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Environment: Climate Change Vol. III [1]

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Wm did not attend
THE WHITE HOUSE
WASHINGTON

January 17, 1997

Wed, 1/22/97, 3-4:30 pm
Alicia/KH: This mtg conflicts w/ NEC weekly mtg which starts @ 3pm

MEMORANDUM FOR DISTRIBUTION

FROM: ELGIE HOLSTEIN
DAVID SANDALOW

SUBJECT: Climate Change

There will be a meeting on climate change domestic policies Wednesday, January 22 from 3:00-4:30 in OEOB Room 231. The agenda will be:

1. Organizational matters
2. Discussion of EPA's market transformation and emissions trading papers (being distributed by EPA)
3. Outreach

Attendance is principals only. Please call Wendy Philleo (456-6224) for clearance.

cc: JS

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Handwritten: cc: Ann JAF [initials]

January 17, 1997

OFFICE OF
AIR AND RADIATION

MEMORANDUM TO DISTRIBUTION LIST

From: Mary Nichols, Assistant Administrator for Air and Radiation and
David Gardiner, Assistant Administrator for Policy, Planning, and Evaluation

Attached are the two draft papers prepared by EPA, on emissions trading approaches and on technology and market transformation, for discussion at the Assistant Secretaries' meeting on Wednesday afternoon, January 22, which is being scheduled by David Sandalow.

Overview of Domestic Greenhouse Gas Emissions Trading Programs

Introduction

This paper describes how a domestic emissions trading program could be used to comply with an emissions target designed to meet an international agreement on greenhouse gases. Emissions trading is a tool for meeting a total quantity limit on emissions. It involves allocating or auctioning emissions allowances to sources, and allowing the trading of allowances in a market with sufficient mechanisms to ensure compliance with targeted levels. Emission trading systems can offer both static and dynamic efficiency advantages over more traditional forms of regulation. The potential for static efficiency gains exists because emitters face different abatement costs. Emissions trading allows those with high abatement costs to purchase allowances from those whose costs are lower. Total costs would therefore be lower than through traditional regulations which require all polluters to comply with a specific standard.

Dynamic efficiency gains can arise because emissions trading provides an incentive to conduct research and development in pollution abatement technologies. Under traditional regulation, firms have little incentive to investigate ways of abating pollution by more than the minimum required to comply with regulatory requirements -- even though going beyond the standards would result in additional environmental benefits. This, coupled with the inability of firms to capture all the economic benefits from R&D spending, results in under-investment in abatement technology R&D. Under emissions trading, emitters continue to face an incentive to look for further cost-effective ways of achieving emissions reductions even when they are in compliance with allowance limits. This is because any "surplus" allowances created can be sold to others in the emissions allowance market or banked to meet future reduction obligations. Emissions trading can therefore lead to a more rapid rate of development of pollution control technologies than those traditional regulatory policies that do not offer incentives to go beyond compliance.

These same efficiency benefits could be achieved through a system of emission taxes. However, a system based on emissions trading differs from a tax system in two important ways. First, under a tax system, the quantity of total emissions is the result of individual polluters' decisions in response to the incentive provided by the tax. The resulting level of emissions can be greater or less than the level targeted when the tax rate is set. By setting overall quantity targets, emissions trading programs coupled with appropriate compliance procedures, offer greater certainty that national emission targets will be achieved. Second, emission tax systems always involve revenues accruing to the government (although they can be rebated). Under an allowance system, the government has greater flexibility in deciding whether to collect revenues by auctioning permits or allocating them based on historical emissions. This flexibility can affect the public acceptance of the mitigation program.

US Experience with Emissions Trading

The US has had more experience with emissions trading than any other country in the world. Specific programs include:

- *Sulfur Dioxide (SO₂) Allowance Trading:* The Clean Air Act Amendments of 1990 imposed an overall 50% emission reduction requirement for SO₂ emissions from electric utility boilers. The portion of the program concerning trading works by allocating emission allowances to electric utilities based on a formula reflecting historical emissions. In addition, a small portion of allowances are auctioned every year to facilitate price discovery and new entrants. Allowances are specifically excluded from being defined as property rights, may be traded to any party anywhere within the continental U.S., and may be "banked" for use in future years. Participants need to conduct regular monitoring of emissions and make an annual accounting of their emissions. Penalties are imposed if emissions exceed the number of allowances held by a source.

There is now a functioning market in SO₂ allowances involving both bilateral exchanges between companies, and brokered exchanges through third parties. This market, along with other factors, has helped to dramatically reduce the cost of the abatement program. When first enacted, it was generally believed that emission allowances would sell in the range of \$500-600 per ton. Current spot prices are in the range of \$80-90. In addition, 1995 emissions were 40% below legally required levels for that year.

- *Water Effluent Trading:* The US generally has regulated surface water quality through a system of discharge limits for large sources of water pollution. In addition, states have standards for ambient water quality which are often not attained even after large dischargers apply "best technology." The reason is that small ("nonpoint") sources (such as runoff from farms) contribute significantly to water pollution. A number of state and local governments are employing trading systems for watersheds that either permit trading among large dischargers, or allow large dischargers to fulfill their requirements by controlling nonpoint sources. These include the Fox River in Wisconsin, the Dillon Reservoir in Colorado, and the Tar-Pamlico River in North Carolina. The latter two programs are designed to manage future economic growth. Thus, the quantity of effluent allowances allocated exceeds current discharge levels. Once growth consumes this excess, trading is expected to reduce compliance costs.
- *Inter-refinery Lead Trading:* EPA operated a lead trading program from 1983 to 1987 as it phased out lead from gasoline. Lead trading allowed refiners and importers to trade lead reduction credits in order to meet limits for the lead content of gasoline. The quantity of allowances to which a firm was entitled was determined by the amount of leaded fuel produced by the firm and the contemporaneous EPA standard. Those who bettered the standard could sell their credits to others. Some 10 billion

grams of lead were traded during the course of the program at prices ranging from 0.75 to 5 cents per gram. Allowing the trading of lead credits reduced the costs of the program by approximately 20 percent.

- *Criteria Air Pollutant Trading:* EPA first began incorporating aspects of emissions trading in its air program in 1974, when it allowed a modified source to use "credits" earned by another source within the same plant to avoid additional regulatory requirements. Since then, emission trading has substantially expanded. Trades have numbered in the thousands and have been estimated by Hahn and Hester (1986) to have achieved savings between \$525 million and \$12 billion.
- *Market Mechanisms for Chlorofluorocarbon (CFC) Phaseout:* Under the 1987 Montreal Protocol to limit stratospheric ozone depletion, the U.S. required the phase out of the production of CFCs by 1996. As part of its program, the U.S. adopted a tradeable permit regime covering CFC manufacturers and importers. These were allocated allowances based on each firm's 1986 market share. As the market for CFCs declined, the system allowed firms to allocate production between different production facilities according to the least-cost pattern of supply. It also gave CFC users the flexibility to switch between different CFC compounds, within the overall limit on allowances. This program helped reduce the costs of the phaseout. In 1988, EPA estimated that the cost to *halve* CFC use would be \$3.55 per kilogram. By 1993, it became clear that all uses could be *eliminated* by 1996 at a cost of \$2.45 per kilogram.

Emission Trading of Greenhouse Gases

These examples show that emission trading and banking have been used to meet established reduction requirements. Emissions trading, coupled with sufficient compliance mechanisms, may similarly be used to meet an established target for greenhouse gas emissions.

An emissions trading program, like any program designed to limit greenhouse gases, must contain certain elements. First and foremost, an agreed upon emissions budget grounded in science must be selected. (This, itself, may influence the rate of technological innovation). A central authority must be given the responsibility for verifying compliance and must be provided sufficient information to do so. Finally, there must be real consequences for noncompliance with allowance limitations or reporting requirements, such as penalties or subtraction of allowances.

A program would have to establish permit lifetimes, monitoring and enforcement provisions, as well as rules for permit banking, borrowing, and trading. Consideration should also be given to transaction costs, which should be kept as low as possible.

However, particularly difficult issues involve who is required to hold a permit and how permits should be allocated.

Who is required to Hold a Permit

Sources of greenhouse gases include not only those emitting carbon dioxide, but other gases such as methane, nitrous oxides, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Gases differ both in their atmospheric lifetimes and in their ability to trap heat in the atmosphere. In addition, carbon is not only emitted through the combustion of fossil fuels, but is also absorbed by "sinks" such as trees and soils.

The decision for determining who should be required to hold a permit should consider the following:

- *Coverage:* While it may not be necessary to ensure that every ton of greenhouse gas is accounted for within an emission trading regime, the scope of coverage of the trading program should be sufficient to ensure compliance with targets set in accordance with an international agreement.
- *Administrative and Compliance feasibility:* The number of sources involved in the trading program should be small enough to be administratively feasible and large enough to ensure market competition. In addition, monitoring and verification of permit compliance must be possible for those included in the program.
- *Potential to Diffuse Low Greenhouse Gas Technologies:* Alternative points of intervention should be evaluated for their ability to provide incentives for research, development, adoption and diffusion of low greenhouse gas technologies.
- *Market Impacts:* Any program that limits emissions will affect the bottom line of firms. The permit program will have economic impacts that vary depending on program design. For example, a program that requires electricity consumers to hold permits based on the national average carbon content of electricity generation will have different competitive effects from one in which individual electric generators must hold permits based on the carbon content of the fuel they consume. In addition, exempting certain sizes or categories of sources from permit requirements because of administrative or equity concerns (e.g., small boilers or home heating oil) has competitive implications within the energy market.
- *Wealth transfers:* Allocating permits redistributes wealth within the economy. The amount of redistribution can be large depending on the permit price (which is determined by the emissions target and the cost of fossil fuel substitutes). While one option would be to auction permits with revenues accruing to the government, another would be to award permits to sources based on historical rates of emissions. In the latter case, wealth would be transferred to whomever is allocated permits.

Carbon Sources

Carbon dioxide currently accounts for about 85% of U.S. greenhouse gas emissions. The term "emission trading" implies the creation of a market of emission allowances (or permits) among *emitters* of greenhouse gases through a limitation on those emissions. In the case of carbon dioxide, however, direct emitters number in the hundreds of millions since they include sources such as automobiles and residential gas water heaters.

However, since virtually all of the carbon contained in fossil fuel extracted from the ground (with the possible exception of certain feedstocks) is eventually released to the atmosphere, a trading program need not focus uniquely on direct emitters, but can target other points in the energy market. These include fuel extraction, processing, refining, distribution, and secondary conversion (e.g., coal to electricity). In addition, these points could vary by fuel type. For example, an emission trading program could focus on the point of final combustion for coal, but on refining for oil, or distribution for natural gas.

Given the wide variety of options available for including energy sources in a trading program, a few alternative programs are described below for illustration:

A Program Targeting Primary Fuel Producers

There are various levels within the primary fuel producing sector – extraction, processing, refining, and distribution – where a permit program could be implemented. One option would be to require permits at the point of first sale (a permit is surrendered with the first inter- or intra- company transaction). Such a system would include transactions between a coal company and an electric utility, between a natural gas producer and its marketing arm, between a natural gas producer and a broker, or between an oil extraction company and its refinery operations. Fuel importers would also require permits to import fuel. This would capture the carbon from fuel consumed in the refining process. The number of market actors under this program design would be under 5000 and virtually all carbon in the energy sector would be included in the program.

A Program of Emission Trading at the Sectoral Level

An emissions trading program could also be applied at the point of combustion, allowing trading among affected sources. This system would be most comparable to the current SO₂ emission allowance trading system.

Targeting the six largest industrial CO₂ emitting sectors (electric utilities, cement, primary metals, pulp and paper, petroleum refining and chemicals) in a sectoral trading program could encompass as many as 20,000 market participants and 90 percent of industrial CO₂ emissions. Mobile source emissions could be indirectly included in the system by allocating transportation equipment manufacturers permits for emissions associated with their automobile fleets or by including refiners in the program. Residential and commercial emissions could be similarly addressed by focusing upstream in the energy system.

Other Greenhouse Gases and Sinks

The remaining 15% of greenhouse gas emissions (on a carbon-equivalent basis) are accounted for by other gases. Most important among these is methane, which by itself accounts for 11% of national emissions. Since gases differ in their lifetimes and in their potential to trap heat in the atmosphere, an "exchange rate" or trading ratio must be established to convert all gases into common units for inclusion in a trading program. Such ratios have been developed by climate researchers and could be applied here. These should be consistent with the rules established in the international protocol.

