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THE WHITE HOUSE
WASHINGTON

June 18, 1997

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Tarullo
McGinty
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MEMORANDUM FOR THE PRESIDENT

FROM: TODD STERN *DS*

SUBJECT: Climate Change

The attached McGinty/Tarullo memo seeks your approval for a course of action on the climate change issue designed to take you through the Denver Summit and the UNGA Special Session on the environment and to lay the groundwork for the December meeting in Kyoto, where negotiations on a new treaty are supposed to conclude.

Decision point. The question for now is how specific a position you should articulate in Denver and New York with respect to emission levels of greenhouse gases. As a matter of substance, most of your Cabinet would support your calling for "stabilizing emissions in the medium term" -- i.e., returning greenhouse gas emissions to 1990 levels by 2005-2020. However, the consensus of your advisors is that such an announcement would not be tenable at this time in view of the strong opposition it would provoke among significant business sectors, labor and Members of Congress, and the lack of public support for concerted action. (Even relatively moderate action, such as returning emissions to 1990 levels by 2010, could have substantial short-term economic costs.)

Consequently, your advisors recommend that you make strong, but non-specific statements about climate change at both the Denver Summit and the UNGA meeting (suggested UNGA language appears at p. 4) and that these events be followed by an intensive effort to educate and persuade the American public about the great importance of this issue in order to build support on the Hill for a strong American position. We would aim to decide our negotiating position for Kyoto by the early fall. This approach will likely subject you and the Vice President to intense criticism from the environmental community, which believes you should make specific emission commitments now. And European leaders such as Blair and Kohl will also criticize our lack of specifics. But the alternative appears worse -- an immediate call for specific reductions that would be sharply attacked by large parts of the business community, rally little public support, and have no chance of endorsement on the Hill.

(Several appendices are attached to the memo. I am sending up Appendix E only -- a draft action plan for engaging the American public. If you want to see any of these other appendices, let me know. Appendix A sets forth four options for specific emission reduction statements, but, as noted, the consensus is that you should not make *any* such specific statement at this time; Appendices B and C review environmental impacts and economic analysis respectively; Appendix D is a more detailed general review of the issue.)

Approve approach ☒

Disapprove ☐

Discuss ☐

THE WHITE HOUSE
WASHINGTON

June 18, 1997

MEMORANDUM FOR THE PRESIDENT

FROM: KATHLEEN A. MCGINTY
DANIEL K. TARULLO

'97 JUN 18 AM 9:17

SUBJECT: UPCOMING INTERNATIONAL EVENTS AND CLIMATE CHANGE

I. Action-Forcing Event

Over the next few weeks, you will have two high-profile events that focus attention on U.S. climate change policies: the Denver Summit of the Eight (June 20-22) and the United Nations General Assembly Special Session on Environment and Development (you are speaking on June 26). To date, the United States has called for binding emissions targets, flexibility in meeting those targets and the participation of all countries under the climate treaty, but has not signaled which specific emissions levels would be acceptable. Negotiations are set to conclude this December in Kyoto. Other countries and domestic constituencies are calling on the U.S. to state its views.

Your advisers are evaluating the specifics of a U.S. negotiating position, with some differences among them. However, there is a consensus that, even at the cost of significant criticism from other countries and environmental groups, it would be imprudent to take a specific position on emissions levels in the upcoming events. Instead, you should make a strong statement about the need to address the problem of climate change and begin an intense process of personally communicating with the American public on this issue with the objective of articulating a substantive policy position in the fall.

II. Background

Climate change may be the most significant economic and environmental policy issue to be addressed in the second term. There is now scientific consensus that human activities (primarily the burning of fossil fuels) are having a discernible influence on the global climate and that "climate change is likely to have wide-ranging and mostly adverse impacts on human health". The implication is that greenhouse gas concentrations must be held to responsible levels in the long term to avoid dire consequences. Greenhouse gas concentrations are at now their highest levels in 200,000 years and, absent policy interventions, concentrations at the end of the next century are predicted to be at a 50 million year high. Impacts are predicted to include higher temperatures (global average temperatures are predicted to increase 2-6.5 degrees F. by 2100), sea level rise (threatening low-lying areas), spread of infectious diseases, and more highly variable weather (with increased frequency of severe weather events such as droughts and floods).

The U.S. is the world's largest emitter of greenhouse gases, with roughly 25% of the world's total. Domestic greenhouse gas emissions have been growing by a bit over 1 percent per year, so that today's emissions are about 10 percent higher than in 1990. In many developing countries, emissions growth rates are higher, but per capita and overall emissions levels are lower. The developed countries are responsible for much of the accumulation of greenhouse gases in the atmosphere and currently are the largest emitters. By 2020-2040, however, the developing countries will surpass the developed countries in terms of emitting greenhouse gases. Since global climate is affected by greenhouse gas concentrations in the atmosphere, and since the efforts by any one country to reduce its emissions cannot have much of an effect on global concentrations, a sensible approach would call on all countries to play a role. The U.S. has urged developing countries to accept significant obligations (short of quantitative emissions targets) in the international treaty negotiations. To date, there has been little international support for the U.S. position on developing countries.

In general, market-based policies are believed to be the most efficient means to reduce greenhouse gas emissions, because these policies promote flexibility and minimize economic costs. The U.S. has urged that the climate change treaty promote maximum domestic flexibility in all countries, establish a system where countries with quantitative emissions targets can trade emissions rights, and establish a system of joint implementation, where developed and developing countries can undertake joint efforts to reduce emissions wherever the cost is lower.

In a Principals meeting to consider the U.S. position on emissions levels under the climate treaty, most of the participants indicated support for "stabilizing emissions in the medium term." (In the parlance of the climate change negotiations, "stabilizing" means returning greenhouse gas emissions to 1990 levels and "medium term" means 2005-2020). But many of the agencies and offices represented conditioned their support on success in achieving other elements of the U.S. negotiating position (e.g., international emissions trading, participation of developing countries). Several participants felt that further analytic work was needed, and expressed a desire to see further options developed.

In the view of many members of your Cabinet, calling for emissions to be stabilized at 1990 levels in the medium term and emphasizing the importance of other elements of the U.S. position would allow you to take the high ground. You could commit the U.S. to meaningful emissions reductions, while insisting on other principles we consider vital to an agreement. This would provide flexibility for future development of our position and, given the likely difficulty in convincing developing countries to participate more fully under the climate treaty, also offer a principled basis for walking away from an agreement in Kyoto should we decide it is in our interest to do so.

However, as several of your economic advisers noted, even the seemingly moderate goal of returning emissions levels to 1990 levels by 2010 would entail economic policy interventions greater than any we have undertaken during your Presidency. Even with the kind of flexibility components proposed by the United States, market-based policies designed to reduce greenhouse gas emissions significantly are likely to raise domestic fuel prices by significant amounts and to have particularly adverse effects on the coal industry. The result would be lower economic growth, with the most

serious effects in the earlier years. Thus, emissions control policies impose significant short term economic costs in order to achieve distant (though potentially enormous) environmental benefits.

In the view of some of your advisers, there is strong evidence that total costs could be lowered significantly if policies were put in place to emphasize investment in productivity-enhancing technologies. A number of economic advisors believe that this use has not been established. Some of the technologies envisioned would not have a major impact by 2010, but could have significant impact in the decade that follows. An expanded program of research and policies encouraging innovation could have low costs and achieve broad political support.

The politics of this issue are difficult, at best. For many environmental groups, strong action on climate change is a litmus test of your environmental policy. If you fail to speak decisively on this issue at the Summit or the UN General Assembly Special Session, their criticism will be intense. European leaders such as Blair and Kohl will probably be both ambitious in their proposals and critical of our lack of specifics. On the other hand, much of the business community is strongly opposed to action that would significantly reduce greenhouse gas emissions. Fossil fuel and heavy manufacturing companies are poised to attack any policies that might be supported by environmental groups. Organized labor is increasingly opposed to strong actions, as well, largely in deference to the concerns of the United Mine Workers. Farmers are likely to oppose any policies that would increase energy prices. Southern and western Republicans in Congress are very skeptical about policies to constrain greenhouse gas emissions, as are Midwestern and coal state Democrats. Indeed, Senator Byrd currently has 45 signatures on a resolution requiring developing country obligations before U.S. agreement in Kyoto.

III. Recommendation

Your advisers believe it is necessary to undertake a serious educational effort to convince the American public that climate change is an important long-term issue that requires the United States to institute policy changes. Such an effort should be an interactive process, with you and your Cabinet members taking lead roles in listening to the public, elected officials, and interest groups, and then fashioning an appropriate policy response. Your advisers believe that such a process is necessary to develop a workable political consensus in the country for an effective climate change policy. If this consensus is not achieved, it will be virtually impossible to have an international climate change treaty limiting domestic greenhouse gas emissions ratified by the Senate in the foreseeable future.

Your advisers recommend that you address climate change at both the Denver Summit and the UN General Assembly Special Session. At Denver, as you have done in the past, you should discuss the subject in strong terms, noting that the science is quite clear on the scope of the climate change problem. You also should note that there are extensive differences in the various proposals made to begin the process of achieving a solution. You can sketch out the importance of creating a long-lasting framework for implementing worldwide climate change policies, because this is an issue of vast scope (covering many decades and all the countries on the earth). And you can call on the Eight to work together to ensure that the treaty negotiated at Kyoto is acceptable to all members.

At the UN General Assembly Session, your advisers recommend that you again discuss the statement in strong terms, signaling your resolve to address this issue. They recommend the following language:

There is no more serious issue than climate change, and it is clear that we will need seriously and significantly to reduce our emissions of greenhouse gases beginning with a strong agreement in Kyoto.

We must remember that our goal is to stabilize concentrations of greenhouse gases in the atmosphere at an acceptable level, a task that must begin now, but which will require continuing sustained effort over many decades. So it is important that we set up a system that will work -- that will allow us to reduce our emissions at the lowest possible cost so that we can achieve the maximum protection of the environment. And it is also important that next steps send a strong signal of our intent, so that governments and industries can make significant investments in the new technologies that will be required if we are to achieve our ultimate goal. And finally, although those of us in the developed world who emit the largest quantities of these gases must take the lead, all countries must participate in moving toward the solution.

Your advisers recommend that you then begin to outline your personal involvement in the education campaign that will be necessary to build domestic acceptance for any meaningful emissions constraints. Although gaining consensus across the political spectrum is not possible on this issue, it may be possible to enhance support significantly among centrist constituencies and the public at large. Notwithstanding that you are speaking to a UN audience, you should direct your remarks to the American public.

You could announce specific means to pursue this dialogue, including your plans to host a White House Conference on Climate Change in September to bring together elected officials, business, labor, and environmental and scientific leaders, academics, and representatives of the public to discuss climate change policy. You could announce that this White House conference would be preceded by a series of regional conferences -- each hosted by members of your Cabinet. These high-level conferences would serve to educate the American public and bring forward ideas on how best to address climate change. A core goal of this and other efforts would be to break through to the American people with the message that "Climate change is an important issue for you and your family -- one that Bill Clinton believes we must address in a responsible way." Meanwhile, analytic work on policy alternatives would continue, informed by the public debate. We would aim to arrive at a complete U.S. negotiating position by the early fall.

You should be aware that this approach may lead to intense criticism of you and the Vice President by environmental groups. These groups have been calling on the U.S. to state a specific position on emissions levels, and will consider strong rhetoric and promises to engage personally in the issue to be inadequate. Some commentators will equate your approach with that of President Bush. (Bush refused to agree to any emissions levels in Rio. You reversed that position in April, 1993 and voluntarily committed the U.S. to reducing emissions to 1990 levels by the year 2000). However, your advisers believe that refraining from announcing specific goals until early fall is necessary to

develop the political and public consensus required to undertake any meaningful policy action on climate change. The alternative set of actions (making statements in the next few weeks supporting emissions constraints perceived as strong) would lead to harsh and lasting criticism from business and labor, in the opinion of your advisers. The resulting public and Congressional reaction could be so severely negative that you might be unable to take any significant policy steps on climate change. Moreover, criticism from these sources also could place other policy initiatives (environmental and others) in jeopardy.

Several appendices provide additional information. Appendix A lists five options identified to the Cabinet recently for statements by the President on climate change. Material analyzing the projected environmental impacts of these options is attached as Appendix B. Material summarizing the projected economic impacts of Options 1, 2, 3 and 4 are presented in Appendix C. Additional background material on climate change (including a discussion of domestic policy options) is attached as Appendix D. Finally, Appendix E sets forth possible elements of a strategy for you to engage the American public on this issue in the weeks and months ahead.

IV. Decision

That you approve the course outlined above.

_____ Approve _____ Disapprove _____ Discuss

APPENDIX E
CLIMATE CHANGE:
THE PRESIDENT ENGAGES THE AMERICAN PUBLIC

Overall Goal: Show the American public that President Clinton is determined to combat climate change in a way that deserves broad support.

Overall Strategy: A Three Pronged Approach

- A. President's Vision Set Forth at UNGA Special Session
- B. Build Public Awareness Through POTUS and VPOTUS Events
- C. Outreach to Policy Community

Implementing the Strategy:

A. President's Remarks at UNGA Special Session: Intensive Engagement to Chart Path Forward

Goal: Set President's vision for approaching climate change and begin drawing business, labor and environmentalists into a cooperative process on how best to move forward.

B. Build Public Awareness Through POTUS and VPOTUS Events

Goal: Elevate public understanding of the importance of changing climate and build support for national policy priorities developed cooperatively through an open dialogue with the range of affected constituencies.

Strategy:

i. Presidential Events:

- a. 3 radio addresses by end of September (first possibly on June 28)
- b. Message-of-the-day events; for example:
 - Kick-off of Million Solar Rooftops (Virginia PV plant or sites in SW/West Coast)
 - Visit Chicago's Board of Trade SO₂ Trading Center
 - Visit a GLOBE school site
 - Visit the Denver Clean Car Exhibit at G-8
 - Visit New York Harbor to highlight sea level rise issues
 - Visit National Park where fragile ecosystems are threatened.

