

CONFIDENTIALDEPUTIES
PAPERPRD-12/GLOBAL CLIMATE CHANGE
POLICY DECISION PAPER

RELEASED IN FULL

I. SETTING

Heat-trapping, "greenhouse" gases are building up in the Earth's atmosphere. The best scientific evidence indicates that the continued increase in greenhouse gas concentrations will cause the global climate to change. The science is uncertain as to the precise timing, magnitude or regional impact of such changes. The best estimates suggest that a doubling of atmospheric carbon dioxide sometime in the next century will result in a temperature increase of 1.5-4.5 degrees Centigrade. In short, the question is not so much whether the climate will change as a result of increased greenhouse gas concentrations in the atmosphere, but how much, how fast and with what effect for specific regions?

The major greenhouse gases are carbon dioxide, methane, nitrous oxide and low-level ozone. Many human activities result in greenhouse gas emissions -- fossil fuel burning produces carbon dioxide; use of replacements (HFCs) for ozone depleting chemicals; livestock and rice cultivation produce methane; fertilizers produce nitrous oxide. At the same time natural "sinks" (e.g. forests) exist that can be enhanced to take up carbon from the atmosphere.

In response to upward trends in greenhouse gas emissions and concentrations in the atmosphere, more than 150 nations signed the Framework Convention on Climate Change in June 1992. To date, 16 nations, including the United States, have ratified the agreement. Fifty ratifications are required for the Convention to enter into force (which is expected in mid 1994).

The Convention's ultimate objective is to stabilize atmospheric greenhouse gas concentrations at a level that would prevent dangerous human interference with climate. Because of the long-lifetime of many greenhouse gases in the atmosphere, an effort to stabilize atmospheric concentrations would require dramatic (60 percent) reductions in current greenhouse gas emissions.

While many nations sought to set firm "targets and timetables" for reducing greenhouse gas emissions, U.S. objection to firm commitments resulted in an agreement that sets a non-binding goal for developed countries to return emissions to 1990 levels by the end of the decade. It is important to note that some OECD countries have set firm commitments unilaterally for reducing emissions. However, it is equally important to note that most have not made much progress in identifying and adopting specific reduction measures to achieve stated commitments.

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During the campaign, President Clinton made several statements in support of a binding target for stabilizing U.S. carbon dioxide emissions at 1990 levels by the year 2000 (in one statement, stabilization of all greenhouse gases at 1990 levels was articulated).

The United States accounts for 20 percent of global greenhouse gas emissions; the OECD accounts for 60 percent. In the coming decades, developing nations will overtake developed nations as the leading source of greenhouse gas emissions (in terms of total quantity, but not on a per capita basis). It is estimated that the OECD will account for 40 percent of all emissions in 2050.

Estimates of greenhouse gas emissions in the future are based on collaborative computer modelling efforts by the Department of Energy and Environmental Protection Agency. The models simulate behavior in energy markets, based on expert energy forecasts and the economic assumptions underlying the Administration's FY 1994 budget request.

11ion Metric Tons: U.S. greenhouse gas emissions were 1520 to 1617 million metric tons (MMT) of carbon equivalent in 1990, of which CO₂ represented 1381 MMT. EPA and DOE models show U.S. total emissions rising to between 1591 and 1696 MMT (with CO₂ accounting for 1476 to 1495 MMT) in 2000 if all Administration proposals to date are enacted (e.g. aggressive implementation of the Energy Policy Act, BTU tax, enhanced funding for EPA voluntary "green" programs). Thus, additional measures will be required to stabilize CO₂ and/or all greenhouse gas emissions by the United States. A summary of illustrative potential additional actions is attached:

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II. OBJECTIVES FOR U.S. POLICY

Because climate change poses a serious threat to the global environment, the United States should play an international leadership role in promoting a strong global response.

The central goal of U.S. policy should be to reduce global emissions of greenhouse gases. Efforts to exert leadership and leverage international action will require U.S. initiative in the following key areas:

- ✓ Setting a firm commitment for reducing U.S. CO₂ and/or greenhouse gas emissions;
- ✓ Pushing OECD partners (and others) to ratify and aggressively implement the Convention, and also adopting a firm commitment for emissions reduction;

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- o Assisting developing countries and countries with economies in transition in limiting future emissions;
- o Promoting the development of new technologies, and continuing U.S. leadership in scientific research.

III. MAJOR OPTIONS FOR ACHIEVING OBJECTIVES

A. EMISSIONS REDUCTION OPTIONS: Key options for U.S. climate change policy relate to the degree, form and timeframe for a U.S. commitment to reduce emissions.