Several, although not all, of the many sources of non-carbon greenhouse gases could likely be included in a trading system. For example, methane emitting coal mines, landfills, livestock manure management facilities and potentially natural gas distribution systems may meet the criteria described above for inclusion in a greenhouse gas trading program. These sources account for 7% of national greenhouse gas emissions. Similarly, emissions of some sources of other gases could potentially be included (e.g., magnesium production).

Forests in the United States currently remove an amount of carbon equal to 8% of national emissions from the atmosphere. However, translating the potential of sinks into monitorable, verifiable, and cost effective emission reductions is hampered by the lack of a comprehensive national accounting system for sinks. Thus, while it may be possible to observe and monitor the planting of trees and preservation of forests in a given area, it is difficult to know how such actions affect national emissions. Preservation of one stand of forests may simply lead to destruction of another in a different location. Overcoming the difficulties associated with monitoring and verification is therefore especially important for the inclusion of sinks to be included in a trading program.

Allocating Permits

In an emission trading system, some mechanism must be provided for allocating permits to sources. There are a number of options available for so doing. These include allocating permits on the basis of baseline/historical emissions (where permits are given to those currently emitting) or through an auction (where revenues accrue to the government). These two mechanisms could also be combined: some portion of permits could be allocated on the basis of historical emissions while the rest are auctioned.

A reserve of allowances or a portion of auction revenues could be set aside to encourage more rapid development and diffusion of low greenhouse gas emitting technologies. For example, manufacturers of energy consuming equipment could compete for the set aside based on the degree to which they produce equipment more efficient than the average in use or than required by current mandatory efficiency standards. Such a program could yield reductions in energy demand and help buffer the consumer from the impact of higher energy costs.

Allocation Based On Baseline/Historical Emissions

Under this approach, sources are given a number of permits based on baseline fuel production or emissions and an allocation formula. Various allocation formulae can be devised, weighted to greater or lesser degrees in favor of sources with high historical emissions. Emissions allowances are endowed to facility operators for no cost and would be transferable. As discussed earlier, this mechanism results in potentially significant wealth accruing to those receiving permits.

Such an allocation mechanism could also create entry barriers. In a capital intensive sector like primary fuel production, where entry barriers are already substantial, new entrants would be further disadvantaged if they had to purchase permits.

The problem could be mitigated by withholding a number of permits for purchase by new entrants or by auctioning a portion on the open market. Such an auction would also facilitate price discovery in a new market. Although new firms will still be disadvantaged (as they will pay for all of their permits), they would be able to enter the market. The pool of permits would need to be withheld from existing sources to ensure compliance with targeted national emission levels.

It may be desirable to allow credit for early emissions reductions (those achieved prior to the start of the program, but after the baseline period) -- in particular for those that reduced greenhouse gas emissions as part of government sponsored voluntary programs. If credits for past actions are given, the total credits allowed would need to be deducted from the overall permit allocation in order not to exceed national greenhouse gas emissions target.

Auction

Alternatively, an auction could be used to allocate permits. In this case, permit holders would pay the market clearing price for every unit of greenhouse gas released. Auctions ensure that permits are available for trade, and would serve to inform potential traders about current price levels. All participants have equal access to permits, placing new entrants on the same footing as existing emitters. Given that an auction could produce substantial revenues, some decision would have to be made with respect to what to do with the proceeds.

Conclusion

Past experience with emission trading programs indicates that they can help significantly reduce the costs of meeting environmental objectives. This is due in part to the incentives they provide for developing and diffusing new environmental technologies. Thus, final compliance costs for the programs that have incorporated emissions trading have, in general, been dramatically lower than ex ante expectations. With careful attention to design, a system of emissions trading could be instituted for greenhouse gas emissions. Such a program would provide similar incentives to research, develop, and

diffuse low greenhouse gas technologies and result in achieving targeted emission levels at the lowest possible cost.

Role of Technology and Market Transformation in a National Policy to Limit Greenhouse Gas Emissions

Technology has a critical role to play in addressing climate change. Energy-efficient technologies provide a sizable opportunity to limit emissions of greenhouse gases while simultaneously enhancing economic productivity. However, to capitalize on this opportunity, the U.S. needs to overcome market failures that have directed the country along a less energy-efficient path to date. This paper discusses the types of things we are doing and can do to transform technology markets and capture the full economic benefits of increased energy efficiency.

Market transformation policies would be a cornerstone to a national policy to limit greenhouse gas emissions, and would be complementary to other policies designed to implement whatever targets and timetables the U.S. adopts under the climate change negotiations. Even highly efficient forms of regulation, such as cap and trade, do not address fundamental failures in today's energy markets. These failures systematically restrain the potential of cost-effective, energy-efficient technologies to fairly low levels.

Policies that can unharness the full potential of energy-efficient technologies are important because they allow a smooth and potentially painless transition to meeting a carbon constraint. In addition, energy efficiency enhances the economy by generating productivity investments. Shifting capital from wasted energy expenditures to new investments will drive economic growth, employment and consumer income. Several major studies have demonstrated the economic advantages of improved energy efficiency. Most recently, the Energy Information Administration released an energy efficiency report based on the *Annual Energy Outlook 1996*. The study suggests that a reduction in U.S. energy consumption of 12 percent (in the year 2015) would increase GDP by 0.5 percent. Further improvements in productivity and competitiveness can occur due to the substantial ancillary benefits of advanced technologies and processes in the industrial sector.¹

Additional studies have documented the large potential for emissions reductions through improved energy efficiency. Studies by the National Academy of Sciences, Office of Technology Assessment, and American Council for an Energy-Efficient Economy have all demonstrated that the technological potential exists to cut energy consumption by 20% or more at a net economic benefit.² However, there is clear evidence that this potential will not be realized in the current market system because of a number of institutional, organizational, and other barriers that work against the diffusion of energy efficient technologies.

Some energy efficiency improvement occurs naturally over time. Additional improvements will result from a clear policy signal on climate change and energy.³ But the existing market failures are extensive and will restrain the energy efficiency response unless they are removed. Failure to fix these barriers would result in a higher cost to the national policy than is necessary. Some programs are already underway to fix these failures. An additional set of new initiatives will be needed to more fully tap the potential of current and future technologies.

The remainder of the paper provides an overview of market failures, current programs underway to remove them, and the potential for additional efforts.

Market Failures Constrain the Markets for Energy-Efficient Technologies

The existence or availability of a financially attractive technology by itself does not mean the technology will be purchased and used in sizable quantities. For high rates of technological diffusion, a number of other key factors have to be in place:

- ▶ Potential buyers of products need to know of the technology;
- ▶ Potential buyers of products need clear, reliable information on the performance and economic benefits of the technology;
- ▶ Potential buyers must be the ones to see the benefits of lower energy bills; and
- ▶ Service providers and users of the technologies must have expertise to appropriately design for, install, and operate the technology.

In most cases, these factors are not in place. The attached table provides an example list of market failures in the buildings sector.

The benefits of removing the barriers to the diffusion of efficient products extend beyond those products. There is a substantial ripple effect that further increases the potential for energy-efficient technologies. First, overcoming barriers to diffusion of today's technologies improves the incentives to manufacturers and spurs new, private R&D and innovation. This leads to new technologies that expand the potential for future energy savings. Second, as sales and production experience increases for efficient technologies, both the fixed and variable costs of production fall, reducing the cost of the technology to the end-user. This "learning by doing" increases the cost-effectiveness of energy efficient technologies and expands the potential for greenhouse gas reductions.

Current Programs Are Overcoming Many Barriers to Energy Efficiency

A number of successful, market transformation programs are currently underway. The Climate Change Action Plan (CCAP) programs, as well as other DOE programs, are overcoming many of the existing market failures in all sectors of the economy (see box for examples). Despite harmful budget cuts, these programs are making a substantial contribution to controlling growth in greenhouse gas emissions.

The CCAP programs were designed to maximize reductions by the year 2000, a relatively short period of time to achieve fundamental market transformation. With continued support beyond the year 2000, these programs will significantly restrain growth in U.S. greenhouse gases through 2010 and beyond. Previous interagency

Examples of Current Programs Overcoming Barriers

- ♦ Information: The ENERGY STAR® Consumer Labeling Program allows manufacturers to label qualifying, efficient products. Consumers are provided with unbiased information on their environmental and economic benefits. Through 1996, this young program has seen thousands of products labeled, billions of dollars invested in ENERGY STAR® products, and hundreds of millions of dollars in consumer savings.
- ♦ No R&D Incentive: The Partnership for a New Generation of Vehicles (PNGV) is a joint R&D effort with U.S.-based automakers to develop new automotive technology that can triple the fuel efficiency.

*** PRE-DECISIONAL DRAFT – Do Not Cite or Quote ***

January 15, 1997.

analysis indicates that around 1/3 of total emissions growth through 2010 will be avoided by the CCAP (a revised assessment of the impact of the CCAP programs relative to baseline growth is expected to be completed by the end of January).

These programs will need to be continued as part of a rational greenhouse gas policy in order to capture the economic potential of energy efficiency technologies. But the focus on the year 2000 limited the options that were included in the CCAP. With a longer term goal, there are significant opportunities to overcome additional barriers throughout the economy.

Further Efforts Are Needed to Remove Additional Barriers

There are additional areas of market imperfection that the Climate Change Action Plan programs and other efforts are not yet fully addressing. Many arise from split incentive problems, which occur when the manufacturer or purchaser of a technology does not receive the energy bill savings. Others are related to the ubiquitous problems of imperfect information. Following are some example areas where further efficiency improvements can be gained through government interventions to overcome market failures:

► Low Private Sector R&D

Failure: In a properly working market, purchasers of technologies would recognize and fully value future energy bill savings, and they would be willing to pay accordingly for efficient technologies. Manufacturers would then have considerable incentive for additional R&D and production of efficient technologies. Because purchasers underestimate the value of energy savings, manufacturers underinvest in R&D.

Solution: Incentives may be provided to manufacturers in a number of ways in order to internalize the energy saving benefits in manufacturers' investment decisions. For example, under a domestic trading system with a cap on greenhouse gas emissions, a reserve of allowances or a portion of auction revenues could be set aside to reward new R&D investment and production of efficient equipment. The incentives could potentially be used in all sectors of the economy, but might be particularly valuable in commercializing highly efficient technologies in the transportation sector.

► Lack of Financing

Failure: Because energy efficiency investments are often low risk and generate a consistent stream of savings, one would expect a robust financial market to fund these investments. But energy financing often is done entirely by the investor, and capital access is a key constraint on efficiency investments.

Solution: The federal government has been particularly successful in the past at jump-starting financial markets by chartering federal institutions. For example, since Sallie Mae was chartered by the federal government in 1972 to increase access to student loans, loan volumes have increased from \$1 billion a year to over \$25 billion a year. Both Fannie Mae (home mortgages) and Sallie Mae demonstrated that profitable financing markets were being restrained by existing institutions. They have evolved

into highly profitable, publicly traded companies that are now candidates for privatization (Fannie Mae's profit in 1996 exceeded \$2 billion). Lessons from Sallie Mae and Fannie Mae should be explored to determine if a similar institutional intervention could invigorate a profitable secondary market for energy efficiency financing.

► *Landlord/Tenant Split Incentives*

Failure: When building owners purchase building equipment but tenants pay the energy bills, the smart economic choice for the owner is to minimize first costs, which minimizes energy efficiency. Highly profitable cost savings are being lost to society because of these institutional arrangements.

Solution: Several interventions could be considered, including leasing reform and providing reliable energy information to potential tenants.

► *Builder/Buyer Split Incentives*

Failure: Because the designers and builders of new buildings do not subsequently operate the buildings and pay the energy bills, new buildings do not incorporate cost-effective, efficient designs and technologies.

Solution: Establish an energy performance rating system for commercial buildings (new and old) that can form the foundation for energy performance to be factored into the asset value of the building. Provide better information to prospective buyers and energy efficiency education and/or certification for designers and contractors.

► *Non-Rationality in the Industrial Sector*

Failure: Many companies recognize energy efficiency investments as a key to corporate competitiveness. For example, Dow Chemical has established a goal of improving energy efficiency at a rate of 2 percent per year, per product manufactured. But many other companies do not focus nearly as aggressively on their energy bills for a variety of reasons. Evidence suggests that the trend of improvements in overall industrial energy intensity has stalled.

Solution: Sector-wide compacts could put the entire industrial sector on a sustainable energy pathway. Rather than individual companies, entire industries could pledge improvements in energy intensity and benefit from the synergies of cooperative approaches to efficiency improvements.

► *Additional Information Barriers*

Failure: The CCAP programs are working in many areas of the economy on informational failures, but they persist in other areas. For example, consumers and businesses have no reliable information on the source of their electricity.