- ii. **Vice Presidential Events:**
 - a. Site visits to technology demonstration projects (e.g. biomass or wind demonstrations in Iowa or Minnesota)
 - b. Announce a New Clean Cities participant (Houston, Phoenix, New York City)
 - c. Partnership for Advanced Housing Technology (new development at Stapleton Airport in Denver or southern California/Florida in disaster vulnerable areas)
 - d. Visit a Federal facility participating in the Federal Energy Management Program
- iii. **Regional and National Workshops:** Conduct three regional conferences leading to a White House Conference. Three to five cabinet members and senior White House staff would participate in each. Conferences conducted in roundtable format, chaired by senior Cabinet members. Each would begin with key presentations, followed by open dialogue. Open to press and encourage live C-Span coverage. Conduct press backgrounders before and after. Involve regional corporate CEO's, academics, environmental & labor leaders, governors, other state & local leaders, religious leaders and members of Congress. All conferences would be comprehensive, but each would have a special focus, tailored to region.

Locations:

- East: New Orleans, Charleston, Miami, or the New Jersey shore. Highlight: Coastal storms damage, infectious disease risk and forest system impacts in southern and eastern states.
- Mid: Columbus, Detroit, Chicago, or Indianapolis. Highlight: Agriculture shifts, coal community impacts, heavy manufacturing impacts and opportunities.
- West: Sacramento, Phoenix, Portland, Seattle or San Francisco. Highlight: Water resource conflicts, public lands impacts, technology response opportunities.
- National: White House/DC, Baltimore, Richmond, New York. Highlight: Comprehensive integration of concerns into a need and pathway for action.

C. Outreach to the Policy Community

Goal: Engage policy community (CEOs and Congress in particular) in design of policies that comprehensively address climate change mitigation and that garner their support.

Strategy:

- i. President and VP should each reserve 10 - 12 slots for climate orientation briefings and meetings with industry leaders between now and Labor Day. Cabinet members should be given key responsibilities for particular sectors/industries. Should schedule in close coordination with National Dialogue meetings. Also encourage Cabinet members to host at least one public meeting and make a major speech.
 - a. Examples for President: meeting with Nobel laureates, meeting with religious leaders, meet with Congressional leaders to stress environmental imperative.
 - b. Examples for Vice President: Dinner with Congressional leaders; Lead a Congressional visit with scientific leaders to the Smithsonian's climate change exhibit.
- ii. **Industry Roundtables:** Series of CEO meetings with POTUS, VP, Cabinet members & other senior staff. Offer our policy inclinations, get feedback and ask for their ideas on what's missing. Examples:
 - a. Invite Norm Augustine, CEO of Lockheed Martin, to bring 10-15 CEOs of major environmental technology firms for meeting.
 - b. Invite John Browne, CEO of BP, to bring 10-15 oil/gas CEOs for meeting.
 - c. Invite R. Linn Draper, CEO of AEP, to bring 10-15 moderate electric utility CEOs for meeting.
 - d. Invite Ken Lay, CEO of Enron, and Dennis Bakke, CEO of AES, to bring 10-15 independent power developers for meeting.
 - e. Invite Michael Bonsignore, CEO of Honeywell, to bring 10-15 energy efficiency technology firms for meeting.
 - f. Invite 10-15 renewable energy CEOs for meeting.
- iii. Disseminate broadly the results of the review by the President's Advisors on Science and Technology (PCAST). The PCAST has been challenged to produce an energy strategy that will meet the "energy and environment needs of the next century" by October.

- iv. Open meeting with the Washington, D.C., policy community on peer-reviewed economic analysis and other information to be used in the regional conferences.

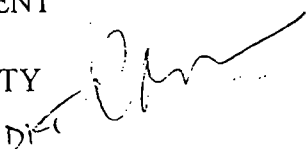
Notional Schedule:

June 24-7:	OSTP South East Regional Workshop (Vanderbilt) - <i>scheduled</i>
June 25:	VP Attends OSTP Impacts Workshop (Nashville) - <i>scheduled</i>
June 26:	President Speaks at UNA Special Session - <i>scheduled</i>
June 27:	President meets with CEO's of Big 3 automakers - <i>scheduled</i>
June 28:	First Presidential radio address to speak to climate change, perhaps with discussion of transportation sector (mtg. with Big 3 on 6/27), including the results of SunRayce 97 (pv powered car race) - <i>TBD</i>
June/July:	VP hosts Congressional Dinner - <i>TBD</i>
Early July:	Public Release of Economic Analysis - <i>TBD</i>
Early July:	Cabinet Orientation - <i>TBD</i>
July 14-16:	OSTP North West Regional Workshop (Seattle) - <i>scheduled</i>
July/August:	Industry Roundtables with President, Vice President, Cabinet and industry leaders - <i>TBD</i>
Late July:	Eastern Regional Meeting - <i>TBD</i>
Mid August:	Mid Regional Meeting - <i>TBD</i>
Late August:	Western Regional Meeting - <i>TBD</i>
Late September:	White House National Conference - <i>TBD</i>
September:	President's Remarks to UNA - <i>TBD</i>
September 3-5:	OSTP New England Regional Meeting (U of NH) - <i>scheduled</i>
Nov. 10-12:	OSTP National Impacts Workshop at NAS - <i>scheduled</i>
October:	PCAST strategy due

THE WHITE HOUSE
WASHINGTON

June 18, 1997

MEMORANDUM FOR THE PRESIDENT

FROM: KATHLEEN A. McGINTY
DANIEL K. TARULLO 

SUBJECT: UPCOMING INTERNATIONAL EVENTS AND CLIMATE CHANGE

I. Action-Forcing Event

Over the next few weeks, you will have two high-profile events that focus attention on U.S. climate change policies: the Denver Summit of the Eight (June 20-22) and the United Nations General Assembly Special Session on Environment and Development (you are speaking on June 26). To date, the United States has called for binding emissions targets, flexibility in meeting those targets and the participation of all countries under the climate treaty, but has not signaled which specific emissions levels would be acceptable. Negotiations are set to conclude this December in Kyoto. Other countries and domestic constituencies are calling on the U.S. to state its views.

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In the view of many members of your Cabinet, calling for emissions to be stabilized at 1990 levels in the medium term and emphasizing the importance of other elements of the U.S. position would allow you to take the high ground. You could commit the U.S. to meaningful emissions reductions, while insisting on other principles we consider vital to an agreement. This would provide flexibility for future development of our position and, given the likely difficulty in convincing developing countries to participate more fully under the climate treaty, also offer a principled basis for walking away from an agreement in Kyoto should we decide it is in our interest to do so.

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III. Recommendation

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You could announce specific means to pursue this dialogue, including your plans to host a White House Conference on Climate Change in September to bring together elected officials, business, labor, and environmental and scientific leaders, academics, and representatives of the public to discuss climate change policy. You could announce that this White House conference would be preceded by a series of regional conferences -- each hosted by members of your Cabinet. These high-level conferences would serve to educate the American public and bring forward ideas on how best to address climate change. A core goal of this and other efforts would be to break through to the American people with the message that "Climate change is an important issue for you and your family -- one that Bill Clinton believes we must address in a responsible way." Meanwhile, analytic work on policy alternatives would continue, informed by the public debate. We would aim to arrive at a complete U.S. negotiating position by the early fall.

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IV. Decision

That you approve the course outlined above.

_____ Approve

_____ Disapprove

_____ Discuss

APPENDIX A

OPTIONS IDENTIFIED TO PRINCIPALS AT RECENT MEETING

Earlier this month, we identified several options for principals concerning the U.S. position on emissions levels in the international climate change negotiations. Each option was defined in terms of a broad directional statement and further described by a particular combination of emissions levels and timing, to help clarify the meaning of the directional statement. Most agencies and offices (State, EPA, Energy, Agriculture, Transportation, Commerce, AID, CEA and the U.S. Ambassador to the United Nations) supported Option 2 below. Many of these offices and agencies conditioned their support for Option 2 on success in achieving other elements of the U.S. negotiating position (e.g., international emissions trading, participation of developing countries, etc.). Treasury and OMB voiced significant concerns.

In the parlance of the climate change negotiations, “stabilizing” means returning greenhouse gas emissions to 1990 levels and “medium term” means 2005-2020.

Following are the five options, with pros and cons, identified to principals:

Option 1: Call for “significantly reducing emissions in the medium term.”

Such a statement would be interpreted to be consistent with the E.U. proposal (a 10-15% cut from 1990 emissions levels by 2010).

Pros:

- Environmental benefits could be large. EPA estimates non-climate benefits (such as reducing fine particles and ozone) would be tens of billions of dollars.
- Many environmental groups would be pleased.

Cons:

- Could impose very large costs on the U.S. economy. Although these effects might ultimately be offset, GDP in 2005 could be reduced by 0.1-1.0% (with international emissions trading) and 0.1-2.0% (without). The price of gasoline could rise by 20-25 cents per gallon (with international emissions trading) to 35-50 cents (without).
- If program were implemented through a domestic emissions trading program in which all permits were auctioned, permit revenues could be in the range of \$110 billion (with international trading) to \$270 billion (without). (Annual permit revenues is not a measure of economic loss, but is one indicator of structural changes in the economy. A domestic implementation scheme could be designed to raise *no* permit revenues).
- Business and labor would be very strongly opposed.
- Without significant changes in the political landscape, the prospects for ratification by the Senate in the next several years would be close to zero.

Option 2: Call for “stabilizing emissions in the medium term and reducing thereafter.” Emphasize that flexibility and the participation of all nations (including developing countries) are essential to addressing this problem.

This option is consistent with stabilizing emissions at 1990 levels by 2010 (though, as noted, “medium term” is interpreted as being between 2005 and 2020).

Pros:

- Allows you to take the high ground: committing the U.S. to meaningful emissions reductions, while insisting on other principles we consider vital to an agreement.
- Provides considerable flexibility for future development of our position. This option is consistent with stabilizing emissions at 1990 levels anywhere between 2005 and 2020.
- Environmental benefits (both climate and non-climate) could be significant. EPA estimates non-climate benefits (such as reducing fine particles and ozone) would be tens of billions of dollars.
- Some environmental groups would be pleased; others would complain of lack of U.S. leadership.

Cons:

- Overall economic impacts of this option could be significant. Although these effects might ultimately be offset, GDP in 2010 could be reduced by 0.2-0.6% (\$20-60 billion) and consumption by .3-1.0%. The price of gasoline could rise by 10-15 cents (with international emissions trading) or 20-40 cents (without).
- Dislocation in some sectors and regions (especially coal states) could be large and long-lasting.
- If program were implemented through a domestic emissions trading program in which all permits were auctioned, permit revenues could be in the range of \$60 billion (with international trading) to \$190 billion (without). (Annual permit revenues is not a measure of economic loss, but is one indicator of structural changes in the economy. A domestic implementation scheme could be designed to raise *no* permit revenues).
- Most business and labor groups would be opposed, although some might support if the policy were coupled with other features they find attractive.
- Without significant changes in the political landscape, the prospects for ratification by the Senate and passage of implementing legislation in the next several years would be poor.

Option 3: Call for “*beginning* to reduce emissions by 2005 and stabilizing emissions by the end of the medium term, with further reductions thereafter.”

This option envisions an international regime that mandates starting emissions reductions earlier than Option 2, but reducing emissions to 1990 levels over a longer period of time. While less constraining than Option 2, the rhetoric used to describe this option (other than the 2005 component) could be substantially identical to the rhetoric for Option 2.

Pros:

- Delaying the most stringent reductions would reduce economic costs, by allowing capital stock to turn over at a natural rate and technology to improve.
- Calling for concrete action before 2010 could be portrayed as more activist. Some agencies (not including the State Department) believe this could enhance our efforts to obtain agreement on international emissions trading and developing country participation.

Cons:

- Would be criticized by environmental community as showing lack of leadership by delaying stabilization.
- Would be criticized by moderate business groups (e.g., chemical companies, some utilities) who strongly oppose any target before the year 2010.
- Would be criticized by more hard-line business groups (fossil fuel producers, heavy manufacturing) and many in organized labor who oppose any action on climate change.
- In the view of the State Department and other agencies, would jeopardize our ability to achieve flexibility provisions (e.g., international emissions trading, joint implementation) and developing country participation in international negotiations.
- Without significant changes in the political landscape, the prospects for ratification by the Senate in the next several years would be poor.

Option 4: Call for “eliminating emissions *growth* in the medium term, on the way to stabilization and eventual reduction of emissions.”

For example, emissions would peak in 2010-2020, return to 1990 levels in the longer term (i.e., after 2020) and decline thereafter.

Pros:

- Economic costs would be relatively mild. Some economists would view this emissions path as consistent with one that would balance costs and benefits of climate change policy.
- Opposition in the business and labor communities would be mild.
- There is a chance an option along these lines would be ratified by the U.S. Senate in the next several years without major political changes.

Cons:

- With this option, there is no chance of obtaining international agreement on our "flexibility" or "developing country participation" proposals.
- Criticism from other countries and U.S. environmental groups would be very strong. Environmental groups would equate your performance in New York with George Bush's performance at the 1992 Rio Earth Summit.
- Environmental benefits (both climate and non-climate) would be modest.
- Some economists (especially those who emphasize the environmental benefits of climate change policies) would criticize this option as inadequate.

Option 5: Call for "strong action on climate change" and "agreement in Kyoto." Say that the United States is continuing to study the issue of emissions levels and will elaborate on its position at a later time.

This roughly repeats prior statements by you and other administration officials.

Pros:

- Leaves options open for future decisions.
- Allows additional refinement of economic modeling runs before our position is announced.

Cons:

- Would be strongly criticized by environmental groups, who would equate your performance in New York with George Bush's performance at the 1992 Rio Earth Summit.
- Without more definition of our position on emissions levels soon, our ability to achieve agreement to flexibility and developing country provisions in Kyoto will be seriously impaired.

APPENDIX B

ENVIRONMENTAL IMPACTS OF OPTIONS

1. Climate Change Impacts

Absent policy interventions, atmospheric greenhouse gas concentrations will increase during the next century to levels unknown on this planet for 50 million years. To avoid such extraordinary increases, *global* greenhouse gas emissions must begin to decline from projected levels early in the next century. For *global* emissions to begin to decline in this time frame, developed countries must move quickly to reduce their emissions, setting the stage for future rounds of negotiations.