EMISSIONS OPTION 1 -- CO2 Commitment: Under this option, the United States would establish a firm commitment to return emissions of carbon dioxide to 1990 levels in the year 2000, and pursue independently reductions in other gases.

- o CO2, the largest single source of greenhouse gas emissions, would be easiest to monitor because most emissions result from energy consumption, for which data are readily available.
- o Several other gases (e.g. methane, nitrous oxide) could be reduced, but given imprecise information about how to measure their baseline emissions and future reductions, limiting the U.S. quantitative commitment to CO2 may be a more practical near-term alternative.

U.S. environmental groups favor a CO2-only commitment, as will key environmentally-minded Congressional leaders (34 House members recently wrote urging the President to reduce greenhouse gas emissions from 1990 levels, which could only be accomplished through this option). Several key OECD partners (the E.C. and Japan) have adopted CO2-only targets.

A CO2-only commitment would be more difficult to achieve, politically and economically, than Option 2.

EMISSIONS OPTION 2 -- All Greenhouse Gas Commitment: Under this option, the United States would establish a firm commitment to return emissions of all greenhouse gases (considered together) to 1990 levels in the year 2000.

- o Unlike a commitment on CO2 only, which primarily addresses the energy sector, a target for all greenhouse gases could enable the United States to reduce the same amount of heat trapping gases in a least-cost manner. This approach spreads the costs among all sectors and recognizes opportunities to reduce other gases.

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- o This approach would be consistent with the Climate Convention, which sets a non-binding goal of returning all greenhouse gas emissions to 1990 levels by the end of the decade.
- o This approach would be more acceptable to U.S. industry interests, some key Members of Congress with energy interests, and some OECD partners (e.g. Canada and Australia). Environmental NGOs would be less enthusiastic about this approach.

DESIGN OPTIONS

There are several design options that could be applied to either a CO2 or all greenhouse gas commitment: 1) a decision to allow carbon sequestration strategies ("sinks"), and/or 2) a decision to allow joint implementation strategies to be employed in calculating and achieving U.S. emissions reductions.

DESIGN OPTION 1 -- Sources only: Under this design option, U.S. emissions reductions would be measured only on the basis of source emissions, excluding sinks (e.g. forests).

- o Unlike sinks, data on sources are readily available and reductions would be easier to quantify, implement and monitor.
- o This strategy would be welcomed by key developing countries, who fear developed countries will attempt to shift the onus for emissions reductions on tropical forests, thus requiring fewer tradeoffs by developed nations.
- o U.S. environmental groups favor this approach as the best strategy for near-term success.

DESIGN OPTION 2 -- Sources and sinks: Under this design option, U.S. emissions reductions would be measured on the basis of actions taken both to reduce source emissions and enhance sinks.

- o This approach would promote efforts to protect and enhance important sinks and would be less costly to the U.S. economy.
- o The Climate Convention sets commitments in terms of both sources and sinks, and continued adherence to this approach would be welcomed by some OECD partners (e.g. Canada, Nordics) and others (Russia) with significant forest resources.
- o This approach would be more acceptable to U.S. industry and some key members of Congress with energy interests because it would shift some costs away from the energy sector.

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Work being done on this?

o No agreed methodologies exist for measuring CO2 reduction credits from sinks, thus challenging the workability of this approach. If such methodologies were developed, some environmental NGOs might support this approach.

We should certainly do this but does this leave joint action field to other nations?

DESIGN OPTION 3 -- Domestic implementation only: Under this design option, the United States would limit reduction measures to those realized through actions within U.S. borders without accounting for actions taken jointly with other countries.

This approach would demonstrate U.S. willingness to take serious steps to deal with its own emissions.

It would be easier to implement and monitor and could proceed without the development of international guidelines or consensus.

o Some U.S. environmental groups do not favor joint implementation, which is seen as a loophole for avoiding significant domestic actions.

DESIGN OPTION 4 -- Joint implementation: Under this design option, the U.S. would allow credit toward the U.S. emission reduction commitment for measures taken in cooperation with other countries to limit emissions outside U.S. borders. For example, the United States could subtract from its total domestic emissions those reductions realized by energy efficiency gains in developing nations.

o This approach would achieve a given level of emission reduction at least-cost to the U.S. economy. By encouraging others to pursue this option, this policy would promote the greatest emissions reductions at the least-cost globally.

o Would be more difficult to implement and monitor because no international guidelines have been agreed to for measuring or accounting reductions from joint implementation. Therefore, international guidelines would have to be developed prior to application of this option.

o Would be favored by U.S. industry and some key Members of Congress with energy interests. Some would view this approach as an effort by developed nations to "buy up" cheap emissions reductions, thus making the future cost of reducing emissions more costly for developing nations.
Yes

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B. TIMEFRAME OPTIONS: In order to exert leadership, the U.S. must also decide how far into the future it will set and/or maintain a commitment to reducing/stabilizing emissions. Diplomatic negotiations have focused on a target for emissions at the end of the decade, a point in time for which it is easier and more reliable to project emissions and the need for emissions reductions. However, climate change is a long-term challenge requiring long-term commitments.