Solution: In a competitive power market, accurate information on efficiency and renewables of power providers would give the consumer the ability to place a value on environmental protection. Information in other areas might also be helpful to achieve long-term greenhouse gas reductions.

- *Barriers to Renewable Technologies* [Placeholder for DOE input on renewable portfolio]

1. Many industrial efficiency improvements also offer important productivity benefits. As an example, in 1990 a North Carolina textile firm installed a radio frequency dryer to replace a gas dryer which was used to dry cashmere wool. The project reduced the energy required for drying by almost half, and reduced fibre loss from over drying by more than 5 percent. The energy savings was about \$0.05 per pound of cashmere, while the savings in lost raw fiber, at \$30 per pound, was more than \$1.50 per pound. While the so-called "cashmere effect" at first may seem to be an extreme example of larger productivity benefits, it is not a case in isolation. Indeed, many other examples can be cited. For instance, the average total annual savings from efficiency projects from the Louisiana Division of Dow Chemicals were 3 to 13 times as large as the energy savings alone. Based on this example and other industrial experiences looking at groups of projects, the average total savings can be assumed to be as high as 4 to 6 times as large as the energy savings for projects that are implemented.

2. The Office of Technology Assessment (1991) study indicates a potential of over 400 MMTCE of reductions possible through 2010 or 2015 with a net savings to the economy. The National Academy of Sciences (1991) study shows as much as 450 MMTCE potential for emissions reductions at a cost savings. *America's Energy Choices* (1990), a study by the American Council for an Energy-Efficient Economy (ACEEE), the Union of Concerned Scientists and others, concluded that energy use could be cut by over 500 MMTCE in its least aggressive "Market Case," in which only cost-effective investments are made.

3. Under the 1987 Montreal Protocol to limit stratospheric ozone depletion, the U.S. required the phase out of the production of CFCs by 1996. Early analyses suggested that the cost to halve CFC use would be \$2.50 per kilogram. By 1990, it became clear that all uses could be eliminated by 1996 at a cost of \$2.45 per kilogram. The technological innovations that have reduced the cost were made possible by a tradeable permit regime, but were spurred by the clear policy signal of the Montreal Protocol and by government efforts working with manufacturers.

Historical Forces Leading to Institutional and Organizational Failure in the Buildings Market

Type of Failure	Nature of Failure	Examples of Failure
Imperfect Competition		
Natural Monopoly	Economies of scale	Electric utilities
Market Power (Monopoly and Oligopoly)	Bargaining power; interdependent conduct	Uniqueness of building location; few development firms in one area
Anti-Competitive Conduct	Collusion; predation	Manipulation of permit process to the detriment of competitors
Information Availability		
Information Costs	Transaction costs	High cost of customized audit (cheaper if done en masse); collecting product info; finding credible information sources
Asymmetric Information	Unequal bargaining	Developer's superior knowledge of building
Misinformation	Misinformed exchange	Belief: "no efficiency increase is possible"
Lack of Information	Uninformed exchange	No knowledge of efficient technologies
Economic Non-Rationality		
Bounded Rationality, Satisficing	Using rules of thumb to reduce transaction costs; not maximizing profits	Ignore costs that are < 5% of rent; use a two year payback; seek acceptable profits
Other Non-Rationality	Cultural reasons for taking actions that affect business practice	Preferring energy production to cost-cutting because it is more congruent with management culture
Risk Aversion	Resistance to change	Avoid changes in suppliers and technologies; avoid new technologies
Side Effects	Negative externalities from power production	Pollution from power generation; dependence on imported oil; risks of nuclear energy
Split Incentives	Utility costs not paid by purchaser and user of equipment.	Landlord-tenant problem; builder-buyer problem
Public Goods		
R&D	Non-excludability, zero marginal costs	Too little R&D performed
Expertise and Training	Non-excludability, zero marginal costs	Too little training on efficient design, installation and maintenance; too little information dissemination
Cash Flow Constraints	Lack of access to capital	Small business tenants on the edge; developer's reluctance to take on more debt
Regulatory Distortions		
Regulatory Bias	More profits for energy production than for efficient use	Utility reluctance to install conservation even when cheaper than new supply
Average Cost Pricing	Price signals do not reflect cost, leading to inefficient usage	Utility regulation in the US
Building Codes	Obsolete codes inhibit innovation and efficiency; # of inconsistent codes inhibits achieving economies of scale	Local US building codes contain requirements that interfere with efficient construction; thousands of building codes in the US



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United States Department of State

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

Washington, D.C. 20520

JAN 16 1997

TO: *Distribution

FROM: OES - Eileen B. Claussen

SUBJECT: Questions and Answers on the U.S. Climate Change
Submission (Protocol Proposal) of January 17, 1997

Attached for your information and use, as appropriate, are a set of questions and answers we developed regarding the U.S. Submission of January 17 to the Secretariat of the U.N. Framework Convention on Climate Change. We plan to use these questions and answers but not to distribute them publicly.

Attachment:

As stated.

Questions and Answers
on the U.S. Submission under the Climate Convention
January 17, 1997

Impact on the Economy

Q 1) Why is the Administration submitting such a detailed U.S. proposal for emissions budgets and budget periods when the results of the U.S. analysis and assessment are not yet available? Aren't you closing off options? Aren't decisions like these likely to have adverse impacts on the U.S. economy, jobs and competitiveness?

A 1) No, we are not closing off options or making decisions with adverse impacts on the U.S. economy. For example, it would not be possible, based on what we are submitting now, to make any assessment of the impact of our framework on the economy, jobs or competitiveness. Moreover, we are proposing specific elements designed to enhance implementation flexibility, including multi-year emissions budgets, emissions trading and joint implementation.

What we are doing is fleshing out the framework we proposed last July; the framework does not yet contain any specifics as to what the first emissions budget should be or the time frame over which it should apply. Decisions on these matters await the results of our ongoing analysis and assessment effort.

1990 Base Year

Q 2) Without the results of the analysis and assessment, why is the Administration proposing a 1990 base year -- won't this limit flexibility?

A 2) No. The year 1990 now serves as the base year in the Convention for commitments of developed countries up to the year 2000. To suggest that we might seek to vary the base year after the year 2000 would call into question the serious resolve of the United States to act responsibly to address the significant environmental threat posed by global warming. Besides, our proposal contains numerous elements designed to promote flexibility, including multi-year emissions budgets, emissions trading and joint implementation.

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Comprehensive Approach

Q 3) Your proposal lists greenhouse gases in Annex C, but that annex would exclude some gases. Does this mean that the Administration has jettisoned the "comprehensive approach" which has been a main tenet of U.S. climate change policy for many years?

A 3) We have called for binding commitments, including emissions budgets, with strict accounting requirements. To accomplish this, it is vital that greenhouse gases that are included in emissions budgets be quantifiable and verifiable. Annex C would list all greenhouse gases not covered by the Montreal Protocol, with the exception of gases, or particular sources and sinks, for which there is insufficient knowledge of the Global Warming Potential (GWP) or an inability accurately to measure emissions or removals. The GWPs we have in mind are those developed by the Intergovernmental Panel on Climate Change (IPCC).

That said, it should also be noted that Article 2, paragraph 7, of the U.S. proposal anticipates the inclusion of a provision requiring control of greenhouse gases not listed in Annex C.

Thus, we remain strongly committed to the comprehensive approach, and intend that all greenhouse gases, their sources and sinks, will be addressed under the agreement.

First Budget Period

Q 4) Last July, the Administration rejected short-term targets and subsequently said that short-term means anything before the year 2010; from this can we infer that the first emissions budget period under your proposal will be from 2000 to 2010?

A 4) We have made no decision as to the initial, or subsequent, budget period. What we have decided is that emissions budgets over multi-year periods are preferable to single-year targets because they increase flexibility for countries in how they use their budgets. And as we indicated last July, short-term targets would be unnecessarily burdensome to national and global economic growth and development. They could also mean that few, if any, countries would ratify the agreement.

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Target v. Emissions Budget

Q 5) Last July you advocated a binding, medium-term target. Now you are advocating an emissions budget? Have you changed your position? What is the difference?

A 5) We are defining a budget as a multi-year target. For some time we have been persuaded that the target should cover a multi-year period because such a target has several advantages. First, a multi-year target would smooth year-to-year variability in weather and economic cycles. Second, a multi-year target would give countries important flexibility to determine the pace at which they would use their emissions (evenly, front-loaded or back-loaded). This flexibility will help countries reduce their compliance costs in view of differing national circumstances.

In our view, a target that extends over a multi-year period and an emissions budget are synonymous, but using the term "emissions budget" may help clarify what we mean. Thus, the United States has not changed its position.

Second Budget Period

Q 6) Why does Article 3(b) of the U.S. submission propose that the budget for the second budget period should be equal to or less than the budget for the first budget period? Is this realistic? How can you make such a proposal before your analysis and assessment is completed?

A 6) We are proposing that emissions budgets in the second period be equal to or less than those in the first period because it is important to signal our resolve to address the significant threat of climate change seriously. Science now tells us that significant reductions in greenhouse gas emissions are needed to stabilize atmospheric concentrations and avoid the potentially devastating impacts that will otherwise occur. What is critical is that this step of the climate convention be as clear as possible about long-term direction -- this will facilitate public and private sector investment in the new technologies that will be needed to address this problem effectively over time.

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Third Budget Period?

Q 7) The Administration is proposing that the emissions budget for the second period be equal to or less than the emissions budget for the first period. What about the emissions budget for the third period -- will it be equal to or less than the budget for the second period?

A 7) The Administration has reached no decision about the emissions budget for a third budget period, but the science of this issue makes clear that we must begin now to reduce greenhouse gas emissions if we are to avoid the potentially devastating impacts of global warming in the future.

Borrowing

Q 8) Your proposal seems to allow developed countries to "borrow" from their future emissions budgets? If you are serious about global warming, isn't borrowing just letting them off the hook, and aren't we all just kidding ourselves?

A 8) We believe that some degree of borrowing against a future emissions budget should not be ruled out. In spite of their best intentions, countries are dealing with big variables in controlling their greenhouse gas emissions. These include, for example, economic growth and world fuel prices. In this sense, borrowing may provide a margin of safety.

On the other hand, we believe that borrowing should be limited to a very small percentage of a country's emissions budget. Under our proposal, if a country went over its emissions budget by the very small percentage we are suggesting, it would need to pay back that overage with interest in the next budget period. If a country were to go over its emissions budget by a larger percentage, it would be in non-compliance with its obligations.

Extent of Borrowing

Q 9) How much do you think countries should be able to borrow?

A 9) Very little.

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Annex A and B

- Q 10) Which countries would be included in your proposed Annex A, and which countries, if any, are likely to volunteer for Annex B and accept having an emissions budget of some kind?
- A 10) We anticipate that all developed countries now listed in Annex I of the Convention would be included in Annex A. We anticipate that advanced developing countries, particularly those that have joined or will soon join the ranks of developed countries, will volunteer to take on the commitments of Annex B countries. Under the U.S. proposal, only countries with emissions budgets would be eligible to engage in emissions trading.

Annex B "Volunteers"

- Q 11) Given how vehemently some of the more advanced developing countries have opposed any effort to have them shoulder responsibilities consistent with their economic status, what makes you think any of them will sign up for Annex B?
- A 11) The United States and other developed countries have long maintained that, as countries develop to -- and beyond -- a certain point, they must graduate to assume responsibilities commensurate with their development. This view is entirely consistent with the Convention's concept of "common but differentiated responsibilities and capabilities." If we are to deal meaningfully with the threat of climate change, there can be no "free-riders" -- all countries must play an appropriate role. We believe that Annex B provides opportunities for advanced developing countries, on a voluntary basis, to graduate to a level of responsibility commensurate with their level of economic development. We believe that a number of such countries understand this view, share our concern about global warming and will volunteer for Annex B status.

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Migration: Annex I to Annex B?

- Q 12) Several countries have called for "differentiated" targets based on their concerns about the different economic welfare losses uniform reductions in greenhouse gas emissions would impose, yet the United States has opposed differentiated targets for developed countries. In your view, what is to keep these countries from volunteering for Annex B and opting out of Annex A?
- A 12) Let us be clear. We understand the concerns that give rise to calls for "differentiated" targets. We believe those concerns can best be addressed by building in various elements of flexibility, including emissions budgets, emissions trading, and joint implementation. We do not believe that any country currently listed in Annex I would seek to avoid its responsibilities by opting out of Annex A and signing up for Annex B. Our proposal would not permit this, nor would we accept it.