In the short-term, the difference between the options presented in terms of additional greenhouse gas concentrations in the atmosphere is small. However, institutional and political factors will lead to important differences between these options. Options 3 and 4, for example, are unlikely to lead developing countries to participate meaningfully in the negotiating process. Option 1, on the other hand, may be so stringent that many businesses would simply work to block implementation rather than restructure activities to comply.

For the world realistically to avoid a doubling of pre-industrial greenhouse gas concentrations (to 550 ppm) in the next century, *global* emissions must deflect from a "business-as-usual" path by about 2010. For the world realistically to avoid a near-tripling of greenhouse gas concentrations (750 ppm), *global* emissions must deflect from this "business-as-usual" path by 2020. Even assuming steep reductions in greenhouse gas emissions in distant decades (which our children and grandchildren may or may not be able to achieve), reductions must begin soon to avoid serious environmental damage.

2. Other Environmental Impacts

Any of the options discussed here could have considerable environmental benefits unrelated to climate change. Measures to reduce greenhouse gas emissions would also reduce emissions of SOX, NOX and toxic pollutants such as mercury. Such measures would contribute significantly to meeting potential Clean Air Act standards for particulate matter and ozone. According to EPA estimates, monetizable benefits of reducing fine particles and ozone in connection with Option 1 or Option 2 could total tens of billions of dollars per year by 2010.

APPENDIX C ECONOMIC ANALYSIS

1. Introduction. An Interagency Analytical Team (IAT) has analyzed the economic impact of various emissions constraints, using three different models. The results are broadly consistent with the considerable literature on this subject.

Economic models are by nature imprecise, especially when projecting over several decades. The models' limitations are exacerbated by the complex and far-reaching effects of any policy aimed at reducing greenhouse gas emissions. Some agencies believe it is important to stress that similar modeling in the past with respect to SO₂ controls under the Clean Air Act dramatically overstated costs, due to unforeseen factors. Nevertheless, models can provide insight into the economic costs and benefits of various policy alternatives.

The "base case" modeling results presented here make the following key assumptions:

- Policy options are implemented by 2010, with a ten-year phase-in period.
- Domestic emissions reductions are achieved by an emissions trading system, where certain entities responsible for greenhouse gas emissions must have a permit, a limited number of permits are sold at auction, and permits may then be traded.
- All revenues raised through the auction process go to reduce the Federal budget deficit (or increase the budget surplus).
- There are no transaction costs nor compliance problems with the domestic emissions trading system.
- Monetary policy acts to offset the effects of reduced economic activity through lower interest rates.
- The path of technological progress over the forecast period has energy use per unit of GDP decreasing more rapidly than observed in most historical periods, consistent with increased emphasis on greenhouse gas emissions and energy efficiency.
- The rest of the economy remains unchanged, which will not occur over the long forecast period used. Unexpected shocks to the economy are likely to have very large effects on the estimates presented.

Results are presented for Options 1 through 4, but the figures associated with Options 3 and 4 should be viewed as illustrative only. These figures were not derived from specific IAT modeling of the emissions constraint policies listed as examples for these Options because the IAT has not examined any policies with emissions budgets for 2020 or later. The figures presented are no more than educated guesses, generated by referring to emissions constraints that were modeled. The IAT has the capability to model emissions policies that have targets for 2020 or later and will do so if policy makers think the effort would be helpful.

Three additional caveats should be noted. First, the base case masks disagreements among agencies over likely rates of technological innovation and diffusion. A faster rate of progress in energy-efficiency and carbon-reducing technologies could reduce estimated economic costs by as much as one-third relative to the base case estimates. However, a slower rate of technological progress than assumed in the base case would increase economic costs noticeably. Second, to the extent that domestic greenhouse gas constraints are not implemented through an emissions trading regime, but instead through less flexible regulatory programs, economic costs will be greater than those shown. Third, to the extent that the distribution of emission permits does not support increased levels of capital investment compared to the baseline, the long-term economic results will be less favorable than estimated by the models.

2. Results. As noted above, the United States has strongly supported international trading of greenhouse gases. With trading, countries with high abatement costs (e.g., the United States and Western Europe) could purchase emissions reductions in countries with lower abatement costs (e.g., in the former Soviet Union). Incorporating a well-functioning international market in emissions permits in the modeling reduces estimated energy price increases significantly. With international emissions trading, the United States is estimated to pay about \$5 billion per year to other developed countries (including those in the former Soviet Union) to purchase permits, avoiding greater expenditures in compliance costs.

Results with international trading

Table 1 presents results from the base case with trading of emissions permits among Annex I nations. The trading takes place among all Annex I nations. (In countries where emissions have fallen below 1990 levels, such as in some parts of the former Soviet Union, trading is assumed to be allowed only to the extent there are corresponding emissions reductions from a "no-policy" baseline). All figures are presented relative to a "no-policy" baseline, in 1995 dollars.

The losses in aggregate economic activity are noticeable, but largely transitory. Table 1 shows GDP loss with international trading peaking at a few tenths of a percentage point in 2005-2010 for the case where emissions are stabilized at 1990 levels by 2010. After this initial loss, the economy begins to rebound as the proceeds from permit auctions reduce the Federal budget deficit (or increase the budget surplus), leading to lower interest rates. Businesses respond by making capital investments to offset higher energy costs. After a while, the economy catches up to its original growth path, indicating that the emissions reduction program modeled is implicitly pro-investment and that the economy is robust enough to withstand modest shocks.

Coal bears the brunt of the emissions reduction policies, because coal is the most greenhouse gas intensive fuel. In general, the least costly way to garner significant emissions reductions is to replace coal in electricity generation and industrial uses.

Results without international trading

If an effective regime for trading international emissions permits is not established, then the estimated energy price increases are nearly doubled, with parallel economic losses. This situation is depicted for the base case in Table 2.

The losses in aggregate economic activity are significant, though again, largely transitory. Table 2 shows GDP loss without international trading peaking around 1 percent in 2005, for stabilizing emissions at 1990 levels in 2010. After this initial loss, the economy begins to rebound as revenue from the domestic permit auctions reduces the Federal budget deficit and lowers interest rates. Businesses respond by making additional capital investments, setting off a mini-“investment boom”. By 2015, the economy is estimated (in some models) to regain and even surpass its original growth path. This result indicates that the emissions reduction program as modeled is pro-investment (because reduced personal consumption allows businesses the wherewithal to expand the capital stock).

Technology assumptions

Another possibility for mitigating economic costs is focusing attention and resources on programs that promise to decrease the rate at which the economy produces greenhouse gas emissions. Examples here might include an increased research and development effort or an initiative to more rapidly diffuse the most efficient energy practices through industry. The “hi-tech” set of assumptions added to the base case modeling shows that energy price increases could be reduced by 10-30 percent, by 2010, with larger reductions possible further in the future. Estimated economic costs of the base case policies would be correspondingly reduced.

Environmental benefits

The figures presented here do not reflect the environmental benefits associated with avoiding climate change, nor do they reflect collateral environmental benefits that may result from reduced emissions of greenhouse gases. Policies to reduce greenhouse gas emissions, for example, are likely to reduce emissions of other pollutants, including SOX, NOX, particulate matter and toxic pollutants (e.g., mercury). According to EPA estimates, the monetizable benefits of reducing fine particles and ozone in connection with either Option 1 or Option 2 could total tens of billions of dollars per year.

Economic effects are summarized on the charts below. Note that the figures presented for Options 3 and 4 are not based on actual IAT modeling, since the IAT has not examined any emissions budgets for 2020 or later. The figures for these Options are based on implied increases in carbon prices obtained from other IAT modeling efforts. Thus, the figures presented for Options 3 and 4 should be considered as illustrative only.

Table 1 --Base Case with OECD Emissions Trading*

Variable of Interest	Option 1 --10% below 1990 levels by 2010	Option 2 --1990 levels by 2010	Option 3 -- Implied carbon price increase of \$20 per ton **	Option 4 -- Implied carbon price increase of \$10 per ton **
GDP in 2005	-1.0% to -0.1%	-0.5% to 0.0%	-0.2% to 0.0%	-0.1% to 0.0%
GDP in 2010	about -0.3%	-0.4% to -0.1%	-0.2% to -0.1%	about -0.1%
GDP in 2020	-0.3% to +0.2%	about -0.1%	-0.1% to 0.0%	about 0.0%
Implied price increase per ton of carbon in 2010	about \$85	about \$50	about \$20	about \$10
Implied price increase per gallon of gasoline in 2010	about 20-25 cents	about 10-15 cents	about 5 cents	about 2-3 cents
Implied price increase per ton of coal in 2010***	about \$50	about \$30	about \$10-15	about \$6
Implied avg. price increase for residential elect. in 2010****	about 1.5 cents per kwh	about 1 cent per kwh	about 0.5 cents per kwh	about 0.3 cents per kwh
Decline in total employment in 2010 (national)	about 200,000	about 50,000-250,000	about 50,000-100,000	less than 50,000
Annual value of domestic emission permits (2010)	about \$110 billion	about \$60-70 billion	about \$25-30 billion	about \$10-15 billion

* Analysis of Joint Implementation (worldwide emissions trading) would show lower costs and imply greater purchases by the U.S. of emissions reductions abroad.

** Although figures are presented, obtaining agreement under the climate treaty to an international emissions trading regime would be very unlikely with targets in this range.

*** Current national average approximately \$28/ton

**** Current national average approximately 8 cents/kilowatt hour

Table 2 --Base Case without OECD Emissions Trading

Variable of Interest	Option 1 --10% below 1990 levels by 2010	Option 2 --1990 levels by 2010	Option 3 --Implied carbon price increase of \$35-50 per ton	Option 4 --Implied carbon price increase of \$15-25 per ton
GDP in 2005	-2.0% to -0.1%	-1.0% to -0.1%	-0.5% to 0.0%	-0.3% to 0.0%
GDP in 2010	-0.7% to -0.3%	-0.6% to -0.2%	-0.4% to -0.1%	-0.2% to -0.1%
GDP in 2020	-0.3% to +1.0%	-0.6% to +0.2%	about -0.1%	about 0.0%
Implied price increase per ton of carbon in 2010	\$130-200	\$80-140	\$35-50	\$15-25
Implied price increase per gallon of gasoline in 2010	35-50 cents	20-40 cents	10-15 cents	5-10 cents
Implied price increase per ton of coal in 2010*	\$80-120	\$50-85	\$20-30	about \$10-15
Implied average price increase for r e s i d e n t i a l electricity in 2010**	about 4 cents per kwh	about 1.5-3.0 cents per kwh	about 1 cent per kwh	about 0.5 cents per kwh
Decline in total employment in 2010 (national)	a b o u t 200,000-500,000	a b o u t 150,000-400,000	a b o u t 50,000-250,000	about 50,000 -100,000
Annual value of domestic emission permits (2010)	about \$270 billion	about \$110- 190 billion	about \$50-70 billion	about \$20-35 billion

* Current national average approximately \$28/ton

**Current national average approximately 8 cents/kilowatt hour.

APPENDIX D

ADDITIONAL BACKGROUND

A. Basis for Concern

The build-up of greenhouse gases in the atmosphere threatens fundamentally to alter the Earth's climate. The most recent international scientific assessment concluded that global average temperatures will increase by 2-6.5 degrees F. by 2100, unless actions are taken to slow the build-up of greenhouse gases. This is the fastest increase in more than 10,000 years.

Potential impacts from climate change include sea level rise, the spread of infectious disease, extreme weather events (such as droughts and floods), loss of forest cover and shifts in agriculturally-productive regions. Absent policy interventions, global average temperatures by the end of the next century will increase 2-6.5 degrees F., sea-level rise will inundate more than 9000 square miles in the United States (with Florida and Louisiana most vulnerable), and an additional 50-80 million people will contract malaria worldwide. According to a NOAA study, average July temperatures in Washington, D.C. by the end of the next century are expected to increase by 5-15 degrees F. (with greater humidity). The international scientific assessment states that "climate change is likely to have wide-ranging and mostly adverse impacts on human health, with significant loss of life."

Nevertheless, significant uncertainties remain concerning the magnitude, timing and regional distribution of impacts. Currently, scientists are unable to predict changes in short-term weather patterns in particular regions.

Atmospheric concentrations of carbon dioxide (the most important greenhouse gas) are well above historic levels and climbing sharply. Concentrations are currently 360 parts per million (ppm), about 30% above pre-industrial levels and the highest in at least 200,000 years. Absent policy interventions, concentrations in 2100 are predicted to reach roughly 750 ppm, the highest in more than 50 million years.

B. Human Sources of Greenhouse Gases

The principal cause of the buildup in greenhouse gases is the burning of fossil fuels. Other human activities, including deforestation and mining, also play a role. The international scientific assessment concluded that "the balance of evidence suggests there is a discernible human influence on the global climate."

Developed countries are responsible for more than 75% of the increase in greenhouse gas concentrations since the beginning of the Industrial Revolution. In the decades ahead, however, emissions from developing countries are expected to grow sharply. By 2035, developing country emissions are expected to exceed those from the developed world.

The United States emits more greenhouse gases than any nation in the world (roughly 25% of the world's total). Our per capita emissions are among the world's highest --roughly 50% greater than the OECD average and eight times that of China. In the United States, greenhouse gas emissions come mainly from industry (1/3), transport (1/3) and buildings (1/3). Since 1990, U.S. greenhouse gas emissions have grown 7-8%. Without policy interventions, U.S. emissions are projected to grow 20-25% over 1990 levels by 2010.

None of the actions contemplated during this round of negotiations will, by themselves, reverse the build-up of greenhouse gases in the atmosphere or even slow it significantly. However, this round will set the stage for future negotiations over steps by both developed and developing countries, and will send important signals to the private sector that could affect the rate at which beneficial technologies are developed and adopted.

C. Clinton Administration Policies To Date

The Clinton administration has been active on this issue since Earth Day 1993, at which time you pledged to return U.S. greenhouse gas emissions to 1990 levels by the year 2000, and then to continue the trend of reduced emissions. In October 1993, the Administration issued the Climate Change Action Plan, designed to achieve that goal. Due to Congressional budget cuts, higher-than-expected economic growth and lower-than-expected energy prices, however, this goal will not be achieved.

