of *existing* energy-efficient technologies.
5. *Federal Procurement and Energy Use:* The Department of Energy will spearhead a comprehensive effort to reduce greenhouse gas emissions from Federal sources.
6. *Electricity Restructuring:* To deliver a significant downpayment on emission reductions, while saving consumers billions, we will pursue a bold plan for electricity restructuring.
7. *Setting a Concentration Goal:* The United States supports developing a specific, long-term concentration goal with the assistance of the National Academy of Sciences and other bodies.
8. *Bilateral Dialogues:* In addition to pursuing agreement in Kyoto, the Administration will pursue bilateral dialogues with key developing countries to promote clean energy.
9. *Economics and Science Reviews:* The President proposes regular scientific and economic reviews. These reviews will ensure that policy-makers have the best possible information on climate change.

WIN-WIN: There are numerous win-win solutions to reducing carbon emissions. For example, a breakthrough in fuel cell technology announced yesterday will clear the way toward developing cars that are three times as efficient as today's models -- cutting pollution while also cutting driving costs.

INITIAL CLIMATE CHANGE ACTIONS

October 22, 1997

President Clinton has proposed nine immediate actions to begin addressing climate change:

- 1. Tax Cuts and Federal R&D:** To spur energy efficiency and the development of lower-carbon energy sources, the Administration supports a major new package of tax cuts and R&D spending amounting to \$5 billion over five years. Many of the ideas from the recent report of the President's Committee on Science and Technology (PCAST) will be considered in constructing this package.
- 2. Credit for Early Action:** To provide an immediate incentive for near-term actions to cut emissions, the Administration is committed to ensuring that firms which act early are rewarded appropriately. We will work with companies to build a program that appropriately rewards those who take prompt and early actions before the beginning of the mandatory emissions budget period in Stage 3.
- 3. Industry-by-Industry Consultations:** The Administration challenges key industry sectors to prepare plans over the next 9 months on how they can best reduce emissions, including how the Federal government can remove regulatory hurdles that discourage energy efficiency. The Administration will work in partnership with industry to develop sensible efficiency standards in a variety of areas.
- 4. Encouraging the Use of Energy-Efficient Products:** As the Department of Energy's 5-Labs study illustrates, many existing technologies produce win-win solutions to reducing carbon emissions -- but nonetheless are still not widely used. The President is committed to expanding their reach. He will therefore complement his other programs by engaging in a broad-based effort to expand the use of *existing* energy-efficient technologies -- while also spurring the development of *new* technologies.
- 5. Federal Procurement and Energy Use:** To reduce greenhouse gas emissions from Federal sources, DOE will spearhead a comprehensive effort that includes expanded performance contracting to make Federal buildings more energy-efficient, improved Federal procurement of energy-efficient technology, and partnerships to improve the energy efficiency of Federal aircraft, ships and vehicles. Federal agencies will also be called upon to assess emissions in major initiatives.
- 6. Electricity Restructuring:** To spur further efforts to clean our air and deliver a downpayment on greenhouse gas emission reductions, while saving consumers billions, we will pursue a bold plan to restructure the energy sector. It is time to change the rules that are often more than 70 years old -- stifling innovations that can save money and impede newer, cleaner technologies.
- 7. Setting a Concentration Goal for Greenhouse Gases in the Atmosphere:** The goal of the existing climate treaty is to stabilize concentrations of greenhouse gases, but the specific concentration has never been defined. The U.S. supports developing a specific, long-term goal, with the assistance of the National Academy of Science and other appropriate bodies.
- 8. Bilateral Dialogues:** In addition to pursuing agreement in Kyoto, the Administration will pursue bilateral dialogues with key developing countries to promote clean energy.
- 9. Economics and Science Reviews:** The President proposes regular scientific and economic reviews, to ensure that policy-makers have the best possible information on climate change.