Waiting for Godot

- Q 13) The United States has rejected short-term targets before 2010 and is calling for multi-year emissions budgets. Won't we have to wait until 2010 at the earliest to know whether a country with an emissions budget has met its commitment?
- A 13) No. Under the U.S. proposal, there would be strong reporting requirements for each country with an emissions budget. Each such country will need to have a national system in place by the beginning of the first budget period to measure its emissions accurately. It will also need to have in place national compliance and enforcement programs. Moreover, each country with an emissions budget will need to report on its national measurement system, the results of its measurement efforts, its projected emissions for the budget period, its national compliance and enforcement programs, including their effectiveness and the actions taken to deal with non-compliance.

Each year, each country with an emissions budget would need to submit a report on how much of its emissions budget remained for the rest of the budget period, and on how many tons of carbon equivalent it had obtained through emissions trading or joint implementation. All of this information would need to be reported on the basis of agreed guidelines and would be publicly available.

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Review and Compliance

Q 14) How do we know that anything will happen to the information reported by countries with emissions budgets? Won't that information just sit around on some shelf in Germany gathering dust?

A 14) Under the U.S. proposal, the information reported by each country with an emissions budget would be considered by the Parties periodically to assess implementation efforts. Based on agreed guidelines, teams of experts would review the information submitted by these countries and assess their implementation efforts, including the likelihood that they will achieve their emissions budget obligations, in written reports. A meeting of the Parties could then make recommendations to individual Parties, which would then need to review their implementation efforts and report back to the next meeting of the Parties. In addition, the Parties would decide what consequences should apply to instances of non-compliance, including, for example, denial of emissions trading rights or rights to engage in joint implementation, loss of voting rights or other rights to participate in decision-making.

New Commitments for Developing Countries?

Q 15) The U.S proposal would require that developing countries identify and implement "no-regrets" measures for mitigating net human emissions of greenhouse gases, including any identified in a new review process. It also would require developing countries to quantify the effects of the measures they implement, evaluate barriers to adoption of potential measures and report to the Secretariat on measures implemented, planned for implementation and barriers to adopting potential measures. Aren't these new commitments that are not currently in the Convention? If so, don't they violate the Berlin Mandate's clear proscription against new commitments for developing countries?

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- A 15) No, in our view, these are not new commitments. The Convention's Article 4.1 already requires all Parties to take a series of actions, including formulating and implementing national or regional programs containing measures to mitigate climate change by addressing human greenhouse gas emissions by sources and removals by sinks. In our view, the elements contained in the U.S. proposal "continue to advance the implementation" of these existing commitments, and are fully consistent with the Berlin Mandate. They do so by being more specific, requiring action and reporting at the level of a specific action or activity.

Developing Country Inventories

- Q 16) But the U.S. proposal also would require developing countries to submit inventories of greenhouse gas emissions on an annual basis. Currently, the Convention only requires developing countries to submit these inventories in their first national communication. How can you say that this isn't a new commitment?
- A 16) The Convention's Article 12 addresses the frequency of reporting. It authorizes the Conference of the Parties to determine the frequency of communications, after the initial communication, for all Parties. The U.S. proposal is thus entirely consistent with existing Convention provisions in this regard.

Review Process for Developing Countries

- Q 17) The U.S. proposal contains a rather extensive review process that would apply to developing countries. In particular, it would be designed to enable the review of the effects of individual measures. Doesn't Article 10 of the Convention limit the review of developing country communications to the "overall, aggregated effect of the steps taken by developing countries? Isn't this thus a "new commitment" that violates the proscription against new commitments for developing countries in the Berlin Mandate?
- A 17) First, Article 10 authorizes the Convention's existing Subsidiary Body for Implementation (SBI), under the guidance of the Conference of the Parties, to consider emissions inventories submitted by developing countries to assess the overall aggregated effects of the steps taken by the Parties. It is difficult to see how the SBI can consider these inventories and assess the overall aggregated effects of steps taken without considering the individual steps taken.

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Second, Article 7 requires the Conference of the Parties to keep under regular review the implementation of the Convention and any related legal instrument and make decisions within its mandate necessary to promote the effective implementation of the Convention. In particular, Article 7.2(e) requires the Conference of the Parties to assess, on the basis of all information made available to it under the Convention, the implementation of the Convention.

These provisions thus already authorize the Conference of the Parties and the Subsidiary Body for Implementation to review the effects of individual measures taken by all Parties. There is nothing in the U.S. proposal that strays from this or that violates the proscription against new commitments for developing countries.

What is Emissions Trading?

- Q 18) What exactly is meant by emissions trading in the U.S. proposal?
- A 18) We mean that any country with an emissions budget would be able to trade as much of its budget as it chooses to another country with an emissions budget.

Who Could Trade?

- Q 19) Who would be authorized to engage in emissions trading under the U.S. proposal?
- A 19) Under the U.S. proposal, any country with an emissions budget that was otherwise in compliance with its obligations would be able to trade with any other country with an emissions budget that was also in compliance with its obligations.

In addition, the U.S. submission proposes that any such country may authorize any domestic entity (e.g., government agencies, private firms, non-governmental organizations, individuals) to participate in actions leading to the transfer and receipt of tons of carbon equivalent. However, only countries with emissions budgets would be able to register such trades.

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Barrier to Trading?

Q 20) Under the U.S proposal, won't emissions trading have to await a meeting of the Parties to the protocol and a decision by them on guidelines to facilitate the reporting of emissions trading information?

A 20) No. Emissions trading would be fully authorized in the protocol itself; only the reporting of emissions trading information would need to await a decision on guidelines by the Parties to the protocol. In our view, this ensures that the Parties will have a strong incentive to develop such guidelines quickly.

Joint Implementation

Q 21) The U.S. proposal contains extensive provisions authorizing joint implementation for credit. Don't these provisions contravene the decision taken at the First Conference of the Parties establishing a pilot phase for Activities Implemented Jointly and specifically prohibiting credit?

A 21) No, the decision of the Conference of the Parties on Activities Implemented Jointly provides for the Parties to reach a conclusive decision on the pilot phase and the continuation beyond it no later than the end of the current decade. There is nothing in that decision that prohibits the Parties to the Convention or the current round of negotiations from including provisions, along the lines of those proposed by the United States, in the new legal instrument. Moreover, we believe that the Parties have strong incentives to do so. For developed country Parties, joint implementation will help promote cost-effective emissions reductions. Joint implementation will also enable developing country Parties to generate tons of carbon equivalent emissions that they will be free to hold or transfer as they see fit, and such transfers will support sustainable development efforts in developing countries that choose to make them.

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Additionality

- Q 22) Like the U.S. Initiative on Joint Implementation, the U.S. proposal would require that projects provide a reduction additional to any that would otherwise occur. Isn't it impossible to determine this, and doesn't it work as a disincentive to companies interested in joint implementation?
- A 22) Under the U.S. Initiative on Joint Implementation, additionality is determined on the basis of a comparison of the project in the absence of the specific measures taken or to be taken to reduce greenhouse gas emissions and as a consequence of those measures. Making such comparisons can be complex in some cases, but it is not impossible. In fact, the "additionality" requirement of the U.S. Initiative on Joint Implementation has not been a problem in practice for participants. In our view, a similar common sense approach can and should be adopted in the new legal instrument. The additionality requirement is fundamental, however, if we are to achieve real reductions in greenhouse gas emissions; otherwise, projects might just be old wine in new bottles -- or worse, they might actually increase greenhouse gas emissions.

Controversy over Joint Implementation

- Q 23) Given the controversy that has raged over joint implementation for several years, and the utter hostility of many developing countries to joint implementation, how likely do you think it is that this feature of the U.S. proposal will survive the negotiating process and actually appear in some form in the new legal instrument? Aren't you really kidding yourselves?
- A 23) We are facing a time that may extend well into the future of limited public sector resources and declining government budgets. However important they may be, funds available under the Convention's financial mechanism from the Global Environment Facility also are limited and will be wholly insufficient to support the kind of massive global effort needed to avert the threat of significant global warming. Joint implementation holds enormous potential to help solve this problem in ways that are good for the economies of developed and developing countries. Joint implementation projects will spur

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investment in developing countries and sustainable development. Sustainable development, in turn, will facilitate taking the actions necessary to avert global warming and other threats to the environment.

Many developing countries already recognize these realities. We are confident that, with time and positive results from joint implementation projects, others will join them.

Scientific Review

Q 24) Article 8 of the U.S. proposal provides for periodic review of the protocol and the guidelines established under it, in light of evolving scientific knowledge related to climate change. Could this Article and its periodic reviews lead to further actions in the future to address global warming?

A 24) Yes. The Convention's ultimate objective is to stabilize atmospheric concentrations of greenhouse gases in the atmosphere at a level that would prevent dangerous human interference with the climate system. No matter how significant the next steps taken under this protocol, they will be only a milestone along a much longer path to attainment of the Convention's ultimate objective.

Long Term Goal

Q 25) What is meant by the "long term goal" with respect to atmospheric concentrations of greenhouse gases contained in Article 9 of the U.S proposal? Could this goal be different from the level mentioned in Article 2 of the Convention concerning the ultimate objective?

A 25) Yes. We need ultimately to establish a path that will result in bringing global emissions well below current levels and stabilizing atmospheric concentrations at a level that will prevent dangerous human interference with the climate system. Article 9 of the U.S. proposal calls on the Parties to the protocol to cooperate in establishing a trajectory for this reduction.

Dispute Settlement

Q 26) What is contemplated under Dispute Settlement? Is it akin to WTO dispute settlement?

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- A 26) Dispute Settlement in this context refers to bilateral State-to-State dispute settlement. The FCCC provides for mandatory conciliation for all Parties, i.e., a Party must go to dispute settlement upon the request of another Party, and the result is non-binding. That process will apply to the new legal instrument, unless the instrument provides otherwise. As in the case of the WTO, the instrument could provide for binding dispute settlement, particularly for Parties with emissions budgets; this is an option we want to see included in the Secretariat's compilation of proposals.

Evolution

- Q 27) The U.S. proposal provides that the Parties to the protocol will adopt by 2005 legally 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 on agreed criteria. Doesn't this proposal obligate any developing countries that sign up to the protocol to adopt by 2005 quantitative commitments regarding their greenhouse gas emissions? If so, isn't this a new commitment in and of itself that violates the Berlin Mandate proscription against new commitments for developing countries? Even if not, why would any developing country intent on growing economically and reaching a level of development comparable to that of developed countries agree to such a commitment in this protocol?

- A 27) In our view, this element of the U.S. proposal does not represent a new commitment on the part of developing countries. The Convention establishes an ultimate objective that can only be met if all countries participate appropriately in seeking to achieve it, recognizing their common but differentiated responsibilities and capabilities. Nowhere does the Convention suggest that any Party will forever be exempt from taking responsibility for its own greenhouse gas emissions.

The U.S. proposal in this regard recognizes the need for a global effort under which all countries take responsibility to reduce their greenhouse gas emissions. The U.S. proposal calls for the negotiation of a mechanism for automatic application of progressive greenhouse gas emissions obligations to Parties, on the basis of agreed criteria. This proposal is fully consistent with the "common but differentiated responsibilities and capabilities" of Parties already reflected in the Convention.

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Entry into Force

- Q 28) The U.S. proposal acknowledges the potential for "free-riders" and suggests that the protocol's entry into force 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. Since U.S. emissions now account for about 22 percent of the total, will the U.S. propose that at countries representing, say, at least 85 percent of global emissions would need to ratify the protocol before it could enter into force? Given the significant differences between Congress and the Administration over the global warming issue, how likely is it that the Senate would give its advice and consent to the U.S. protocol proposal?
- A 28) This is a complicated issue that will require considerable further study. On the one hand, the Administration takes the threat of global warming seriously and seeks to promote effective global action. Toward this end, too high a percentage requirement might thwart the efforts of countries to move forward. On the other hand, a protocol that is not ratified by countries representing a significant percentage of the world's emissions will not be effective in addressing this significant threat to our environment.

The Administration intends to continue working with the Congress to highlight the dimensions of the environmental problem we face and to find a solution that will be viewed as in the best interest of the United States, both environmentally and economically.

Public Consultation

- Q 29) Despite its promises to the contrary, the Administration has developed its protocol proposal without consultation either with the Congress or with affected groups in the United States, whether from the environmental community or the private sector. When does the Administration intend to engage in a meaningful dialogue with the Congress and with non-governmental organizations? Can you amend the U.S. proposal before the next negotiating session?

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A 29) The Administration has been involved in an intense dialogue with the Congress and with affected groups in both the environmental community and the private sector since 1993. It is simply not true to suggest otherwise. Moreover, the U.S. proposal is fully consistent with U.S. positions taken at each of the previous negotiating sessions, positions that have been developed with the input of the Congress and affected groups and positions that have been publicly stated on numerous occasions.