You have spoken to this issue on many occasions. In May 1997, in Costa Rica, you said "we must meet the challenge of climate change"; in April 1997, before departing for North Dakota, you discussed possible links between extreme weather events and greenhouse gas emissions; in your 1997 State of the Union, you called for "reduc[ing] the greenhouse gases that challenge our health even as they change our climate"; in December 1996, in Australia, you said "we must work to reduce harmful greenhouse gas emissions...If they continue unabated, the consequences will be nothing short of devastating the children here in this audience and their children."

The Administration has strongly supported research and development programs with significant climate change benefits. Examples include the Partnership for a New Generation of Vehicles (a \$280 million program), the Global Change Research Program (\$1.8 billion) and renewable energy and energy efficiency programs (\$1 billion).

The United States has been an active participant in the international climate change negotiations, as described below.

D. International Negotiating Context

There is international agreement that the climate change problem is significant and requires action. There is also consensus that the existing UN Framework Convention on

Climate Change, signed in Rio in 1992, is inadequate. Under the Convention, developed countries set a goal of reducing greenhouse gas emissions to 1990 levels by the year 2000, but few will do so. The Convention contains no goal beyond the year 2000.

In April 1995, in Berlin, the Parties to the Convention agreed to negotiate next steps for the post-2000 period. Under the terms of the "Berlin Mandate," developed nations would agree to quantified emissions limits over specified time frames (e.g., 2005, 2010 and 2020) by December 1997. Developing nations (who typically have less stringent obligations than developed nations in environmental treaties) agreed to reaffirm their existing commitments, and continue to advance implementation of these commitments in this round of negotiations.

In July 1996, the U.S. called for an approach that would include three key elements: (1) a binding target (instead of the existing Convention's non-binding goal), (2) flexibility in implementation (for example, through emissions trading among developed nations and "joint implementation" with developing nations), and (3) the participation of developing countries. The U.S. proposal did not include any particular target or timetable.

Support for most aspects of the U.S. proposal has been quite limited. Some aspects have encountered stiff opposition. Few countries have supported the US call for more active developing country participation under the Convention. Developing countries, in particular, have argued heatedly that the developed world is responsible for the buildup of greenhouse gases in the atmosphere and must take the lead in addressing the problem. Support for "joint implementation" has also been limited. Such a mechanism could significantly reduce overall costs to the U.S., but involve substantial international payments or transfer of technology by the private sector.

Views of other countries vary considerably. The European Union has proposed that developed nations cut back emissions 10-15% from 1990 levels by 2010 (and an as-yet unspecified amount by 2005). Small island nations have proposed that developed nations reduce emissions by 20% from 1990 levels by 2005. Other nations, including Australia, Japan and Canada, have expressed concerns about moving too far too fast, but have not put forward any specific targets.

E. Constituency Views.

At present, public attention to climate change is low. Although polling data indicate that the public believes climate change is a serious problem, few rank it high on a list of concerns. Public and media attention to the issue will likely grow as the Kyoto Conference approaches.

For many environmental groups, strong action on climate change is a litmus test for the administration's environmental policy. They plan public relations campaigns on the issue in the year ahead. Many environmental groups are calling for sharp emissions cuts early in the next century (e.g., 20% below 1990 levels by 2005). On the issue of emissions trading

and joint implementation, the environmental community is divided, with some groups (e.g., Environmental Defense Fund) strongly supportive and others (e.g., Sierra Club) strongly opposed. Most environmental groups will support flexibility provisions if coupled with emissions reductions below 1990 levels.

Business is composed of several camps. The largest --made up of coal companies, coal-dependent utilities, fuel producers, heavy industry and transporters --is strongly opposed to any action at Kyoto. This group is well-funded and poised for a significant public relations campaign. A second group --made up of chemical companies, natural gas interests, some appliance manufacturers and others --is cautiously supportive of action at Kyoto. A smaller third group --composed of natural gas, renewable energy and energy efficiency companies --strongly supports aggressive climate change policies. Many businesses point to international competitiveness as a primary concern. In a major speech recently, the CEO of BP broke ranks with other oil companies and said "it would be unwise and potentially dangerous" to ignore mounting evidence of climate change.

Earlier this year, more than 2000 economists (including six Nobel Laureates) signed a letter stating that "sound economic analysis shows that there are policy options that would slow climate change without harming American living standards, and these measures may in fact improve U.S. productivity in the longer-run." Recently, several dozen scientists sent the President a letter warning of the consequences of rapid climate change and urging us to limit change to the "lowest rate feasible."

Agriculture groups are only beginning to pay attention to this issue. They have been concerned about extreme weather, but also worried that climate change mitigation policies could lead to rising fuel costs and competitive disadvantage with developing countries. The U.S. insurance industry is also beginning to pay attention, especially the reinsurers (who have lobbied Congress for more money for climate change research).

Labor is increasingly opposed to action on climate change, largely in deference to the concerns of the United Mine Workers. An AFL-CIO resolution earlier this year was critical of the administration's climate change policy. Some unions --including the UAW, the Steelworkers, the Oil, Chemical and Atomic Workers, the AFT and the NEA --have taken more moderate views in the past.

Finally, the religious community is increasingly engaged on this issue. The National Council of Churches has collected more than 100,000 signatures in the past few months on a petition urging action on this issue.

F. Congressional Considerations

There is considerable skepticism about climate change on Capitol Hill. Most Republicans, and many Democrats, appear far more concerned about the costs of mitigation than the problem itself. Southern and western Republicans are, by and large, skeptical or hostile to action on climate change. Midwestern Democrats have expressed concern about

the impacts of climate change policies on coal and heavy manufacturing (especially autos). Northeast and West Coast Members are perhaps the most likely to support action on this issue.

Many Members cite the unwillingness of developing countries to accept quantitative emissions limits as a major concern. Increasingly, Members are complaining about a lack of openness in our decision-making process. Many are urging the administration to make key aspects of our policy and analysis known in the very near future.

“Advice and consent” of the Senate will be required for any agreement reached in Kyoto.

Implementing legislation will likely be needed as well. Favorable votes in the 105th Congress, or even the 106th, would be an enormous challenge. Ratification might need to await work on matters (e.g., joint implementation, developing country commitments) unlikely to be resolved in Kyoto.

G. Domestic Implementation

An Assistant Secretary-level working group has recommended a domestic climate change policy with three parts: domestic emissions trading programs, technology programs, and transition assistance programs. Details of these programs could be developed in consultation with constituencies in the months ahead.

i. Emissions Trading Programs Under domestic emissions trading programs, permits representing rights to emit greenhouse gases in the United States would be distributed, either through an auction or allocation system. Permits would be tradeable. Firms would have an incentive to control emissions where costs are low and sell reductions to firms facing higher control costs.

Domestic emissions trading programs are an attractive policy tool. Compared to traditional “command-and-control” regulatory approaches, they offer greater flexibility and lower costs. Such programs are being used successfully in several areas under the U.S. Clean Air Act.

Among the important issues to be addressed in designing a domestic emissions trading program are:

- Where the constraint is imposed. A “primary fuel” trading program would limit the production or import of fossil fuels. A “sectoral” trading program would limit emissions from one or more key sectors (e.g., utilities, transport and heavy manufacturing).
- How permits are distributed. Permits could be given to existing emitters, given to others (who could then sell them back to current emitters), auctioned, or some combination of the foregoing. If permits are auctioned, substantial revenues would

be raised. (Options for using these revenues include tax cuts, deficit reduction and support for transitional or technology programs). If permits are given away, recipients would potentially receive a windfall.

ii. Technology Programs. The cost of reducing greenhouse gas emissions between now and 2020 depends greatly on the ability to accelerate use of existing energy-efficient technologies. Over the longer-term, the solution to the climate change problem depends on developing and deploying new technologies that are even more efficient and/or based on non-carbon energy sources.

A range of government programs might help accelerate technological change. Information dissemination programs assist businesses and consumers in identifying opportunities to reduce the energy intensity of their products or services (e.g., using more energy efficient light bulbs, insulation, appliances, etc.). In addition, research and development programs generally aim to improve technologies by lowering production and operating costs. Large opportunities for cost-lowering research and development exist in buildings, transportation, combustion, renewables and sequestration (e.g., fuel cells, advanced industrial turbines, advanced diesel engines, and transportation biofuels). However, generating significant increases in budget support for technology programs will be challenging.

iii. Transition Assistance Programs. Under any of the policy options being considered, some workers and communities may be adversely affected. Workers in energy-intensive industries and those in energy extraction may be most likely to be hurt. Given the geographic isolation of some of these industries, the surrounding communities may also be adversely affected.

A transition program would reduce costs to individuals and communities. Transition assistance can help facilitate community and worker adjustments via retraining, job search assistance, and infrastructure development for new business in the community. As previous experience with acid rain, military base closures, and the federal government's own work force restructuring has demonstrated, the early development of such programs can be vital to building public support for a policy.

Among the important issues to address in designing a transition program are:

- Whether a new, categorical program should be designed or existing programs expanded. A new, categorical program would limit benefits to targeted workers and communities but allow for flexibility in benefit levels. Expansion of current programs to allow for increased usage is consistent with Administration program consolidation efforts but constrains program design flexibility.
- How the program will interact with the other components of climate change policy. Permit auctions could provide an important revenue source for these programs. Permit allocations could be used to "fund" transition assistance.

APPENDIX E
CLIMATE CHANGE:
THE PRESIDENT ENGAGES THE AMERICAN PUBLIC

Overall Goal: Show the American public that President Clinton is determined to combat climate change in a way that deserves broad support.

Overall Strategy: A Three Pronged Approach

- A. President's Vision Set Forth at UNGA Special Session
- B. Build Public Awareness Through POTUS and VPOTUS Events
- C. Outreach to Policy Community

Implementing the Strategy:

A. President's Remarks at UNGA Special Session: Intensive Engagement to Chart Path Forward

Goal: Set President's vision for approaching climate change and begin drawing business, labor and environmentalists into a cooperative process on how best to move forward.

B. Build Public Awareness Through POTUS and VPOTUS Events

Goal: Elevate public understanding of the importance of changing climate and build support for national policy priorities developed cooperatively through an open dialogue with the range of affected constituencies.

Strategy:

i. Presidential Events:

- a. 3 radio addresses by end of September (first possibly on June 28)
- b. Message-of-the-day events; for example:
 - Kick-off of Million Solar Rooftops (Virginia PV plant or sites in SW/West Coast)
 - Visit Chicago's Board of Trade SO₂ Trading Center
 - Visit a GLOBE school site
 - Visit the Denver Clean Car Exhibit at G-8
 - Visit New York Harbor to highlight sea level rise issues
 - Visit National Park where fragile ecosystems are threatened.

ii. Vice Presidential Events:

- a. Site visits to technology demonstration projects (e.g. biomass or wind demonstrations in Iowa or Minnesota)
- b. Announce a New Clean Cities participant (Houston, Phoenix, New York City)
- c. Partnership for Advanced Housing Technology (new development at Stapleton Airport in Denver or southern California/Florida in disaster vulnerable areas)
- d. Visit a Federal facility participating in the Federal Energy Management Program

iii. Regional and National Workshops: Conduct three regional conferences leading to a White House Conference. Three to five cabinet members and senior White House staff would participate in each. Conferences conducted in roundtable format, chaired by senior Cabinet members. Each would begin with key presentations, followed by open dialogue. Open to press and encourage live C-Span coverage. Conduct press backgrounders before and after. Involve regional corporate CEO's, academics, environmental & labor leaders, governors, other state & local leaders, religious leaders and members of Congress. All conferences would be comprehensive, but each would have a special focus, tailored to region.

Locations:

- East: New Orleans, Charleston, Miami, or the New Jersey shore. Highlight: Coastal storms damage, infectious disease risk and forest system impacts in southern and eastern states.
- Mid: Columbus, Detroit, Chicago, or Indianapolis. Highlight: Agriculture shifts, coal community impacts, heavy manufacturing impacts and opportunities.
- West: Sacramento, Phoenix, Portland, Seattle or San Francisco. Highlight: Water resource conflicts, public lands impacts, technology response opportunities.
- National: White House/DC, Baltimore, Richmond, New York. Highlight: Comprehensive integration of concerns into a need and pathway for action.

C. Outreach to the Policy Community

Goal: Engage policy community (CEOs and Congress in particular) in design of policies that comprehensively address climate change mitigation and that garner their support.

Strategy:

- i. President and VP should each reserve 10 - 12 slots for climate orientation briefings and meetings with industry leaders between now and Labor Day. Cabinet members should be given key responsibilities for particular sectors/industries. Should schedule in close coordination with National Dialogue meetings. Also encourage Cabinet members to host at least one public meeting and make a major speech.
 - a. Examples for President: meeting with Nobel laureates, meeting with religious leaders, meet with Congressional leaders to stress environmental imperative.
 - b. Examples for Vice President: Dinner with Congressional leaders; Lead a Congressional visit with scientific leaders to the Smithsonian's climate change exhibit.
- ii. **Industry Roundtables:** Series of CEO meetings with POTUS, VP, Cabinet members & other senior staff. Offer our policy inclinations, get feedback and ask for their ideas on what's missing. Examples:
 - a. Invite Norm Augustine, CEO of Lockheed Martin, to bring 10-15 CEOs of major environmental technology firms for meeting.
 - b. Invite John Browne, CEO of BP, to bring 10-15 oil/gas CEOs for meeting.
 - c. Invite R. Linn Draper, CEO of AEP, to bring 10-15 moderate electric utility CEOs for meeting.
 - d. Invite Ken Lay, CEO of Enron, and Dennis Bakke, CEO of AES, to bring 10-15 independent power developers for meeting.
 - e. Invite Michael Bonsignore, CEO of Honeywell, to bring 10-15 energy efficiency technology firms for meeting.
 - f. Invite 10-15 renewable energy CEOs for meeting.
- iii. Disseminate broadly the results of the review by the President's Advisors on Science and Technology (PCAST). The PCAST has been challenged to produce an energy strategy that will meet the "energy and environment needs of the next century" by October.