- ✓ [o The U.S. could most easily set a commitment to return emissions to 1990 levels by the end of the decade, recognizing that based on current projections this commitment will require additional measures.
- o A "year 2000" commitment would be consistent with the Climate Convention goal, but would not be as ambitious as some goals being discussed by other nations and environmental NGOs: Germany endorsed a 25 percent reduction from 1990 levels by the year 2005 (a very significant challenge); U.S. environmental groups have called for reducing CO2 and greenhouse gas emissions 25 percent by 2005.
- o Beyond the end of the decade, preliminary and less-reliable projections indicate that U.S. emissions will rise more sharply, thus requiring significant additional actions to hold stable at or further reduce emissions from 1990 levels. In the absence of firm economic forecasts, it is difficult to determine the full implications of such a commitment.

✓ [Alternatively, the United States could initiate a process at this time for assessing its commitments for reducing emissions in the future (e.g. the years 2005, 2010). This approach recognizes the inherent constraints on long-term decision-making without avoiding the issue of long-term commitments altogether.

C. OPTIONS FOR LEVERAGING INTERNATIONAL ACTION: Beyond a commitment to reduce its emissions, United States objectives are linked to actions by other nations to limit emissions. U.S. policy should be aimed at best leveraging commitments and vigorous actions by others. The following options are not mutually exclusive.

? 1) **Revising the Climate Convention:** The United States could seek to revise the Climate Convention (through amendment or protocol) or seek a binding agreement among the developed nations and countries with economies in transition (together, the "Annex I" countries under the Convention) to reduce future emissions.

This is unclear

** we have enough problems of our own now; let's do our own; explore beyond 2000; + push OECD*

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- o Revising the Convention would result in binding emissions reductions and would thus achieve greater certainty than currently exists under the Convention that emissions will actually be reduced.
- o Revising the Convention in the near-term would complicate (and could derail) important preparatory work in the Intergovernmental Negotiating Committee (INC) for the first meeting of the Conference of the Parties.
- o Revising the Convention will not be welcomed by some Annex I countries, who already see difficulties in meeting commitments under the current agreement.
- o Reopening the Convention to strengthen Annex I country commitments could invite additional, undesirable efforts by developing countries to revise other provisions.
- o Revising the Convention will require the advice and consent of the Senate.

2) Develop a political declaration: A political declaration, on the other hand, could be undertaken by Annex I countries outside the INC and thus allow preparatory work to help implement the Convention to continue undisturbed.

- o A non-binding political declaration would be less problematic for many Annex I countries, although such a declaration could also be less effective at ensuring emissions reductions.
- o A political declaration would not require Senate advice and consent, but Congressional consultations would be necessary.

3) Establish a process for addressing future commitments: As an alternative to revising the Convention or seeking a common political declaration, the Administration could establish a process by which stronger international commitments could be pursued in the future.

IV. RECOMMENDATIONS

- 1) That the U.S. commitment to return emissions to 1990 levels in the year 2000 extend to (CO2 only), (all GHGs)
- 2) That the U.S. commitment encompass (sources only), (sources and sinks)

↳ will also force US to focus
on sinks in US - can this be
domestic sinks? How

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- 3) That the U.S. (endorse), (not endorse) developing appropriate methods of joint implementation
- 4) That the U.S. quantitative commitment (apply only in the year 2000), (extend beyond the year 2000) Explore years beyond
- 5) That the U.S., immediately following a domestic announcement of a U.S. quantitative commitment (explore revising the Convention), (explore negotiating a political declaration by Annex I countries), (establish a process by which further international commitments could be pursued in the future -- with an eye toward revising the Convention after its entry into force (and after the first meeting of the Conference of the Parties, anticipated for early to mid-1995).

Unfortunately this does not include a listing of how to get the additional reductions in CO₂ or all gases.

How much from CAFE? Housing? Etc?

It seems to me that without these numbers it is extremely difficult to persuade people to take on the 1990/2000 commitment, because they won't know what this really means.

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