While we plan to continue efforts to refine the U.S. proposal prior to future negotiating sessions, in particular, by filling in various blanks in several areas noted in the U.S. text, we have no plans to amend the U.S. submission prior to the next negotiating session.

Development of the U.S. Proposal

Q 30) Who participated in developing the U.S. submission? Was this something done by staffers at the State Department, or were other agencies involved? At what level?

A 30) The U.S. submission was developed in a broad interagency process that began even before the end of the last negotiating session in Geneva on December 7 last year. It has been fully vetted within the Federal Government at working levels and at high policy levels. It has the full backing and support of the Administration, and represents a consensus of many different actors with many different points of view.

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Drafted:OES/EGC:DAREIFSnyder:1/15-16/97:SEEGC Doc #10025
revised:1/16/97

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United States Department of State

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

Washington, D.C. 20520

JAN 16 1997

cc: AM
JAF
JS
MM

TO: *Distribution
FROM: OES - Eileen B. Claussen 
SUBJECT: U.S. Climate Change Submission

Attached for your information and use are copies of the following:

- (1) U.S. Submission (Proposed Proposal) of January 17 to the Secretariat of the U.N. Framework Convention on Climate Change
- (2) Fact Sheet on U.S. Climate Change Proposal
- (3) Negotiations Background and Calendar

I will brief Congressional staff tomorrow morning at 10:00 a.m., and distribute these documents at that time. They should be treated as "close hold" until after the Congressional briefing. I will brief representatives of U.S. environmental organizations and the private sector tomorrow afternoon at 2:00 p.m. here at the State Department.

Please accept my thanks for your help in developing the U.S. Submission against a difficult deadline.

Attachments:
As stated.

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FROM: Eileen R. Clausen

1/17/97

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 for which a global warming potential is set forth 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 set forth in 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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7. [Provision requiring control of greenhouse gases not listed in Annex C.]
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 A Parties. It will then be an Annex A Party. The Depositary shall inform the other signatories and Parties of any such notification.
9. 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 second Meeting, decide on minimum standards for the measurement of anthropogenic emissions by sources, and removals by sinks, of greenhouse gases.
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.
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;

-4-

- (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.
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.

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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 accordance with guidelines to be adopted by the Meeting of the Parties. 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 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. Reports will be provided to a Meeting of the Parties.
5. Based on such reports, a Meeting of the Parties may make recommendations to a Party. In such case, the Party shall review its implementation, take appropriate action, and report back to the next Meeting of the Parties on its action.
6. There would also be provisions setting forth various consequences for non-compliance with obligations, as determined by a Meeting of the Parties. Consequences would correspond to the type, degree, and frequency of non-compliance. Some would be automatic, while others might be discretionary. Examples of consequences could include, e.g.:
 - (a) denial of the opportunity to sell tonnes of carbon equivalent emissions allowed through international emissions trading and/or joint implementation;
 - (b) loss of voting rights and/or other opportunities to participate in processes under the Protocol.

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:

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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;
 - (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;

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- (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. An Annex A or Annex B Party that is in compliance with its obligations under Article 3 (Measurement and Reporting) and that has in place a national mechanism for certification and verification of trades, may transfer to, or receive 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. 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 receipt under paragraph 1 of tonnes of carbon equivalent emissions allowed.
3. A Meeting of the Parties 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.

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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).
6. A Party may authorize any domestic entity (e.g., government agencies, private firms, non-governmental organizations, individuals) to participate in actions leading to generation, transfer and receipt under this Article of tonnes of carbon equivalent emissions.
7. 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.

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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].
4. The functions of the meetings of the Parties shall be to:
 - (a) review the implementation of this Protocol, including the information submitted in accordance with Article 3;
 - (b) periodically review the adequacy of this Protocol;
 - (c) [other].
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.
2. The functions of the secretariat shall be:
 - (a) ...

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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.

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.]

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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.

Views on Certain Final Clauses

Adoption 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.

-12-

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

This Annex would list greenhouse gases not covered by the Montreal Protocol, with the exception of gases, or particular sources and sinks, for which there is insufficient knowledge of the GWP or inability to accurately measure emissions or removals. GWPs would be those developed by the IPCC.

January 17, 1997

FACT SHEET ON U.S. CLIMATE CHANGE PROPOSAL

In July, 1996 the United States outlined a broad framework for negotiation of next steps under the Framework Convention on Climate Change. In December, 1996, the U.S. further elaborated its ideas by describing the key elements that should be discussed for inclusion in a protocol to guide greenhouse gas emissions reduction efforts in the post-2000 period. The attached document represents further elaboration of the proposed framework. Today, the United States will present to the Convention's Secretariat draft text for consideration in international negotiations that will occur throughout 1997. Consistent with previous U.S. statements and proposals, the U.S. Submission addresses the following key topics:

EMISSIONS TARGETS

- A new concept is set forth to guide the establishment of developed country emissions targets. Building on the concept of cumulative and averaged emissions, the U.S. proposes creation of an "emissions budget". Multiple emissions budget periods are proposed, including a second period in which emissions are equal to or less than the first period, thus assuring continued progress toward achievement of the Convention's objective.
 - For a given period, each developed country Party would be allocated an emissions budget.
 - The submission does not identify either the size of the budgets or the duration of the periods.
 - Parties would be allowed to "bank" for future use emissions not used during a given period; to "borrow" a limited amount of emissions (with a penalty) from a subsequent period; and to trade emissions.
 - A new category is proposed to encourage rapidly developing countries to voluntarily adopt emissions budgets.

REPORTING AND COMPLIANCE

- The proposal establishes procedures to ensure adequate reporting, measurement, review and compliance.
 - Countries would have to set national systems for measuring emissions accurately, achieving compliance and ensuring enforcement.
 - Annual reports on measurement, compliance and enforcement efforts for the relevant budget period would be required and made available to the public.

- Implementation efforts would be reviewed under the Convention by expert teams and discussed at appropriate meetings of the Parties.
- The Parties would be assigned responsibility for determining the consequences of non-compliance, for example: denial of emissions trading/joint implementation rights; loss of voting and other decision-making rights.

ADVANCING DEVELOPING COUNTRY EFFORTS

- The proposal advances implementation of developing country commitments under the Convention by:
 - Requiring developing countries to identify and adopt "no-regrets" measures to mitigate net greenhouse gas emissions.
 - Requiring developing countries to prepare annual emissions inventories and report on steps taken to reduce emissions.
 - Establishing a process for reviewing developing country reports and improving emissions reduction strategies.

EMISSIONS TRADING AND JOINT IMPLEMENTATION

- The U.S. submission provides for full emissions trading among countries with emissions budgets (provided they are in compliance with all obligations under the agreement); it also provides for "joint implementation", through which countries without emissions budgets could create and transfer emissions reduction credits achieved by qualified projects.

LONG-TERM EFFORTS UNDER THE CONVENTION

- The proposal calls for periodic review of the agreement as scientific knowledge and information grows; it also requires the Parties to seek establishment of a long-term goal for atmospheric greenhouse gas concentrations.
- The proposal calls for establishment of a date certain for negotiation of emissions obligations for all Parties, and calls for development of graduation mechanisms to strengthen the obligations of developing nations.

NEGOTIATIONS BACKGROUND AND CALENDAR

Over 160 countries are now Parties to the U.N. Framework Convention on Climate Change (the Convention), adopted May 9, 1992, opened for signature at the Earth Summit in Rio de Janeiro in June, and ratified by the United States in October of that year, after receiving the advice and consent of the Senate. The United States was the fourth nation overall, and the first industrialized nation, to ratify the Convention.

The Convention entered into force on March 21, 1994, and the Parties held their first meeting in April 1995 in Berlin. There, they launched a negotiating process designed to produce a new legal instrument to deal with the threat of climate change in the post 2000 period. They called for the instrument (either an amendment or a protocol) to be adopted at their third meeting, scheduled for Kyoto, Japan, in December 1997.

The negotiating process began in August 1995, in accordance with the decision of the Parties (known as the "Berlin Mandate"). It is taking place in a temporary subsidiary body of the Convention known as the Ad Hoc Group on the Berlin Mandate (AGBM). The AGBM has met four times since its first meeting (in October 1995 and in February, July and December 1996). It will next meet from March 3-7, 1997, in Bonn, Germany. After that, it will meet again in August and October 1997 before the Parties assemble in Kyoto in December.

At the AGBM's 5th meeting in December 1996, Parties were requested to submit proposals, preferably in the form of agreement text, to the Secretariat by January 15, 1997. The proposals received from various Parties will be compiled in a document and circulated to all Parties before the March AGBM meeting. In addition, the AGBM Chair will prepare a "framework compilation" that will also be circulated to all Parties before the March meeting.

Early AGBM meetings focused largely on analysis and assessment. Since July 1996, these meetings have shifted their emphasis toward negotiations, although analysis and assessment are continuing. While the U.S. submission represents a significant step forward, much work remains to be done if the Parties are to adopt a new legal instrument in Kyoto.

The Convention's secretariat moved to its new headquarters in Bonn, Germany, in August 1996. Future meetings of the Convention will take place there, unless otherwise agreed by the Parties.

The U.S. submission represents the latest U.S. contribution to the international negotiating effort. It follows from the policy announced by the United States last July at the Second Conference of the Parties and further elaborated at the last

-2-

negotiating session in December 1996. The United States has proposed a three-part framework for a target to limit and reduce greenhouse gas emissions among developed countries: (1) the target should be binding; (2) it should focus on the medium term (i.e., 2010 to 2020); and (3) countries should have flexibility nationally in implementation. In addition, the United States said that it will be critical to include developing countries in next steps because finding a solution to the climate change problem will require a concerted global effort. In the U.S. view, all four of these concepts are linked and all four must be included in the new legal instrument; they are part of the U.S. draft protocol proposal.

CALENDAR OF MAJOR FCCC EVENTS AND MEETINGS

1992

May	Adoption of the UN Framework Convention on Climate Change - New York
June	Convention signed at the Earth Summit - Rio de Janeiro, Brazil
October	Convention ratified by the United States

1994

March	Convention enters into force
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1995

March-April	First Conference of the Parties (COP-1) - Berlin
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1996

July	Second Conference of the Parties (COP-2) - Geneva
December	Negotiating session - Geneva

1997

Feb 25- March 7	Negotiating session - Bonn
July 28- August 7	Negotiating session - Bonn
October 20-31	Negotiating Session - venue to be determined
Dec 1-12	Third Conference of the Parties to the UN Framework Convention on Climate Change (COP-3) - Kyoto, Japan

R

REDEFINING PROGRESS

ONE KEARNY STREET • 4TH FLOOR • SAN FRANCISCO • CALIFORNIA 94108

Telephone 415.781.1191 • Facsimile 415.781.1198

1960
11/6/97

cc: JAF
JS

January 14th, 1997

The Honorable Alicia Munnell
Council of Economic Advisors
OEOP Room 314
17th St. & Pennsylvania Ave. NW
Washington, DC 20502

Dear Ms. Munnell,

We want to bring to your attention the enclosed "Economists' Statement on Climate Change." The statement – originally drafted by Kenneth Arrow, Dale Jorgenson, Paul Krugman, William Nordhaus, and Robert Solow – is now being circulated for endorsement to the entire membership of the American Economics Association (AEA). We expect a large number of endorsements from economists across the country, after which an official public announcement will be made in mid-February.

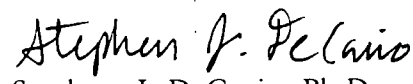
This initiative is being coordinated by Redefining Progress, a non-partisan, non-profit public policy organization. We are pleased to provide you with advance notice of this undertaking.

As you will notice, the attached statement represents a remarkable consensus. It not only provides strong support for the United States to seek an international agreement on climate change, but also a rebuke to those who claim that any meaningful effort to mitigate climate change will devastate the economy.

We would welcome the opportunity to discuss this initiative or the economics of climate change in more detail. Please call Ted Halstead at (415) 781-1191 or Stephen DeCanio at (805) 893-3130.

Most Sincerely,


Ted Halstead
President


Stephen J. DeCanio, Ph.D.
Senior Economist

enclosure

ECONOMISTS' STATEMENT ON CLIMATE CHANGE

We the undersigned agree that:

I. The review conducted by a distinguished international panel of scientists under the auspices of the Intergovernmental Panel on Climate Change has determined that "the balance of evidence suggests a discernible human influence on global climate." As economists, we believe that global climate change carries with it significant environmental, economic, social, and geopolitical risks, and that preventive steps are justified.