- iv. Open meeting with the Washington, D.C., policy community on peer-reviewed economic analysis and other information to be used in the regional conferences.

Notional Schedule:

June 24-7:	OSTP South East Regional Workshop (Vanderbilt) - <i>scheduled</i>
June 25:	VP Attends OSTP Impacts Workshop (Nashville) - <i>scheduled</i>
June 26:	President Speaks at UNA Special Session - <i>scheduled</i>
June 27:	President meets with CEO's of Big 3 automakers - <i>scheduled</i>
June 28:	First Presidential radio address to speak to climate change, perhaps with discussion of transportation sector (mtg. with Big 3 on 6/27), including the results of SunRayce 97 (pv powered car race) - <i>TBD</i>
June/July:	VP hosts Congressional Dinner - <i>TBD</i>
Early July:	Public Release of Economic Analysis - <i>TBD</i>
Early July:	Cabinet Orientation - <i>TBD</i>
July 14-16:	OSTP North West Regional Workshop (Seattle) - <i>scheduled</i>
July/August:	Industry Roundtables with President, Vice President, Cabinet and industry leaders - <i>TBD</i>
Late July:	Eastern Regional Meeting - <i>TBD</i>
Mid August:	Mid Regional Meeting - <i>TBD</i>
Late August:	Western Regional Meeting - <i>TBD</i>
Late September:	White House National Conference - <i>TBD</i>
September:	President's Remarks to UNA - <i>TBD</i>
September 3-5:	OSTP New England Regional Meeting (U of NH) - <i>scheduled</i>
Nov. 10-12:	OSTP National Impacts Workshop at NAS - <i>scheduled</i>
October:	PCAST strategy due

FAX

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AM
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Date: Monday, June 16, 1997

Time: 4:43:01 PM

2 Pages

To: Jeff Frankel
CEA

From:

Fax: 3956958
Voice:

Fax:
Voice:

Comments:

EXCERPTS ON CLIMATE CHANGE
Remarks by the President to Business Roundtable
Washington, D.C.
June 12, 1997

...Finally, let me say on an issue that I know is a concern to some of you because I read your ad in the paper -- (laughter) -- I think that we have to prove that we can grow the economy while not only preserving, but actually enhancing, the environment. And I believe most of you think we can do that. And I think the message you were trying to get across in the ad is, don't wreck the economy without knowing what you're doing. I understand that.

But let me say, I was very moved by the speech recently given by the Chairman of British Petroleum on the issue of climate change. I don't know how many of you read it, but essentially what he said is, look, nobody knows exactly what the impact of climate change is, but let's not deny anymore that the climate is changing and that it can't be good, and that no harm will be done if we take sensible steps to try to reduce greenhouse gas emissions and to do other things which will help us to preserve the environment.

We've had more extreme weather conditions in the United States in the last five years than we had in the previous 30. And we know from all the scientific studies what is happening to the temperature of the globe. What I ask you to do is to work with me in good faith to give our children a world worth living in.

A lot of you have made a good deal of money in your corporations by technologies which improve the environment. And if we have the strongest economy in the world, we will find a sensible way to grow that economy in a way that fulfills our responsibilities.

Today, with 4 percent of the world's population, we produce over 20 percent of the greenhouse gases. We're up 13 percent since 1990 when President Bush and his administration said we would try to hold constant through the year 2000.

I had an interesting conversation with Jiang Zemin in New York about a year ago, when he said, I don't want you to have a containment policy toward China. I said, I'm not sure -- I said, I don't want to have a containment policy towards China. I said, my biggest worry about you is that you'll get rich the same way we did. And if you do that, you might burn the air up because you've got 1.2 billion people. And we need to find an environmentally responsible way for China to grow.

So I ask you to join with us in this partnership. There is no secret plan. There is no scheme here to try to put thousands of Americans out of business. I have devoted my passion and the best ideas I could come up with to try to get this country in good shape economically and socially. But I do believe it is folly for us to believe that we can go into the next century without a strategy that says we're going to be responsible and we're going to do our part and lead the world on the environmental issues -- because we all know what the evidence is. We don't know what the consequences are, and we don't want to go off and do something that we're not sure makes sense. But we can do this. We can do it together. We can do it in a way that makes sense.

And I ask you not to ever ask us to back away from that, but instead join hands with us and do what we've done for the last four and a half years. Let's find a way to preserve the environment, to meet our international responsibilities, to meet our responsibilities to our children, and grow the economy at the same time. I know we can do it. Look at the evidence of the last four years. We can do anything if we put our minds to it...

Upton-Klink Proposal Would Turn Back Air Standards

Two leading House Commerce Committee members are preparing legislation to turn back new air quality standards if they are finalized in the form proposed by the EPA.

ENVIRONMENT

House Commerce Oversight and Investigations Subcommittee ranking member Ron Klink, D-Pa., and Rep. Fred Upton, R-Mich., Tuesday wrote a letter to colleagues calling the EPA standards a "costly rush to judgment."

The letter requested support for a proposal Klink and Upton are developing that would give the EPA five more years to perform additional research to decide if new standards should be required.

"Because the EPA has stated that it will be at least seven years before the proposed standards will actually be implemented, this legislation will have no negative effect on public health," the letter said.

Administration officials met at the White House Tuesday to weigh options on the standards, sources said, and were considering a compromise between the EPA's position and the positions of several other federal agencies which have objected to the proposal.

But, in an indication of the difficulty faced by the White House, an industry source charged that a compromise re-

portedly proposed by the EPA is "no compromise at all."

And U.S. Public Interest Research Group Executive Director Gene Karpinski said any attempt to "split the difference will lose the support of the environmental and public health community and probably not please polluters."

House Commerce ranking member John Dingell, D-Mich., Tuesday said the White House has given the EPA more time to clear up problems with the standards.

Speaking to the National Energy Research Organization, Dingell criticized the EPA's stance, saying the proposed standards would impose enormous costs for "minute benefit."

Dingell said the administration has yet to feel "genuine industry outrage" on the proposal and called on industry to do more to make its objections heard at the White House and among local government officials — who would have to implement the standards.

Dingell said legislation may be needed to address the standards if the administration makes "the wrong decision."

However, he warned that reaching veto-proof majorities would be difficult.

Separately, **House Government Reform ranking member Henry Waxman, D-Calif., Rep. Dennis Kucinich,**

D-Ohio, and other Democrats Tuesday accused industry of mounting a multi-million dollar propaganda campaign to frighten and confuse the public on the standards.

The conservative group Citizens for a Sound Economy is running television ads charging 83 percent of the pollution problem comes from "fugitive dust" from roads, plowing and natural sources.

Waxman and Kucinich called CSE an "industry front."

Dingell also chided the administration for its stance in negotiations over a revised climate change treaty, saying negotiators have not dealt the country an "honest, fair and shuffled deck."

Dingell said the administration has not informed the nation it already has reached agreement to commit the nation to limit greenhouse gas emissions to 1990 levels and that the limits would be enforced mainly on the United States, not developing nations or other nations.

Likening the talks to "a crooked poker game," Dingell said Congress should reject an agreement along these lines.

Meanwhile, White House economist Janet Yellen told reporters Tuesday that the administration's internal talks on the standards are centered on health benefits, not economic costs.

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ISSUE FOR DECISION

In your trips to the Denver Summit of the Eight (June 20-22) and UN General Assembly Special Session on Environment and Development (June 26), what should you say concerning the U.S. position on emissions levels under the climate treaty?

NEED FOR DECISION

To date, the U.S. has not supported any specific emissions levels under the climate treaty. Other countries and domestic constituencies are calling on us to state our views. At the Denver Summit of the Eight, Chancellor Kohl and others will press you on this issue. At the UNGA Special Session, media and constituency interest in this issue will be high. Both meetings offer important opportunities to advance and explain our position.

I. BACKGROUND

Climate change is an issue of vast scale. Decisions on the issue posed in this memorandum could have significant environmental, economic and political consequences.

The build-up of greenhouse gases in the atmosphere threatens fundamentally to alter the Earth's climate. Currently, greenhouse gas concentrations are at their highest level in more than 200,000 years. (See Appendix A). Absent policy interventions, concentrations by the end of the next century will reach the highest level in more than *50 million* years. Impacts are predicted to include sea level rise, the spread of infectious disease, more frequent and severe droughts and floods, loss of forest cover and shifts in agriculturally-productive regions. Absent policy interventions, global average temperatures by the end of the next century are projected to increase 2-6.5 degrees F., sea-level rise is projected to inundate more than 9000 square miles in the United States (with Florida and Louisiana most vulnerable) and an additional 50-80 million people are projected to contract malaria worldwide. According to a NOAA study, average July temperatures in Washington, D.C. by the end of the next century are expected to increase by 5-15 degrees F. (with greater humidity).

The economic costs of reducing greenhouse gas emissions is potentially substantial. The principal source of such emissions is the burning of fossil fuels, which powers the global economy. Stabilizing emissions at 1990 levels by 2010 (ten years later than envisioned in the Climate Change Action Plan) is projected to reduce U.S. GDP in 2010 by 0.1-0.4% (with somewhat larger reductions in consumption), increase gasoline prices in 2010 by 10-15 cents per gallon and more than double the price of coal. Without a well-functioning system of international emissions trading, these figures would be even higher -- a U.S. GDP loss of 0.2-0.6% (with slightly larger reductions in consumption), gasoline price increase in 2010 of 20-40 cents per gallon and roughly a tripling of the price of coal. Private capital outflows associated with an international emissions trading regime are predicted to be roughly \$5 billion per year.

These economic estimates assume that revenues raised by auctioning emissions permits are used for deficit reduction -- costs could be higher if implementation programs are less favorable to investment or lower if programs are more favorable to investment. Significantly, modeling indicates that economic losses from some policies are largely transitory: after an initial loss, the economy rebounds and catches up to its original growth path. Costs depend significantly on rates of technological innovation. Effects on some sectors and regions of the economy will be much larger than effects on the economy as a whole.

This administration has been active on this issue since Earth Day 1993, at which time you pledged to return U.S. greenhouse gas emissions to 1990 levels by the year 2000, and then to continue the trend of reduced emissions. In October 1993, we issued the Climate Change Action Plan, made up of several dozen mostly voluntary programs, designed to meet that goal. (Due to Congressional budget cuts, higher-than-expected economic growth and lower-than-expected oil prices, the goal will be missed by a wide margin). U.S. negotiators have shaped the international climate change negotiations by calling for binding emissions targets, "flexibility" provisions (such

as international emissions trading and joint implementation) that would significantly lower costs of meeting those targets, and the participation of developing countries. You have spoken to this issue several times in the past year, including in the 1997 State of the Union, where you called for "reduc[ing] the greenhouse gases that challenge our health even as they change our climate."

The politics of this issue are difficult, at best. For many environmental groups, strong action on climate change is a litmus test for your environmental policy. If you fail to speak decisively on this issue in Denver (at the Summit) or New York (at the UNGA Special Session), their criticism will be intense. On the other hand, much of the business community is strongly opposed to action on climate change. Fossil fuel and heavy manufacturing companies are poised vigorously to attack any policies the environmental community might support. Labor is increasingly opposed to action as well, largely in deference to the concerns of the United Mine Workers. Southern and western Republicans on the Hill are very skeptical about this agenda, as are midwestern and coal state Democrats.

II. OPTIONS

Earlier this week, we identified several options for principals concerning the U.S. position on emissions levels in the international climate change negotiations. Each option was defined in terms of a broad directional statement you might offer at the Denver Summit or UNGA Special Session.

The meeting produced a considerable convergence of views. Most agencies (State, Commerce, Transportation, Energy, Agriculture, EPA, AID, OSTP and CEA) supported an option in which you would call for "stabilizing emissions in the medium term and reducing thereafter." In the parlance of the climate change negotiations, "stabilizing" means returning greenhouse gas emissions to 1990 levels and "medium term" means 2005-2020.

Several caveats are important:

First, many of these agencies conditioned their support on success in obtaining flexibility provisions (e.g., international emissions trading, joint implementation) and the participation of developing countries. These agencies generally believe that any statement you make concerning emissions levels should be coupled with a strong statement on the importance of these additional provisions. Some agencies believe we should not accept any agreement at Kyoto unless developing countries agree to eventual accession to emissions limits similar to developed countries.

Second, the Treasury Department and OMB have significant concerns about the economic costs and political feasibility of stabilizing in the 2010 timeframe. These agencies note that opponents would characterize domestic emissions trading regime as a tax, with revenues larger than any tax increase yet considered by your administration. Treasury also focused on the potential wealth transfers possible under some control regimes, noting that these transfers could be several times the size of the tax cuts contemplated in the balanced budget agreement. Treasury note that cost estimates are based on the assumption that underlying economic growth rates through 2010 will average just over 2%, and that costs

of achieving any target would increase if these growth rates were higher.

Third, many participants noted the magnitude of this decision for the second term agenda. There is a widely held view that we cannot take this on without you and the Vice President making this a top tier issue during the next several years. Some agencies think this could be the most significant issue you address in the second term.

Fourth, at least one agency (Energy) linked its support to strong administration backing for increased funding for greenhouse gas-related technology programs in the years ahead. OSTP argued that, with appropriate investments, we can meet both our climate change and economic goals with advanced technologies (such as the 80 mpg "supercar" being developed by the Partnership for a New Generation of Vehicles). Energy, EPA and OSTP argue strongly that these technologies were not adequately considered in the economic modeling showing GDP and job losses. In contrast, the economic agencies argue that technology assumptions in the modeling are overly optimistic.

Finally, one agency (CEA) stated that if no agreement is reached Kyoto, the U.S. should consider taking relatively small unilateral actions to show good faith internationally, to start educating the American people and to begin creating the incentives for energy efficient investments.

In light of the foregoing, and after further discussions, we are identifying five options for you in Denver and New York. They are:

Option 1: Call for "significantly reducing emissions in the medium term."

Comment: Interior Department supports this option, stating that strong measures are necessary to protect the resources it manages. Such a statement would be interpreted to be consistent with the E.U. proposal (a 10-15% cut from 1990 emissions levels by 2010).