II. Economic studies have found that there are many potential policies to reduce greenhouse-gas emissions for which the total benefits outweigh the total costs. For the United States in particular, 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.

III. The most efficient approach to slowing climate change is through market-based policies. In order for the world to achieve its climatic objectives at minimum cost, a cooperative approach among nations is required—such as an international emissions trading agreement. The United States and other nations can most efficiently implement their climate policies through market mechanisms, such as carbon taxes or the auction of emissions permits. The revenues generated from such policies can effectively be used to reduce the deficit or to lower existing taxes.

ENDORSEMENT FORM

NAME _____ SIGNATURE _____

TITLE/AFFILIATION _____ DATE _____

DO YOU HOLD A PHD IN ECONOMICS ☐ YES ☐ NO IF NO, DEGREE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE _____ FAX _____ E-MAIL _____

WOULD YOU LIKE TO RECEIVE MORE INFORMATION ON REDEFINING PROGRESS ☐ YES ☐ NO

 PLEASE COMPLETE AND SEND TO REDEFINING PROGRESS

BY FAX:

FAX: (415) 781-1198
PHONE: (415) 781-1191

BY MAIL:

ONE KEARNY STREET • 4TH FLOOR
SAN FRANCISCO, CA 94108

January 3rd, 1997

Dear Colleague,

As you may know, representatives of the world's nations will convene in Kyoto in December, 1997 to negotiate an international agreement addressing the threat of global climate change due to greenhouse gas emissions. This presents a significant opportunity for the United States to exercise a leadership role in ensuring our long-term well-being. Conversely, a failure on the part of the U.S. government to put forward a well-reasoned position would be a major environmental, economic, and diplomatic setback.

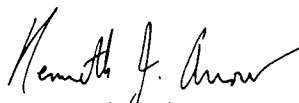
As the climate debate unfolds, it is imperative that public policy be guided by sound economics rather than misleading claims put forward by special interest groups. For this reason, we invite you to join us in endorsing the attached non-partisan consensus statement on the economics of climate change.

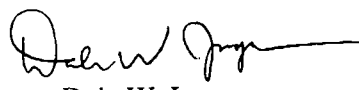
Once this statement has been signed by a large number of economists, it will be widely disseminated to leaders in the public and private sectors, and to the general media. This effort is being coordinated by Redefining Progress, a non-partisan, non-profit public policy organization.

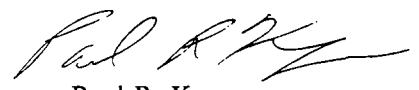
Attached please find an endorsement form for your consideration. This letter and endorsement form are being sent to the membership of the American Economic Association. Please feel free to circulate it to your colleagues in case they are not on the AEA mailing list.

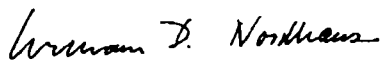
We thank you for your prompt attention to this critical issue.

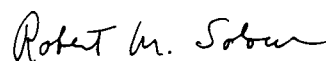
Sincerely,


Kenneth J. Arrow


Dale W. Jorgenson


Paul R. Krugman


William D. Nordhaus


Robert M. Solow

Tues, 1/14/97, 4:58pm Munnell 001

THE WHITE HOUSE
WASHINGTON

January 13, 1997

cc: AM
JAH
SS
MM

MEMORANDUM FOR DISTRIBUTION

FROM: Kristen Panerai
National Economic Council

SUBJECT: Climate Change Deputies Meeting

Attached please find the agenda and the paper for tomorrow's Climate Change Deputies meeting at 4:30 pm. in 231 OEOB.

Deputies plus one are invited to attend. If you have not done so yet, please call Kristen Panerai at 456-5353 with your clearance information by COB Monday, January 13.

Distribution:

Charles Curtis, DoE
Morton Downey, DOT
Ev Ehrlic, Commerce
Leon Fuerth, OVP
John Garamendi, DOI
Jack Gibbons, OSTP
Jamie Gorelick, DOJ
David Hales, AID
Fred Hanson, EPA
Jeff Lang, USTR
Jack Lew, OMB
Cynthia Metzler, Labor
Richard Rominger, USDA
Alicia Munnell, CEA
Nancy Soderberg, NSC
Larry Summers, Treasury
Tim Wirth, State

CLIMATE CHANGE AGENDA
January 14, 1996, 4:30 p.m., 231 OEOB

- I. Introduction
- II. Submission of draft protocol language
- III. Review of modeling effort
- IV. Development of domestic implementation policies

THE WHITE HOUSE

WASHINGTON

January 13, 1997

MEMORANDUM FOR CLIMATE CHANGE DEPUTIES

FROM: ELGIE HOLSTEIN, NEC^{*}

RE: Paper for 1/14 Deputies Meeting

Attached is a revised draft climate change protocol, based on discussions among the assistant secretaries group. In addition, I am attaching a paper prepared by the State Department regarding the issue of borrowing.

REV. 5, 1/13/97, 8 am

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 for which a global warming potential is set forth 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 set forth in 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

-2-

- (b) any tonnes of carbon equivalent emissions allowed that are carried over from a prior budget period under paragraph 5 below, plus
 - (c) 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
 - (d) 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. [Provision requiring control of greenhouse gases not listed in Annex C.]
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.

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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 second Meeting, decide on minimum standards for the measurement of anthropogenic emissions by sources, and removals by sinks, of greenhouse gases.
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.
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

-4-

- (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.
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.

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3. Reviews will be in accordance with guidelines to be adopted by the Meeting of the Parties. 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 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. Reports will be provided to a Meeting of the Parties.
5. Based on such reports, a Meeting of the Parties may make recommendations to a Party. In such case, the Party shall review its implementation, take appropriate action, and report back to the next Meeting of the Parties on its action.
6. There would also be provisions setting forth various consequences for non-compliance with obligations, as determined by a Meeting of the Parties. Consequences would correspond to the type, degree, and frequency of non-compliance. Some would be automatic, while others might be discretionary. Examples of consequences could include, e.g.:
 - (a) denial of the opportunity to sell tonnes of carbon equivalent emissions allowed through international emissions trading and/or joint implementation;
 - (b) loss of voting rights and/or other opportunities to participate in processes under the Protocol.

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.

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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;
 - (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;

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- (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. An Annex A or Annex B Party that is in compliance with its obligations under Article 3 (Measurement and Reporting) and that has in place a national mechanism for certification and verification of trades, may transfer to, or receive 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. 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 receipt under paragraph 1 of tonnes of carbon equivalent emissions allowed.
3. A Meeting of the Parties 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.

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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).
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.

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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].
4. The functions of the meetings of the Parties shall be to:
 - (a) review the implementation of this Protocol, including the information submitted in accordance with Article 3;
 - (b) periodically review the adequacy of this Protocol;
 - (c) [other].
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.
2. The functions of the secretariat shall be:
 - (a) ...

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Article 12Subsidiary 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.

Article 13Subsidiary 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 14Multilateral 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.]

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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], legally 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.

Views on Certain Final Clauses

Adoption 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.

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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

This Annex would list greenhouse gases not covered by the Montreal Protocol, with the exception of gases, or particular sources and sinks, for which there is insufficient knowledge of the GWP or inability to accurately measure emissions or removals. GWPs would be those developed by the IPCC.

BORROWING

Currently, the draft text provides no language on "borrowing", although the December paper tabled by the United States at the AGBM session suggested we would be exploring the potential for borrowing as well as banking. While the Assistant Secretary-level discussion agreed that at least in some form the issue of borrowing might be included, no agreement was reached as to the form that a borrowing regime would take -- nor, consequently, for what text should be inserted. Three possibilities for inclusion of borrowing in the text, covering the range of alternatives discussed, are suggested below:

Option 1: Right to Borrow

Allow an Annex A or B Party to borrow from the second budget period to meet its obligations in the first budget period (and from the third period for the second, if there is a third period specified in the Protocol). Borrowing would be limited in amount, and borrowed emissions would be repaid with interest in the subsequent period. Note that reporting and review of borrowed emissions, and the possible development of additional guidelines would already be covered by language in the existing articles. Non-compliance would be affected as follows: a Party would be in non-compliance if it exceeded its allowed borrowing quota; if it borrowed within allowed limits, whether it ultimately complied (i.e., repaid the tonnes) would not be known until the end of the subsequent budget period.

Option 2: Debt Carryover

Restrict borrowing to a "debt carryover" so that it would not be used as a planning device, but only as a safety valve in case budget obligations were not met. Unlike Option 1, a Party exceeding its emissions budget would be in non-compliance. This option could be additional to that described in Option 1 above; there would be a right to borrow up to a certain percentage; beyond that, exceedences would be penalized.

Option 3: Continue to Explore

Insert general language indicating that the United States is still interested in exploring allowing Parties to borrow against future emissions budgets in order to increase their current emissions budgets. Borrowing would require a credible accounting and repayment mechanism, and could entail additional restrictions (e.g., to limit the proportion of emissions reductions postponed). A borrowing regime might also be used to provide funds to assist developing countries (e.g., requiring Parties wishing to borrow to escrow a portion of the funds that might be required to purchase emissions in case of default, and using the funds to provide loan guarantees or grants to developing countries).

TEXTUAL OPTIONS

Right to Borrow

Language to this effect could be inserted in Article 2 as a new paragraph 2(b-bis), and a new paragraph 5 bis:

Article 2(b-bis): "Up to [10 percent] of the tonnes of carbon equivalent emissions allowed under paragraphs 3 or 4 below such as may be borrowed from the subsequent budget period under paragraph 5 bis below."

Article 2(5 bis): "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."

Debt Carryover

The notion of treating borrowing as a penalty rather than a right could be inserted into Article 4.6 as follows:

Article 6(a): If an Annex A or Annex B Party exceeds its emissions budget in a particular budget period, it would have an additional emissions obligation (i.e., tonnes not achieved plus additional tonnes) for the following budget period."

Continue to Expore

Text similar to that in the description above would be inserted into Article 2 as paragraph 2(5bis).



United States Department of State

Bureau of Oceans and International
Environmental and Scientific Affairs

Washington, D.C. 20520

DATE: 2/14/97

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cc: JAF
SS
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NUMBER OF PAGES TO FOLLOW: 2

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The Washington Post

BUSINESS

Linking Business's Climate and Earth's

Some Companies Begin to Explore Whether Global Warming Could Hurt Their Bottom Lines

By Martha M. Hamilton
Washington Post Staff Writer

A few U.S. businesses are beginning to take practical steps to deal with what their managers regard as a real and potentially dangerous trend—global climate change.

These companies have concluded that the spread of carbon dioxide and other "greenhouse" gases—through the burning of fossil fuels such as coal and oil—could produce devastating worldwide changes in temperature and precipitation. They fear this "global warming" will be harmful to the environment—and also to the corporate bottom line.

Some of the corporate steps are tentative, and they come at a time when most U.S. companies are still spewing out carbon dioxide without thinking much about its potential costs. Indeed, representatives of the U.S. coal, oil and utility industries are vigorously opposing a Clinton administration plan to seek binding limits on releases of greenhouse gases. But there are signs, too, of changing business attitudes toward global warming.

At Mobil Corp., for instance, there have been staff-level discussions about whether the company should track its emissions of carbon dioxide. Mobil hasn't yet reached any decision on the matter, a spokesman said.

But some are more concrete. Mon-

santo Co., the chemical and biotechnology company, has begun measuring its own CO₂ emissions. "If you look at the kind of businesses Monsanto is in, the economic consequences of even a slightly warmer world are pretty devastating," said Kate Fish, director of

public policy for the St. Louis-based company.

"We depend on farmers to a large part, and farmers depend on things like stable weather patterns and soil moisture content," she said. "Extreme weather patterns are daunting."

Because of that, the issue of global warming is taken seriously by senior management at the company, she said. "The first step is where are you with CO₂ emissions," she noted. Although environmental laws require companies to keep track of other emissions—such as sulfur dioxide and nitrous oxide—carbon dioxide emissions have been "free," she noted.

Other companies have studied ways to offset or reduce emissions of carbon dioxide. AES Corp., a company that builds independent power generating plants, has in several cases in the past planted trees or bought endangered forests—because the trees will help absorb carbon dioxide produced by the power plants.

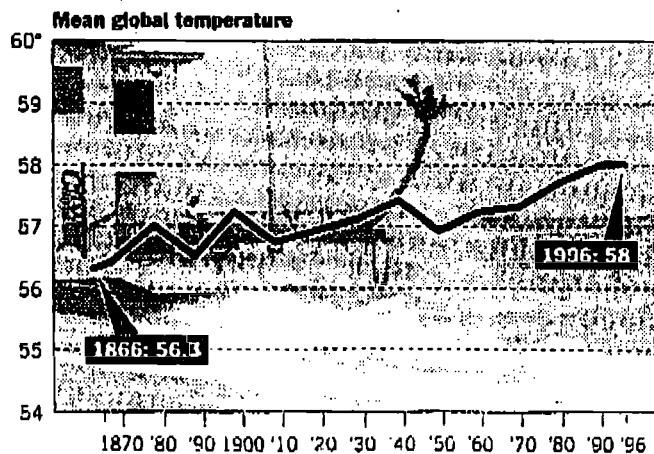
Northeast Utilities, the largest electric utility in New England, joined in a voluntary federal program to reduce emissions. The company reported last month that it had limited CO₂ emissions to 11.1 million tons systemwide in 1995—even lower than the target it had set, of 14.7 million tons.

Dow Chemical Co. has established a goal of improving energy efficiency at a rate of 2 percent per year, per product manufactured, according to Paul Cicio, the company's manager of government relations, hydrocarbons and energy policy. This is one of a series of

See CLIMATE, H8, Col. 1

TOO HOT TO HANDLE?

The earth is almost two degrees Fahrenheit warmer than it was 130 years ago; that, coupled with coastal erosion caused by particularly bad hurricane seasons, has businesses looking at ways to limit the environmental harm they cause.



THE WASHINGTON POST

H8 SUNDAY, JANUARY 12, 1997

Signs Increase That Business Attitudes Are Changing Toward Global Warming

CLIMATE, From H1

global environmental goals the chemical company has established, he said.

"The most important way companies improve energy efficiency is when they build new facilities," Cicio said. For instance, a new plant in Alberta, Canada, which produces ethylene—the basic raw material for the production of plastics—is 30 percent more efficient than a similar plant built just 17 years ago.

"The key is looking for projects that accomplish the best of both worlds—the ones that allow us to make a return for our shareholders and also to improve the environment," he said. "That doesn't happen by accident."

And other companies have achieved greenhouse-gas-reducing energy efficiency in the course of pursuing other goals. Carrier Corp., for instance, was looking for a new type of chiller to replace an old technology that relied on ozone-depleting chlorine. The company chose to skip over an interim generation of chillers that would still have used the ozone-depleting chemical.

Instead, it went directly to an alternative that used no chlorine at all, according to Matt Chadderdon, vice president for government relations for the United Technologies Corp. subsidiary.

One industry that is mindful of the potential effects of global climate change is the insurance industry—which would have to pay for floods, droughts and other natural disasters that might result from changes in global temperature and weather.

A warning to the industry came last April from Franklin W. Nutter, director of the Reinsurance Association of America. In a speech to the Casualty Actuarial Society, he urged the industry to encourage energy efficiency. Reinsurance is the process of sharing risks among insurance companies.

Nutter noted that the International Panel on Climate Change "predicts that over the next 100 years the earth will warm from 1.5 degrees to 6.3 degrees Fahrenheit, and that sea level will rise from 6 inches to 38 inches—roughly the same amount of change in the next 100 years as has occurred over the Earth since the last Ice Age nearly 10,000 years ago."

The result of these climate changes, according to the panel, "would be greater frequency and intensity of droughts, geographic spreading of disease more common in warmer climates, the retreat of mountain glaciers, storms of greater malevolence and more intense wet and stormy conditions."

The insurance industry "should not postpone reasonable and appropriate

measures" while waiting for additional scientific assessment, Nutter said.

"There's no certainty as to what the impact of climate change will be on weather patterns," said Karen M. Clark, president of Applied Insurance Research of Boston, a company that provides computer modeling for the insurance industry. The computer models can only assess what the industry's losses would be if predictions about the impact of global warming on weather patterns are true, she said.

Clark and others said that, so far, there has been more corporate interest in the possible business impact of global climate change in Western Europe than in the United States.

Monsanto's Fish said she worries that "it will put U.S. business at a competitive disadvantage worldwide, if we see companies in other countries driving toward more efficient production."

International negotiators are hammering out details of how to address the issue of global climate change, including whether to set legally binding targets for reducing emissions of greenhouse gases after the year 2000.

Said Eileen Claussen, the State Department's assistant secretary for oceans and international environmental and scientific affairs: "I think it is a competitiveness issue, and I would like us to be out there in the lead."

**United States Department of State***Assistant Secretary of State for Oceans and
International Environmental and Scientific Affairs**Washington, D.C. 20520*

January 13, 1997

*cc: Amy
JAF
JS
JLW*

TO: *Distribution
FROM: OES - Eileen B. Claussen *JE for*
SUBJECT: Revised Draft Climate Text

Attached for your information is the revised draft climate text, and a short paper on borrowing (which includes options for consideration by the Deputies). The paper has been sent to the NEC for distribution to the Deputies.

Attachments:
As stated.

REV. 5, 1/13/97, 8 am

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 for which a global warming potential is set forth 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 set forth in 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) 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
 - (d) 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. [Provision requiring control of greenhouse gases not listed in Annex C.]
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.

-3-

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 second Meeting, decide on minimum standards for the measurement of anthropogenic emissions by sources, and removals by sinks, of greenhouse gases.
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.
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

- 4 -

- (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.
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.

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3. Reviews will be in accordance with guidelines to be adopted by the Meeting of the Parties. 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 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. Reports will be provided to a Meeting of the Parties.
5. Based on such reports, a Meeting of the Parties may make recommendations to a Party. In such case, the Party shall review its implementation, take appropriate action, and report back to the next Meeting of the Parties on its action.
6. There would also be provisions setting forth various consequences for non-compliance with obligations, as determined by a Meeting of the Parties. Consequences would correspond to the type, degree, and frequency of non-compliance. Some would be automatic, while others might be discretionary. Examples of consequences could include, e.g.:
 - (a) denial of the opportunity to sell tonnes of carbon equivalent emissions allowed through international emissions trading and/or joint implementation;
 - (b) loss of voting rights and/or other opportunities to participate in processes under the Protocol.

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.

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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;
 - (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;

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- (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. An Annex A or Annex B Party that is in compliance with its obligations under Article 3 (Measurement and Reporting) and that has in place a national mechanism for certification and verification of trades, may transfer to, or receive 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. 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 receipt under paragraph 1 of tonnes of carbon equivalent emissions allowed.
3. A Meeting of the Parties 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.

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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).
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.

-9-

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].
4. The functions of the meetings of the Parties shall be to:
 - (a) review the implementation of this Protocol, including the information submitted in accordance with Article 3;
 - (b) periodically review the adequacy of this Protocol;
 - (c) [other].
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.
2. The functions of the secretariat shall be:
 - (a) ...

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Article 12Subsidiary 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 14Multilateral 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.]

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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], legally 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.

Views on Certain Final Clauses

Adoption 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.

-12-

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

This Annex would list greenhouse gases not covered by the Montreal Protocol, with the exception of gases, or particular sources and sinks, for which there is insufficient knowledge of the GWP or inability to accurately measure emissions or removals. GWPs would be those developed by the IPCC.

BORROWING

Currently, the draft text provides no language on "borrowing", although the December paper tabled by the United States at the AGBM session suggested we would be exploring the potential for borrowing as well as banking. While the Assistant Secretary-level discussion agreed that at least in some form the issue of borrowing might be included, no agreement was reached as to the form that a borrowing regime would take -- nor, consequently, for what text should be inserted. Three possibilities for inclusion of borrowing in the text, covering the range of alternatives discussed, are suggested below:

Option 1: Right to Borrow

Allow an Annex A or B Party to borrow from the second budget period to meet its obligations in the first budget period (and from the third period for the second, if there is a third period specified in the Protocol). Borrowing would be limited in amount, and borrowed emissions would be repaid with interest in the subsequent period. Note that reporting and review of borrowed emissions, and the possible development of additional guidelines would already be covered by language in the existing articles. Non-compliance would be affected as follows: a Party would be in non-compliance if it exceeded its allowed borrowing quota; if it borrowed within allowed limits, whether it ultimately complied (i.e., repaid the tonnes) would not be known until the end of the subsequent budget period.

Option 2: Debt Carryover

Restrict borrowing to a "debt carryover" so that it would not be used as a planning device, but only as a safety valve in case budget obligations were not met. Unlike Option 1, a Party exceeding its emissions budget would be in non-compliance. This option could be additional to that described in Option 1 above; there would be a right to borrow up to a certain percentage; beyond that, exceedences would be penalized.

Option 3: Continue to Explore

Insert general language indicating that the United States is still interested in exploring allowing Parties to borrow against future emissions budgets in order to increase their current emissions budgets. Borrowing would require a credible accounting and repayment mechanism, and could entail additional restrictions (e.g., to limit the proportion of emissions reductions postponed). A borrowing regime might also be used to provide funds to assist developing countries (e.g., requiring Parties wishing to borrow to escrow a portion of the funds that might be required to purchase emissions in case of default, and using the funds to provide loan guarantees or grants to developing countries).

TEXTUAL OPTIONS

Right to Borrow

Language to this effect could be inserted in Article 2 as a new paragraph 2(b-bis), and a new paragraph 5 bis:

Article 2(b-bis): "Up to [10 percent] of the tonnes of carbon equivalent emissions allowed under paragraphs 3 or 4 below such as may be borrowed from the subsequent budget period under paragraph 5 bis below."

Article 2(5 bis): "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."

Debt Carryover

The notion of treating borrowing as a penalty rather than a right could be inserted into Article 4.6 as follows:

Article 6(a): If an Annex A or Annex B Party exceeds its emissions budget in a particular budget period, it would have an additional emissions obligation (i.e., tonnes not achieved plus additional tonnes) for the following budget period."

Continue to Expore

Text similar to that in the description above would be inserted into Article 2 as paragraph 2(5bis).

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United States Department of State

Assistant Secretary of State for Oceans and
International Environmental and Scientific Affairs

Washington, D.C. 20520

January 9, 1997

TO: *Distribution
FROM: OES - Eileen B. Claussen
SUBJECT: Revised Draft Climate Text

Attached for discussion at our meeting tomorrow afternoon at 3:30 p.m. in Room 7835, Main State, is a revised draft protocol text. The revised draft seeks to incorporate the points of agreement at our January 7 meeting and elaborate, as agreed, a number of other areas. The text should be treated as "close hold" and should not be given to anyone outside the USG.

I look forward to seeing you tomorrow so that we can agree on a text.

Attachment:
As stated.

REV. 4, 1/9/97, 6 pm

U.S. DRAFT PROTOCOL FRAMEWORK

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 for which a global warming potential is set forth 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 set forth in Annex C of this Protocol.
5. [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
 - (b) any tonnes of carbon equivalent emissions allowed that are carried over from a prior budget period under paragraph 5 below, plus

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- (c) 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
 - (d) any tonnes of carbon equivalent emissions allowed that are transferred to another Party under Article 7 (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].
 - 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. [Provision requiring control of greenhouse gases not listed in Annex C.]
 - 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.

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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 second Meeting, decide on minimum standards for the measurement of anthropogenic emissions by sources, and removals by sinks, of greenhouse gases.
3. Each Annex A and 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 monitoring; and
 - (c) a description of relevant national compliance and enforcement programs and of their effectiveness, including actions taken in cases of non-compliance with national law.
4. In addition to the information required to be submitted under paragraph 3, 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 3, its current calculation corresponding to each of the subparagraphs in Article 2.2. 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.

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5. The first submission 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.
6. 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.
7. 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 accordance with guidelines to be adopted by the Meeting of the Parties. 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 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. Reports will be provided to a Meeting of the Parties.

-5-

5. Based on such reports, a Meeting of the Parties may make recommendations to a Party. In such case, the Party shall review its implementation, take appropriate action, and report back to the next Meeting of the Parties on its action.
6. There would also be provisions setting forth various consequences for non-compliance with obligations, as determined by a Meeting of the Parties. Consequences would correspond to the type, degree, and frequency of non-compliance. Examples of consequences could include, e.g.:
 - (a) if an Annex A or Annex B Party exceeds its emissions budget in a particular budget period, it would have an additional emissions obligation (i.e., tonnes not achieved plus additional tonnes) for the following budget period;
 - (b) denial of the opportunity to engage in international emissions trading and/or joint implementation;
 - (c) loss of voting rights and/or other opportunities to participate in processes under the Protocol.

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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.

-6-

5. Each Party that is neither in Annex A nor Annex B shall identify and implement "no-regrets" measures for mitigating emissions of greenhouse gases not controlled by the Montreal Protocol, 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 that could:
 - (a) enable the review of the effects of individual measures described in paragraph 5;
 - (b) include efforts to assist such Parties in identifying and implementing "no-regrets" and cost-effective options for mitigating greenhouse gas emissions;
 - (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.