Pros:

- Environmental benefits could be large. EPA estimates non-climate benefits (such as reducing fine particles and ozone) would be tens of billions of dollars.
- Many environmental groups would be pleased.

Cons:

- Could impose very large costs on the U.S. economy.
- Business and labor would be very strongly opposed.
- Without significant changes in the political landscape, the prospects for ratification by the Senate in the next several years would be close to zero.

Option 2: Call for "stabilizing emissions in the medium term and reducing thereafter."
Emphasize that flexibility and the participation of all nations (including developing countries) are essential to addressing this problem.

Comment: This is the recommendation from most of the Cabinet. In making this recommendations, the Cabinet focused on a specific emissions target: stabilizing emissions at 1990 levels by 2010.

Pros:

- Allows you to take the high ground: committing the U.S. to meaningful emissions reductions, while insisting on other principles we consider vital to an agreement.
- Provides considerable flexibility for future development of our position: consistent with stabilizing emissions at 1990 levels anywhere between 2005 and 2020.
- Environmental benefits (both climate and non-climate) could be significant.
- Some environmental groups would be pleased; others would complain of lack of U.S. leadership.

Cons:

- Overall economic impacts of this option could be significant (although GDP impacts could be transitory).
- Dislocation in some sectors and regions (especially coal states) could be large.
- Most business and labor groups would be opposed, although some might support if the policy were coupled with other features they find attractive.
- Without significant changes in the political landscape, the prospects for ratification by the Senate in the next several years would be poor.

Option 3: Call for “beginning to reduce emissions *growth* by 2005 and stabilizing emissions toward the end of the medium term, with further reductions thereafter.”

Comment: This option envisions an international regime that mandates starting emissions reductions earlier than Option 2, but reducing emissions to 1990 levels over a longer period of time. While less constraining than Option 2, the rhetoric used to describe this option (other than the 2005 component) could be substantially identical to the rhetoric for Option 2.

Pros:

- Delayed target date reduces economic costs, allowing capital stock to turn over at a natural rate and technology to improve.
- Calling for early target date could be portrayed as an activist approach.
- more?

Cons:

- Would be criticized by environmental community as showing lack of leadership by delaying stabilization for more than two decades.

- Would be criticized by moderate business groups (e.g. chemical companies, some utilities) who strongly oppose any target before the year 2010.
- Would be criticized by more hard-line business groups (fossil fuel producers, heavy manufacturing) and many in organized labor who oppose any action on climate change.
- Jeopardizes our ability to achieve flexibility provisions (e.g., international emissions trading, joint implementation) and developing country participation in international negotiations.
- Without significant changes in the political landscape, the prospects for ratification by the Senate in the next several years would be poor.

Option 4: Call for “reducing emissions *growth* in the medium term, on the way to stabilization and eventual reduction of emissions.”

Comment: For example, emissions would peak in 2010, return to 1990 levels in the longer term (i.e. after 2020) and decline thereafter.

Pros:

- Economic costs would be relatively mild. Some economists would view this emissions path as consistent with one that would balance costs and benefits of climate change policy.
- Opposition in the business and labor communities would be mild.
- There is a chance an option along these lines would be ratified by the U.S. Senate in the next several years without major political changes.

Cons

- With this option, there is no chance of obtaining international agreement on our “flexibility” or “developing country participation” proposals.
- Criticism from other countries and U.S. environmental groups would be very strong. Environmental groups would equate your performance in New York with George Bush’s performance at the 1992 Rio Earth Summit.
- Environmental benefits (both climate and non-climate) would be modest.
- Some economists (especially those who emphasize the environmental benefits of climate change policies) would criticize this option as inadequate.

Option 5: Call for “strong action on climate change” and “agreement in Kyoto.” Say that the United States is continuing to study the issue of emissions levels and will elaborate on its position at a later time.

Comment: This roughly repeats prior statements by you and other administration officials.

Pros:

- Leaves options open for future decisions.
- Allows additional refinement of economic modeling runs before our position is announced.

Cons:

- Would be strongly criticized by environmental groups, who would equate your performance in New York with George Bush's performance at the 1992 Rio Earth Summit.
- Without more definition of our position on emissions levels soon, our ability to achieve agreement to flexibility and developing country provisions in Kyoto will be seriously impaired.

Material analyzing the environmental impacts of these options is attached as Appendix B. Material summarizing the projected economic impacts of Options 1 and 2 are presented in Appendix C. The interagency analysis team has not examined options that stabilize emissions at 1990 levels in 2020 or beyond (e.g. Options 3 and 4). Additional background material on climate change (including a discussion of domestic policy options) is attached as Appendix D.



EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL OF ECONOMIC ADVISERS
WASHINGTON, D.C. 20500

MEMBER

June 9, 1997

MEMORANDUM FOR DAVID B. SANDALOW

FROM: ALICIA H. MUNNELL *AM*
JEFFREY A. FRANKEL

SUBJECT: POTUS Memo on Climate Change

Thank you for the opportunity to comment on the decision memo before it goes to the principals for review. We are very concerned with the memo as drafted, and cannot sign off without some significant changes that will make it more useful for the President and Vice President. Our comments fall into four categories.

1. **The CEA position mischaracterized.** Because of the way the memo is constructed, the CEA position is described incorrectly in the current draft. CEA believes that Option 2 is an expensive option--more expensive than portrayed in the accompanying tables--and not consistent with an optimal path that maximizes the benefit-cost ratio as recommended by most economists. Nevertheless, we believe that global climate change is a potentially significant problem that can be solved only by the participation of both developed and developing countries. For this reason, we would be willing to go beyond what most economists recommend as an optimal path for efficient emission reduction if, and only if, we could secure (a) LDC commitment to "evolution," that is, eventual accession to emission limits similar to the Annex I countries; and (b) a flexible international trading system. We would like this reasoning spelled out in the discussion of Option 2 in the memo.

Second, our view of unilateral action should be stated as follows:

"If no agreement is reached in Kyoto, the CEA believes that the U.S. should consider taking smaller unilateral actions to show good faith internationally, to start educating the American people, and to begin creating the incentives for energy-efficient investments."

2. **Economic impacts of emission restraints understated.** The tables presented in Appendix C show the most optimistic plausible outcomes from the alternative emission restraints. As such, they should be included. But to give a fairer sense of the possible economic impacts, the memo should also include a second set of tables that assume (1) a lower rate of autonomous

technological change (as suggested by the majority of the outside reviewers); and (2) a less optimal recycling of the domestic permit revenue such as reducing the personal income tax. In addition, all tables should include the decline in consumption as well as the decline in GDP.

3. Option 3 not well-developed. If the President and Vice President do not want to sign on to a program with the enormous economic and political implications of Option 2, they need to have a viable alternative. As presented, Option 3 does not satisfy that criteria. Characterizing Option 3 as calling for “emission levels peaking at 2010, returning to 1990 levels in the longer term, and declining thereafter” would be more consistent with the international agenda. It would also be useful to spell out the benefits of such a proposal--namely, that its provisions are more likely to be adopted than those of the more ambitious plan, and that phasing in new energy efficient capital as old capital wears out is far more efficient than the more rapid option..

4. The pros and cons of the options are not clearly spelled out. Each option should have a list of the three or four strongest arguments for and against. These should be more substantive than “take the high ground,” or “would equate your performance...with George Bush’s....” For example, suggested pros and cons for Option 2 would be as follows:

Pros

- Would allow the United States to show leadership on global climate change.
- Would increase the likelihood of reaching agreement at Kyoto.
- — If adopted, would produce substantial collateral benefits such as reductions in ozone and PM.
- Coupled with demands for developing country participation and flexibility, provides a principled way of negotiating internationally.

Cons

- Would dramatically alter the Nation’s fiscal structure, raising \$100-\$200 billion per year if emission permits were auctioned.
- Would raise the price of gasoline by as much as 40 cents per gallon; would as much as quadruple the price of coal from \$28/ton to \$113/ ton.
- Would reduce GDP by as much as 0.6 percent in 2010, and reduce consumption by as much as 1.0 percent.
- Would have enormous regional and industry impacts.

Finally, we have attached some detailed editorial comments.

As we said at the beginning, we view the four points discussed above as being so serious that they preclude sending the memo even to the principals until the issues have been addressed.

ISSUE FOR DECISION

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The cost of reducing greenhouse gas emissions is potentially substantial. The principal source of such emissions is the burning of fossil fuels, which powers the global economy. Meeting the emissions targets proposed by the European Union, for example, is projected to reduce U.S. GDP in 2005 by 0.1-1.0%, increase gasoline prices in 2010 by 20-25 cents per gallon and increase coal prices in 2010 by almost 180%. Without a well-functioning system of international emissions trading, these figures would roughly double. Private capital outflows associated with an international emissions trading regime are predicted to be roughly \$5 billion per year. Significantly, modeling indicates that economic losses from some policies are largely transitory: after an initial loss, the economy rebounds and catches up to its original growth path. Costs depend significantly on rates of technological innovation. Effects on some sectors of the economy will be much larger than effects on the economy as a whole.

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decisively on this issue in Denver (at the Summit) or New York (at the UNGA Special Session), their criticism will be intense. On the other hand, much of the business community is strongly opposed to action on climate change. Fossil fuel and heavy manufacturing companies are poised vigorously to attack any policies the environmental community might support. Labor is increasingly opposed to action on climate change, largely in deference to the concerns of the United Mine Workers. Southern and western Republicans on the Hill are very skeptical about this agenda, as are midwestern and coal state Democrats.

On June 4, the Los Angeles Times wrote "At two international summits this month, President Clinton will no doubt take some heat about U.S. sluggishness in combating global warming...The United States, which produces nearly one-quarter of all fossil fuel emissions and has an environmentally savvy administration, is the logical mediator of a compromise proposal."

II. OPTIONS

Earlier this week, we identified several options for principals concerning the U.S. position on emissions levels in the international climate change negotiations. Each option was defined in terms of a broad directional statement you might offer at the Denver Summit or UNGA Special Session.

The meeting produced a considerable convergence of views. Most agencies (State, Commerce, Transportation, Energy, Agriculture, EPA, AID, OSTP and CEA) supported an option in which you would call for "stabilizing emissions in the medium term and reducing thereafter." In the parlance of the climate change negotiations, this means stabilizing greenhouse gas emissions at 1990 levels by roughly 2010 and reducing to lower levels thereafter.

Several caveats are important:

First, many of these agencies conditioned their support on success in obtaining flexibility provisions (e.g., international emissions trading, joint implementation) and the participation of developing countries. These agencies generally believe that any statement you make concerning emissions levels should be coupled with a strong statement on the importance of these additional provisions. Some agencies believe we should not accept any agreement at Kyoto unless developing countries agree to negotiate quantitative emissions limits.

Second, the Treasury Department has significant concerns. ^{Treasury} ~~Larry Summers~~, in particular, spoke forcefully about the economic and political costs of stabilization and urged a less ambitious approach. ~~Summers noted that~~ cost estimates are based on the assumption that underlying economic growth rates through 2010 will average just over 2%, and that costs of achieving any target would increase if these growth rates were higher. Treasury also focused on the potential wealth transfers possible under some control regimes, noting that

Not clear -

these transfers could be several times the size of the tax cuts contemplated in the balanced budget agreement. OMB expressed similar concerns.

Third, many participants noted the magnitude of this decision for the second term agenda. There is a widely held view that we cannot take this on without you and the Vice President making this a top tier issue during the next several years.

Fourth, at least one agency (Energy) conditioned its support on strong administration backing for increased funding for greenhouse gas-related technology programs in the years ahead.

Finally, ^{suggested} one agency (CEA) ^{might} ~~stated that the U.S. should take unilateral action to reduce~~ ^{to} greenhouse gas emissions ^{if no agreement is reached in Kyoto} ~~if no agreement is reached in Kyoto~~ ^{edge} ~~that~~ ^{the American people}

^{world policy in the right direction and educate the American people}
In light of the foregoing, and after further discussions, we are identifying four options for you in Denver and New York. They are: ^{highlight the importance and}

Option 1: Call for "significantly reducing emissions in the medium term."

Comment: Interior Department supports this option, stating that strong measures are necessary to protect the resources it manages. ^{fulcrum} Such a statement would be interpreted to be consistent with the E.U. proposal (a 10-15% cut from 1990 emissions levels by 2010).

This option could impose very large costs on the U.S. economy. Environmental benefits could also be large, especially when non-climate benefits (such as reducing fine particles and ozone) are considered. Many environmental groups would be pleased, but business and labor would be very strongly opposed. Without significant changes in the political landscape, the prospects for ratification by the Senate in the next several years would be close to zero.

Option 2: Call for "stabilizing emissions in the medium term and reducing thereafter."
Emphasize that flexibility and the participation of all nations (including developing countries) are essential to addressing this problem.

Comment: This is the recommendation from most of the Cabinet. It allows you to take the high ground: committing the U.S. to meaningful emissions reductions, while insisting on other principles we consider vital to an agreement. It lays the groundwork for refusing to sign a treaty in Kyoto, if we are unable to secure agreement on flexibility or developing country provisions.

Overall economic impacts of this option could be significant (although GDP impacts could be transitory). Dislocation in some sectors and regions (especially coal states) could be large. Environmental benefits (both climate and non-climate) could be significant. Some environmental groups would be pleased; others would complain of lack of U.S. leadership. Most business and labor groups would be opposed, although some might

support if the policy were coupled with other features they find attractive. Without significant changes in the political landscape, the prospects for ratification by the Senate in the next several years would be poor.

Option 3: Call for "reducing emissions *growth* in the medium term, on the way to stabilization."

Comment: This is consistent with views of the Treasury Department. Economic costs would be relatively mild, as would opposition in the business and labor communities. Environmental benefits (both climate and non-climate) would be modest. Criticism from other countries and U.S. environmental groups would be very strong. Environmental groups would equate your performance in New York with George Bush's performance at the 1992 Rio Earth Summit.

With this option, there is no chance of obtaining international agreement on our "flexibility" or "developing country participation" proposals. Emphasizing the importance of these proposals in the context of this option would lead to especially scathing criticism. However, there is a chance an option along these lines would be ratified by the U.S. Senate in the next several years without major political changes.

Option 4: Call for "strong action on climate change" and "agreement in Kyoto." Say that the United States is continuing to study the issue of emissions levels and will elaborate on its position at a later time.

Comment: This roughly repeats prior statements by you and other administration officials. It would be strongly criticized by environmental groups, who (here too) would equate your performance in New York with George Bush's performance at the 1992 Rio Earth Summit.

This formulation would allow additional refinement of economic modeling runs before our position is announced. We are currently in the middle of peer review of this modeling. More time would produce additional validation of interagency modeling work, although we do not anticipate significant changes in the results.

Material analyzing the environmental impacts of these options is attached as Appendix B. Material summarizing the projected economic impacts of Options 1, 2 and 3 is presented in Appendix C. Additional background material on climate change (including a discussion of domestic policy options) is attached as Appendix D.

Not correct. Reviewers have been very critical of our model and assumptions.

Add possibility of smaller unilateral actions to signal seriousness of intent.

Start in terms of costs.

**United States Department of State***Assistant Secretary of State for Oceans and
International Environmental and Scientific Affairs*

Washington, D.C. 20520

*cc: AM
JAF
JS*

June 4, 1997

TO: Distribution

FROM: OES - Eileen B. Claussen

SUBJECT: Distribution of Documents

Attached is a copy of the U.S. submission to the UNFCCC Secretariat, which includes the following documents:

- Additional/modified text on issues related to Annex C (which gases are to be included);
- Additional modified text on issues related to compliance; and
- A copy of the U.S. draft protocol proposal revised to include this additional text.

The Secretariat will include the submission, which was forwarded earlier this week, in the miscellaneous document to be circulated prior to the AGBM meeting. Also attached is a one page fact sheet summarizing changes/modifications. This was not sent to the FCCC, but has been useful in explaining materials to the Hill and others.

Attachment: as stated.

Total pages in this transmission (including cover page): 18

Additional U.S. Proposals
(references are to the original U.S. submission)

Article 1 (Definitions)

- o Replace definition 3 ("Greenhouse gas") with the following:

"Greenhouse gas" means any greenhouse gas covered in Annex C of this Protocol."

- o Replace definition 4 ("Tonne of carbon equivalent") with the following:

"Tonne of carbon equivalent" means one metric tonne of carbon, or a quantity of one or more other greenhouse gases equivalent to one metric tonne based on the global warming potentials decided by the Parties in accordance with Annex C of this Protocol.

Article 2 (Emissions Budgets)

- o Delete paragraph 7

Article 3 (Measurement and Reporting)

- o Replace paragraph 2 with the following:

For the purposes of implementing paragraph 1 and promoting comparability, consistency, and transparency, the Parties shall, not later than their first Meeting, decide on agreed best available methods for the measurement by Parties of anthropogenic emissions by sources, and removals by sinks, of greenhouse gases, taking into account the best available methods determined by the IPCC and other expert bodies. They shall also decide on appropriate adjustments to measurements of emissions and removals where agreed best available methods have not been used. The Parties shall periodically update agreed best available methods and adjustments based on evolving scientific knowledge, including advice from the Subsidiary Body for Scientific and Technological Advice referred to in Article 12.

Annex C

- o Replace descriptive language with the following:

All greenhouse gases, their sources and sinks, with global warming potentials as decided by the Parties at their first meeting (taking into account the IPCC's global warming potentials for 100-year time horizons) and as subsequently updated by the Parties to reflect evolving scientific knowledge.

Additional U.S. Proposals
(references are to the original U.S. submission)

In Article 2 of the U.S. proposal (Emissions Budgets), add a new paragraph 6.bis. as follows:

- 2.6.bis. At the end of a budget period applicable to a Party, any amount of tonnes of carbon equivalent emissions over its emissions budget shall be subtracted at a rate of [rate greater than that in paragraph 6] from the subsequent budget period.

In Article 4 of the U.S. proposal (Review and Compliance Process), substitute for paragraphs 3 to 6 the following text:

- 4.3 Reviews will be in connection with the review of communications conducted under Article 10.2(b) of the Convention and will be in accordance with guidelines to be adopted by the Parties at a meeting. These guidelines shall, inter alia, provide for how information will be made available to the public and define mechanisms by which observers and the public may provide comments, supplemental data or other information to facilitate and improve reviews. The guidelines shall be periodically reviewed by the Parties for appropriate revision.
- 4.4 Review teams will review all aspects of a Party's implementation of this Protocol, including the likelihood that a Party will achieve its emissions budgets obligations. They will be authorized, inter alia, to review pertinent information and consult with the Party in question and others as necessary. They will prepare a report assessing a Party's implementation of its obligations, identifying any areas of apparent non-compliance, as well as potential problems in achieving obligations.
- 4.5 Such reports will be circulated by the Secretariat to all Parties. In addition, the Secretariat will identify for further consideration any report indicating a question of implementation.

In Article 6 of the U.S. proposal (International Emissions Trading), substitute the following text:

- 6.1. Except as otherwise provided below, any Annex A or Annex B Party may transfer to, or acquire from, any Annex A or Annex B Party, any of its tonnes of carbon equivalent emissions allowed for a budget period, for the purpose of meeting its obligations under Article 2.

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- 6.2 An Annex A or Annex B Party may not transfer or acquire any of its tonnes of carbon equivalent emissions allowed if it is not in compliance with its obligations under Article 3 (Measurement and Reporting) or if it does not have in place a national mechanism for certification and verification of trades.
- 6.3 An Annex A or Annex B Party may not transfer in a given budget period any of its tonnes of carbon equivalent emissions allowed if it has exceeded its emissions budget for that period.
- 6.4 If a question of a Party's implementation of the requirements referred to in paragraph 2 or 3 above is identified by either the review process under Article 4.5 or by the Secretariat under Article 11.2(b):
- transfers and acquisitions of tonnes allowed (in the case of paragraph 2) and transfers of tonnes allowed (in the case of paragraph 3) may continue to be made after the question has been identified, provided that any such tonnes may not be used by any Party to meet its obligations under Article 2 until any issue of compliance is resolved. Issues of compliance shall be resolved as expeditiously as possible.
- 6.5 A Party may authorize any domestic entity (e.g., government agencies, private firms, non-governmental organizations, individuals) to participate in actions leading to transfer and acquisition under paragraph 1 of tonnes of carbon equivalent emissions allowed.
- 6.6 The Parties, at a meeting, may further elaborate guidelines to facilitate the reporting of emissions trading information.

In Article 10 of the U.S. proposal (Meetings of the Parties), for paragraph 4, substitute the following text:

10.4 The Parties:

- (a) shall periodically review the adequacy of this Protocol;
- (b) shall review the implementation of this Protocol, including the information submitted in accordance with Articles 3 and 5, reports received from the review teams referred to in Article 4, and any other reports and recommendations received from processes under this Protocol;

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- (c) shall implement an appropriate regime to address cases of non-compliance with obligations under this Protocol, including through the development of an indicative list of consequences, taking into account the type, degree, and frequency of non-compliance;
- (d) may establish an implementation committee consisting of a subset of Parties to assist them, including by making recommendations, in carrying out functions referred to in subparagraphs (b) and (c) above.

In Article 11 of the U.S. proposal (Secretariat), for paragraph 2, substitute the following:

11.2 The functions of the secretariat shall be:

- (a) to maintain and administer records relating to the accounting of the emissions budgets of Annex A and Annex B Parties, including initial budget allocations, adjustments to budgets consistent with Articles 2, 6, and 7, annual emissions, and remaining budgets in a given budget period;
 - (b) to facilitate the review of implementation of this Protocol through, inter alia, coordinating the review of Annex A and Annex B implementation; coordinating the reviews under Article 5; identifying for the Parties questions of implementation, including whether individual reports are consistent with reporting criteria; and preparing an annual compilation and synthesis report that contains inventory and budget information, and notes any discrepancies in accounting.
 - (c) [other].
-

as of June 1997

U.S. DRAFT PROTOCOL FRAMEWORK

(submitted without prejudice to ultimate form of agreement)

The Parties to this Protocol,

Have agreed as follows:

Article 1
Definitions

For purposes of this Protocol:

1. "The Convention" means the United Nations Framework Convention on Climate Change done at New York on 9 May 1992.
2. "Party" means Party to this Protocol.
3. "Greenhouse gas" means any greenhouse gas covered in Annex C of this Protocol.
4. "Tonne of carbon equivalent" means one metric tonne of carbon, or a quantity of one or more other greenhouse gases equivalent to one metric tonne based on the global warming potentials decided by the Parties in accordance with Annex C of this Protocol.
5. "Net anthropogenic emissions" of greenhouse gases is the calculated difference between emissions by sources and removals by sinks.
6. [other definitions to be developed or cross-referenced to the Convention as necessary]

Article 2
Emissions Budgets

1. Each Annex A and Annex B Party shall ensure that its net anthropogenic emissions of greenhouse gases do not exceed its emissions budget for any applicable budget period, as specified in this Article.
2. For each Annex A and Annex B Party, its emissions budget shall be denominated in tonnes of carbon equivalent emissions allowed and shall equal:
 - (a) the tonnes of carbon equivalent emissions it is allowed under paragraph 3 or 4 below, plus

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- (b) any tonnes of carbon equivalent emissions allowed that are carried over from a prior budget period under paragraph 5 below, plus
 - (c) up to [__ percent] of the tonnes of carbon equivalent emissions allowed under paragraph 3 or 4 below, such as may be borrowed from the subsequent budget period under paragraph 6 below, plus
 - (d) any tonnes of carbon equivalent emissions allowed that are acquired from another Party under Article 6 (International Emissions Trading) or Article 7 (Joint Implementation), minus
 - (e) any tonnes of carbon equivalent emissions allowed that are transferred to another Party under Article 6 (International Emissions Trading).
3. (a) For the first budget period, [20__ through 20__], each Annex A Party shall have a number of tonnes of carbon equivalent allowed equal to [a percentage of] its net anthropogenic emissions of tonnes of carbon equivalent in 1990, multiplied by [the number of years in this budget period].
- (b) For the second budget period, [20__ through 20__], each Annex A Party shall have a number of tonnes of carbon equivalent emissions allowed equal to [a percentage equal to or less than the percentage in subparagraph 3(a)] of its net anthropogenic emissions of tonnes of carbon equivalent in 1990, multiplied by [the number of years in this budget period].
- (c) [possible subsequent budget period(s)]
4. For the budget period [20__ through 20__], each Annex B Party (see Annex B for States included) shall have a number of tonnes of carbon equivalent emissions allowed equal to [options for Annex B Parties include: budget periods, baseyears, and/or percentages different from those applicable to Annex A Parties].
5. At the end of a budget period applicable to a Party, any amount by which the Party's emissions of tonnes of carbon equivalent is under its emissions budget for that period may be carried over and added to its emissions budget for the next budget period.
6. At the end of a budget period applicable to a Party, any amount of tonnes of carbon equivalent emissions allowed that is borrowed from the subsequent budget period shall be subtracted at a rate of [1.2:1] from the subsequent budget period.

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- 6bis. At the end of a budget period applicable to a Party, any amount of tonnes of carbon equivalent emissions over its emissions budget shall be subtracted at a rate of [rate greater than that in paragraph 6] from the subsequent budget period.
7. Any State not listed in Annex A may, in its instrument of ratification, acceptance, approval or accession, or at any time thereafter, notify the Depositary that it intends to be bound by obligations of Annex A Parties. It will then be an Annex A Party. The Depositary shall inform the other signatories and Parties of any such notification.
8. Any State not listed in Annex A may, in its instrument of ratification, acceptance, approval, or accession, or at any time thereafter, notify the Depositary that it intends to be bound by obligations of Annex B Parties. It will then be an Annex B Party. The Depositary shall inform the other signatories and Parties of any such notification.

Article 3
Measurement and Reporting

1. Each Annex A and Annex B Party shall have in place by [the first year of its first budget period] a national system for the accurate measurement of anthropogenic emissions by sources, and removals by sinks, of greenhouse gases.
2. For the purposes of implementing paragraph 1 and promoting comparability, consistency, and transparency, the Parties shall, not later than their first Meeting, decide on agreed best available methods for the measurement by Parties of anthropogenic emissions by sources, and removals by sinks, of greenhouse gases, taking into account the best available methods determined by the IPCC and other expert bodies. They shall also decide on appropriate adjustments to measurements of emissions and removals where agreed best available methods have not been used. The Parties shall periodically update agreed best available methods and adjustments based on evolving scientific knowledge, including advice from the Subsidiary Body for Scientific and Technological Advice referred to in Article 12.
3. Each Annex A and Annex B Party shall put in place, if it has not already done so, national compliance and enforcement programs relevant to its implementation of the obligations under this Protocol.

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4. Each Annex A and Annex B Party shall submit to the Secretariat, as part of its communication under Article 12 of the Convention, information on its implementation of this Protocol, including policies and measures it is taking to meet its obligations in Article 2. Such submission shall be in accordance with guidelines which the Parties adopt at their first Meeting, taking into account any relevant guidelines adopted by the Parties to the Convention. Such submission shall also contain the following information:
 - (a) once the obligation in paragraph 1 above becomes effective, a description of the national measurement system that it has in place;
 - (b) once the obligation in paragraph 1 above becomes effective, the results of its national measurement system;
 - (c) a quantitative projection of its net anthropogenic emissions of greenhouse gases through the budget periods; and
 - (d) a description of relevant national compliance and enforcement programs it has in place pursuant to paragraph 3 above, as well as a description of their effectiveness, including actions taken in cases of non-compliance with national law.
5. In addition to the information required to be submitted under paragraph 4, each Annex A and Annex B Party shall submit to the Secretariat, on an annual basis and in accordance with the guidelines referred to in paragraph 4, its current calculation corresponding to each of the subparagraphs in Article 2.2 and its remaining emissions budget for that budget period. With respect to any tonnes of carbon equivalent emissions allowed that are acquired or transferred under Articles 6 or 7, the Party shall specify the quantity, Party of origin or destination, and the relevant budget period.
6. The first of the submissions referred to in paragraph 5 shall be part of a Party's first communication that is due after the Protocol has been in force for that Party for two years. The frequency of subsequent submissions shall be determined by the Parties.
7. Information communicated by Parties under this Article shall be transmitted by the secretariat as soon as possible to the Parties and to any subsidiary bodies concerned.

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8. Without prejudice to the ability of any Party to make public its communication at any time, the secretariat shall make information communicated by Parties under this Article publicly available at the time it is submitted to the Parties.

Article 4
Review and Compliance Process

1. In addition to the review of communications conducted under Article 10.2(b) of the Convention, the Meeting of the Parties shall consider the information submitted by Annex A and Annex B Parties under Article 3 in order to assess those Parties' implementation of their obligations.
2. Reviews will be conducted by expert review teams, which will be coordinated by the secretariat and composed of experts selected from those nominated by Parties and, as appropriate, by intergovernmental organizations.
3. Reviews will be in connection with the review of communications conducted under Article 10.2(b) of the Convention and will be in accordance with guidelines to be adopted by the Parties at a meeting. These guidelines shall, inter alia, provide for how information will be made available to the public and define mechanisms by which observers and the public may provide comments, supplemental data or other information to facilitate and improve reviews. The guidelines shall be periodically reviewed by the Parties for appropriate revision.
4. Review teams will review all aspects of a Party's implementation of this Protocol, including the likelihood that a Party will achieve its emissions budgets obligations. They will be authorized, inter alia, to review pertinent information and consult with the Party in question and others as necessary. They will prepare a report assessing a Party's implementation of its obligations, identifying any areas of apparent non-compliance, as well as potential problems in achieving obligations.
5. Such reports will be circulated by the Secretariat to all Parties. In addition, the Secretariat will identify for further consideration any report indicating a question of implementation.

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Article 5
Advancement of the Implementation of
Article 4.1 of the Convention

Recognizing the progress that has been made to date in implementing commitments under Article 4.1 of the Convention:

1. The Parties reaffirm their commitments under Article 4.1 of the Convention and the need to continue to advance the implementation of such commitments.
2. Each Party shall strengthen its legal and institutional framework to advance the implementation of its commitments under Article 4.1 of the Convention.
3. Each Party shall take measures to facilitate investment in climate-friendly technologies.
4. Each Party shall report, as part of its communication under the Convention, on how it is promoting public education and participation in the development of climate change policy.
5. Each Party that is neither in Annex A nor Annex B shall identify and implement "no-regrets" measures for mitigating net anthropogenic emissions of greenhouse gases, including any identified through the review process under paragraph 7 below. In this regard, each such Party shall also:
 - (a) quantify the effects of the measures it implements;
 - (b) evaluate barriers to the adoption of potential measures; and
 - (c) report to the Secretariat, as part of its communication under the Convention, on the measures it has implemented, plans to implement, and barriers to the adoption of potential measures.
6. Each Party that is neither in Annex A nor Annex B shall submit to the Secretariat, on an annual basis, its inventory of greenhouse gas emissions. Such inventory shall be consistent with any guidelines adopted by the Parties.
7. The Parties shall establish a process for reviewing communications received under the Convention from the Parties identified in paragraphs 5 and 6. The process shall be designed to:
 - (a) enable the review of the effects of individual measures described in paragraph 5;

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- (b) assist such Parties in identifying and implementing "no-regrets" measures for mitigating net anthropogenic emissions of greenhouse gases;
- (c) seek to identify key sectors and technological options within them;
- (d) consider possibilities for promoting voluntary arrangements with industry aimed at identifying and encouraging implementation of "no regrets" measures; and
- (e) explore various means through which such Parties could obtain both the know-how and the technology needed to implement options identified.

Article 6
International Emissions Trading

1. Except as otherwise provided below, any Annex A or Annex B Party may transfer to, or acquire from, any Annex A or Annex B Party, any of its tonnes of carbon equivalent emissions allowed for a budget period, for the purpose of meeting its obligations under Article 2.
2. An Annex A or Annex B Party may not transfer or acquire any of its tonnes of carbon equivalent emissions allowed if it is not in compliance with its obligations under Article 3 (Measurement and Reporting) or if it does not have in place a national mechanism for certification and verification of trades.
3. An Annex A or Annex B Party may not transfer in a given budget period any of its tonnes of carbon equivalent emissions allowed if it has exceeded its emissions budget for that period.
4. If a question of a Party's implementation of the requirements referred to in paragraph 2 or 3 above is identified by either the review process under Article 4.5 or by the Secretariat under Article 11.2(b):
 - transfers and acquisitions of tonnes allowed (in the case of paragraph 2) and transfers of tonnes allowed (in the case of paragraph 3) may continue to be made after the question has been identified, provided that any such tonnes may not be used by any Party to meet its obligations under Article 2 until any issue of compliance is resolved. Issues of compliance shall be resolved as expeditiously as possible.

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5. A Party may authorize any domestic entity (e.g., government agencies, private firms, non-governmental organizations, individuals) to participate in actions leading to transfer and acquisition under paragraph 1 of tonnes of carbon equivalent emissions allowed.
6. The Parties, at a meeting, may further elaborate guidelines to facilitate the reporting of emissions trading information.

Article 7
Joint Implementation

1. Any Party that is neither in Annex A nor B may generate tonnes of carbon equivalent emissions allowed through projects that meet the criteria set forth in paragraph 2.
2. In addition to any criteria adopted by the Parties to this Protocol, the following criteria shall apply to projects:
 - (a) Projects must be compatible with and supportive of national environment and development priorities and strategies, as well as contribute to cost-effectiveness in achieving global benefits;
 - (b) Projects must provide a reduction in emissions that is additional to any that would otherwise occur.
3. [Additional provisions to be added on calculation, measurement, monitoring, verification, review, reporting]
4. Any Party that generates tonnes of carbon equivalent emissions allowed consistent with this Article may:
 - (a) hold such tonnes of carbon equivalent emissions allowed; or
 - (b) transfer any portion thereof to any Party.
5. An Annex A or Annex B Party may acquire tonnes of carbon equivalent emissions allowed under this Article for the purpose of meeting its obligations under Article 2, provided it is in compliance with its obligations under Article 3 (Measurement and Reporting).

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6. Any Party that is neither in Annex A nor Annex B that generates or acquires tonnes of carbon equivalent emissions allowed under this Article shall notify the Secretariat annually of the quantity, origin, and destination of such tonnes.

Article 8
Science

The Parties shall periodically review this Protocol, and guidelines established thereunder, in light of evolving scientific knowledge related to climate change.

Article 9
Progress Toward Long-Term Goal

The Parties shall cooperate in the establishment of a long-term goal with respect to atmospheric concentrations of greenhouse gases.

Article 10
Meetings of the Parties

1. The Parties shall hold meetings at regular intervals. The secretariat shall convene the first meeting of the Parties not later than one year after the date of the entry into force of this Protocol and in conjunction with a meeting of the Conference of the Parties to the Convention.
2. Subsequent meetings of the Parties shall be held, unless the Parties decide otherwise, in conjunction with meetings of the Conference of the Parties to the Convention. Extraordinary meetings of the Parties shall be held at such other times as may be deemed necessary by a meeting of the Parties, or at the written request of a Party, provided that within six months of such a request being communicated to them by the secretariat, it is supported by at least one third of the Parties.
3. The Parties, at their first meeting, shall:
 - (a) adopt, by consensus, rules of procedure for their meetings;
 - (b) [other].

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4. The Parties:

- (a) shall periodically review the adequacy of this Protocol;
- (b) shall review the implementation of this Protocol, including the information submitted in accordance with Articles 3 and 5, reports received from the review teams referred to in Article 4, and any other reports and recommendations received from processes under this Protocol;
- (c) shall implement an appropriate regime to address cases of non-compliance with obligations under this Protocol, including through the development of an indicative list of consequences, taking into account the type, degree, and frequency of non-compliance;
- (d) may establish an implementation committee consisting of a subset of Parties to assist them, including by making recommendations, in carrying out functions referred to in subparagraphs (b) and (c) above.

5. The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any State not party to this Protocol, may be represented at meetings of the Parties as observers. Any body or agency, whether national or international, governmental or non-governmental, qualified in fields relating to climate change which has informed the secretariat of its wish to be represented at a meeting of the Parties as an observer may be admitted unless at least one third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure adopted by the Parties.

Article 11
Secretariat

1. In accordance with Article 8.2(g) of the Convention, the secretariat of this Protocol shall be the secretariat of the Convention.

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2. The functions of the secretariat shall be:
- (a) to maintain and administer records relating to the accounting of the emissions budgets of Annex A and Annex B Parties, including initial budget allocations, adjustments to budgets consistent with Articles 2, 6, and 7, annual emissions, and remaining budgets in a given budget period;
 - (b) to facilitate the review of implementation of this Protocol through, inter alia, coordinating the review of Annex A and Annex B implementation; coordinating the reviews under Article 5; identifying for the Parties questions of implementation, including whether individual reports are consistent with reporting criteria; and preparing an annual compilation and synthesis report that contains inventory and budget information, and notes any discrepancies in accounting.
 - (c) [other].

Article 12

Subsidiary Body for Scientific and Technological Advice

1. The Subsidiary Body for Scientific and Technological Advice of the Convention shall serve as the Subsidiary Body for Scientific and Technological Advice of the Protocol.
2. When the Subsidiary Body for Scientific and Technological Advice exercises its functions with regard to matters concerning the Protocol, decisions shall be taken only by those of its members that are, at the same time, Parties to the Protocol.
3. When the Subsidiary Body for Scientific and Technological Advice exercises its functions with regard to matters concerning the Protocol, any member of the bureau of the Subsidiary Body for Scientific and Technological Advice representing a Party to the Convention, but, at the same time, not a Party to the Protocol, shall be substituted by an additional member to be elected by and from the Parties to the Protocol.

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Article 13
Subsidiary Body for Implementation

1. The Subsidiary Body for Implementation of the Convention shall serve as the Subsidiary Body for Implementation of the Protocol.
2. When the Subsidiary Body for Implementation exercises its functions with regard to matters concerning the Protocol, decisions shall be taken only by those of its members that are, at the same time, Parties to the Protocol.
3. When the Subsidiary Body for Implementation exercises its functions with regard to matters concerning the Protocol, any member of the bureau of the Subsidiary Body for Implementation representing a Party to the Convention, but, at the same time, not a Party to the Protocol, shall be substituted by an additional member to be elected by and from the Parties to the Protocol.

Article 14
Multilateral Consultative Process

[The Parties, at their first Meeting or as soon as practicable thereafter, shall consider the establishment of a multilateral consultative process to promote effective implementation of the Convention.]

Article 15
Dispute Settlement

[silence, with the result that Article 14 of the Convention would apply to this Protocol.]

[in addition, mandatory, binding dispute settlement [with specific consequences flowing from a violation] among Annex A and Annex B Parties, as well as against other Parties as appropriate (e.g., host countries under Article 7)]

Note: this process would be without prejudice to the review and compliance process under Article 4

Article 16
Evolution

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.

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Views on Certain Final ClausesAdoption and Amendments of Annexes

Depending upon what type of material is eventually included in annexes, it may not be appropriate to restrict the content of all annexes to "lists, forms and any other material of a descriptive nature that is of a scientific, technical, procedural or administrative character." For any substantive annex, it may not be appropriate to provide for tacit adoption/amendment.

Signature

This provision should state that only Parties to the Convention may be Parties to the Protocol.

Entry into Force

To ensure effective implementation, as well as to minimize the potential "free rider" problem, this provision may need to stipulate an entry into force trigger that requires ratification by States that account for a particular percentage of global emissions of greenhouse gases.

Annex A

This Annex would include the same States as those listed in Annex I of the Convention, plus those that join subsequently pursuant to Article 2.

Annex B

This Annex would include those States not listed in Annex A that indicate before adoption of the protocol that they want to be included in this Annex, plus those that join subsequently pursuant to Article 2.

Annex C

All greenhouse gases, their sources and sinks, with global warming potentials as decided by the Parties at their first meeting (taking into account the IPCC's global warming potentials for 100-year time horizons) and as subsequently updated by the Parties to reflect evolving scientific knowledge.

FACT SHEET ON SUPPLEMENTAL U.S. CLIMATE CHANGE PROPOSALS

June 1997

In January 1997 the United States submitted a draft text for a legal instrument to address next steps under the United Nations Framework Convention on Climate Change. Several technical elements left undefined in the January submission (principally those relating to compliance issues, and to which gases should be included in an agreement) have been further developed in the attached text; they are described below. The revised U.S. draft protocol proposal containing these new elements will form the basis for the U.S. position in the next session of the Ad Hoc Group on the Berlin Mandate (scheduled to meet in late July). Please call Jonathan Pershing (647-4069) or Linda Strachan (647-3550) of the State Department with any questions.

COMPLIANCE

- The January text created "emissions budgets", with targets based on the total emissions over a period of several years; this revision provides for a penalty to be assessed should a Party exceed its allowed budget.
- The January text created a review process; this revision calls for the review process to build on the existing Convention review mechanism, authorizes the review of any pertinent information, allows for consultations with both the Party and others in the course of a review, calls for the circulation of the completed review to all Parties, and requests the Secretariat to identify any report that requires further consideration.
- The January text provided an option for Parties with budgets to trade emissions; this text limits trading to Parties that have met all obligations pertaining to measurement and reporting of budgets, and that have in place national mechanisms for certification and verification of trades. With respect to a given budget period, it also precludes a Party from trading if it has exceeded its budget, and provisionally limits a Party's ability to trade if its compliance has been called into question.
- The January text provided for Meetings of the Parties; this text also calls for periodic review by the Parties of protocol implementation (including of the review process), requires Parties to implement an appropriate non-compliance regime (including through the development of an indicative list of consequences for non-compliance), and allows the Parties to establish an implementation committee to assist them in carrying out these duties.

ANNEX C: WHICH GASES ARE INCLUDED

- The January text suggested that all gases for which monitoring and measurement procedures are available should be included in the agreement; this revision maintains the broad inclusion of all greenhouse gases, sources, sinks and sectors, and calls upon the Parties to decide on best available methods for measurement, and to propose adjustments to the measurements in cases where best available methods are not used. The revision also calls for periodic updating of measurement methods.

cc: Am

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