-7-

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1. An Annex A or Annex B Party that is in compliance with its obligations under Article 3 (Measurement and Reporting) may transfer to, or receive 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. 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 receipt under paragraph 1 of tonnes of carbon equivalent emissions allowed.
3. A Meeting of the Parties may further elaborate guidelines to facilitate the reporting of emissions trading information.

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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 criteria, guidelines, 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

-8-

- (b) transfer any portion thereof to any Party, provided that an Annex A or Annex B Party must be in compliance with its obligations under Article 3 (Measurement and Reporting).
- 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.
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The Parties shall periodically review this Protocol in light of evolving scientific knowledge related to climate change.

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-9-

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 - (a) adopt, by consensus, rules of procedure for their meetings;
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4. The functions of the meetings of the Parties shall be to:
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[silence, with the result that Article 14 of the Convention would apply to this Protocol.]

[for Annex A and Annex B Parties, mandatory, binding dispute settlement]

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[for Annex A and Annex B Parties, mandatory, binding dispute settlement with consequences flowing from a violation]

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-12-

Annex B

This Annex would include those States 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

This Annex would include greenhouse gases not covered by the Montreal Protocol for which the Parties have determined there is sufficient knowledge of the GWP and emissions or removals.

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**ENVIRONMENTAL
DEFENSE FUND**

cc: JAF
JS
Capital Office
1875 Connecticut Ave., N.W.
Washington, DC 20009
(202) 387-3500
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URGENT

PLEASE DELIVER BEFORE AFTERNOON MEETING ON 1/10/97

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FROM: Joe Goffman

DATE: January 10, 1997

Number of pages including cover sheet (5)

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ENVIRONMENTAL
DEFENSE FUND

To: Participants, Inter-Agency Process on Climate Change

From: Dan Dudek, Joe Goffman, Annie Peterson

Re: U.S. Protocol Submission for January 15

Date: January 10, 1997

Capital Office
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Last July, Undersecretary Wirth transformed the international debate on climate change, establishing the United States' leadership role in that debate. His dramatic statement at the Geneva meetings forged an inextricable linkage between a U.S. commitment to support the development of an international agreement legally binding countries to greenhouse gas emissions (GHG) reduction obligations and flexible compliance elements exemplified by emissions trading and joint implementation for credit. Now, the U.S. has reached the moment when it must provide the international community with the essential details of an international GHG emissions budget and trading program that can fulfill that linkage.

The document submitted by the U.S. at last December's meeting of the Advisory Group on the Berlin Mandate outlined to an impressive and encouraging extent some of the elements of the structure of such a program. Nevertheless, many critical details remained unspecified in the December submission. In addition, the skepticism freely expressed by many other governments and interests, both here and abroad and including the environmental community, testified to the failure of the U.S. to communicate its ideas and intentions convincingly. The severity of this criticism and the apparent absence of a forceful U.S. response to it raises fears that the U.S. would be unable or unwilling to deliver in a final protocol those elements essential to integrating the flexibility and environmental integrity so necessary to the linkage established by Undersecretary Wirth.

That is why it is critical that the upcoming U.S. submission be carefully crafted to ensure that no one misconstrues or dismisses the U.S. commitment to fashioning an international agreement that can achieve political, economic and, above all, environmental success. **We believe that the attached detailed specifications -- which represent a fully integrated design, not merely an accretion of discrete, negotiable elements -- for a GHG emissions budget and trading system can provide the structure for an international regime that meets these demands for success. A protocol that includes only some of these elements and thus meets only some of these tests will justify the vigorous opposition of the environmental community for the fundamental reason that it will not accomplish its environmental objectives.**

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We stress the necessity of maintaining the integration of all of the proposed elements set forth here because the test for success of an international GHG protocol is an exacting one. First, an international protocol and the regime it establishes must impose comprehensive and credible GHG emissions obligations. Second, it must ensure compliance by *sovereign nations* whose *voluntary* agreement lies at the foundation of the protocol itself and its implementation. Participants in the protocol also will no doubt demand assurance that their economic aspirations can be met even while fulfilling their GHG emissions requirements. At the same time, the protocol must accommodate the inevitable diversity of nations' domestic responses to their GHG obligations. Finally, to succeed environmentally, the protocol must stimulate early commitments to GHG emissions reductions and to innovation, foster the broadest menu of strategies, tools and opportunities for the development of successful solutions to the GHG emissions problem and maximize participation by both industrialized and developing countries.

In addition, capitalizing on the construct enunciated by Undersecretary Wirth last July, **the proposed design adopts an approach under which those elements affording flexibility to nations and firms and those ensuring the environmental integrity of the system are identical.** Thus, one of the rationales for setting emissions budgets on a 10-year scale, for example, is to ensure that the international community has the necessary time to complete the scientific and technology assessments as well as generate sufficient information (*i.e.*, on the basis of 5 years' experience) about ongoing performance under the then-current budget regime in order to establish the GHG emissions budget for the ensuing period. At the same time, a 10-year budget period affords nations and firms the temporal latitude needed to respond both to their GHG emissions constraints and to changing economic demands, while also forcing nations and firms to take the actions necessary to curb their GHG emissions. **Accurate annual reporting is more crucial to the integrity of a GHG emissions budget and trading system than shortened or more frequent budget periods.**

Similarly, one of the critical features of the proposed design ties an automatic, limited "debt-carryover"-with-interest provision for nations' GHG emissions budgets to penalties for failure to meet budget obligations. This feature exemplifies the iron linkage that must be forged between flexibility and compliance accountability -- just as it is critical to ensuring the balancing of nations' compliance accounts and the atmospheric GHG ledger.

Without these structural and substantive provisions, any protocol negotiated by the next Conference of the Parties to the Framework Convention on Climate Change, scheduled for Kyoto, Japan before the end of the year will merit rejection by the U.S. With these provisions, an international protocol can blaze the path to a global solution to a crucial environmental threat. To ensure this, we urge that the U.S. January 15 submission fully reflect the details of the attached proposal.

We are prepared to offer you extensive support and assistance in the development of this effort both before and after January 15. Thank you for your consideration in this matter.

MINIMUM ELEMENTS OF AN INTERNATIONAL PROTOCOL FOR GREENHOUSE GAS EMISSION REDUCTIONS

January 9, 1997

I. Credible Environmental Goals

- first period of emissions reductions begins by 2005 and ends not later than 2014
- ultimate concentrations of 450 ppmv (CO₂ equivalent), inclusive of all GHG
- Transient constraint: warming rate not to exceed of 1° C per Century

II. Legally Binding Obligations

- For OECD nations and economies in transition, Established on the basis of historic emissions baselines and Set as a cumulative emissions budget
- For other nations, Comprehensive GHG Inventory and Reporting

III. Transparent and Verifiable Annual National Reporting

- ◆ all gases, sources and sinks by sector
- ◆ all transacted international GHG reductions by country and vintage

IV. Continuing Review and Evaluation Process to Set New Budget Levels

- ◆ Assessment of Science
- ◆ Review of Progress of the Parties
- ◆ Review of Development and Adoption of Technologies
- ◆ Then Set New Decadal Emissions Budget

V. International Greenhouse Gas Emissions Trading

- ◆ decadal emissions budgets to provide both economic investment, planning, and response flexibility and action-spurring certainty
- ◆ banking for both early reductions and debt carryover
- ◆ all GHG emissions by sources, uptake by sinks, and transactions in terms of 100-year GWPs
- ◆ Joint Implementation, for credit, is an essential element for addressing both graduation and economic competitiveness concerns
 - In nations that have not taken a budget, project-by project crediting with international review
 - For nations with a budget, full international trading of reductions

VI. Enforcement

All GHG reduction obligations remain until discharged

For Cumulative Net Emissions Greater Than Budget But Less Than 110%:

- All Emissions Greater Than Budget Automatically Deducted From Next Budget
- Dispremium (interest) charged on emissions over budget

For Cumulative Net Emissions Greater Than 110% But Less Than 120%:

- Above Plus automatic discounting of the non-complier's sold GHG reductions that have not yet been used by other countries for compliance beginning in the year of first occurrence (discounting to be in proportion to amount of non-compliance)

For Cumulative Net Emissions Greater Than 120%:

- Above Plus Mandatory COP Review of Party's Non-Compliance

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United States Department of State

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

Washington, D.C. 20520

Handwritten signatures and initials:
H
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K.P.
mm

January 2, 1997

TO: Distribution
FROM: Eileen B. Claussen
SUBJECT: Papers for January 7 Climate Meeting

Attached please find copies of the papers on international trading and borrowing as promised in my December 20 memo. As noted, we will discuss these, as well as the draft text, at our meeting on January 7, 1997.

Attachments:
As Stated

Predecisional Document

DRAFT

January 2, 1997

PROPOSAL FOR AN INTERNATIONAL GREENHOUSE GAS TRADING SYSTEM

The Ministerial Declaration in Geneva at the Second Conference of the Parties to the Framework Convention on Climate Change (FCCC) called for quantified, legally binding objectives within specified timeframes. In December 1996, the U.S. circulated a non-paper that outlines its ideas on implementing the Geneva Declaration. This proposal includes a multi-year medium-term emissions target; inclusion of all greenhouse gases (GHGs) and sinks; development of a system for international trading of emissions allowances and joint implementation credits; and consideration of emissions saving and borrowing. In this paper a multi-year emissions target is referred to as a budget.

Building on the December 1996 proposal, this paper will describe how an international GHG emission trading system might be established and implemented. A complementary domestic regime would have to be developed. While the proposed trading system is designed to use existing institutions and processes as much as possible, and to provide participants with flexibility in implementation, it also includes additional reporting and compliance mechanisms as appropriate.

The proposed international GHG trading system described below is designed to address the following key questions necessary for such a system to be successful:

- How are the tradable units defined?
- Who are the participants in the trading system?
- How are units traded?
- How is trading activity reported?
- What compliance mechanisms are available?

Background Assumptions

In order to adequately characterize the proposed trading system, it is assumed that:

Form of the target(s). Legally binding budgets would apply only to Annex I countries that become Parties to the agreement currently being negotiated by the Ad-Hoc Group on the Berlin Mandate (The Agreement). The budgets would cover a period of 3-10 years, would be expressed in terms of net GHG emissions (all sources

Predecisional Document

DRAFT

January 2, 1997

and sinks), and would be derived by applying a uniform limit or reduction percentage to each country's emissions in a base year or years, e.g., 1990 or 1987-1993. Parties maintain reviews of climate and environmental sciences, technology development and availability, economic impacts of budgetary compliance, and other relevant information through the FCCC Secretariat and IPCC. Based on these reviews, and to provide predictability of future obligations, the budget for subsequent periods would be established well before -- e.g., no later than four or five years -- its beginning.

Reporting and compliance provisions. Among the legal instruments agreed to would be reporting, measurement, verification and compliance provisions that address net GHG emissions for all Parties to the Agreement, and which would provide the fundamental informational basis for the international trading system. The current requirement for reporting annual inventories would incorporate reporting on trading activity.

Joint implementation. The current joint implementation (JI) pilot program, Activities Implemented Jointly, would end in 2000. A JI regime providing for emissions credits, granted by an international project reviewing body, would be established in the Agreement.

Elements of the International GHG Trading System

Within the context outlined above, the Agreement would establish an international GHG trading system. Parties with budgets could engage in international emissions trading as full or partial fulfillment of that obligation. Key elements of the proposed GHG trading system are described below:

Tradable Units. The tradable unit would be known as a "unit of carbon equivalent" (UCE). Certificates for UCEs would represent a metric ton of carbon equivalent, based on 100-year global warming potential, and would be identified by country-of-origin, year of issuance, and a serial number. This tonne could be associated with either a source or a sink of any greenhouse gas (other than water vapor). UCEs would be used to meet current budgets, held for future use, or traded. Joint implementation (JI) credits would be treated within the trading system as equivalent to UCEs on a tonne-for-tonne basis, and the partners in JI projects would decide among themselves as to sharing of UCEs associated with each project.

UCE Budgets. The number of UCEs initially available to each Party is equivalent to the budget of net GHG emissions established for each Party to cover the multi-year period. For example, assuming a budget based on the 1990 level for a 3 to 10

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January 2, 1997

1 year period, the U.S. would be allocated approximately 4500 million UCEs (3 times
2 1500 MMT for 3 years) to 15,000 million UCEs (10 times 1500 MMT for 10 years),
3 respectively. Procedures and guidelines for participation of non-Annex 1 parties
4 will be developed.

5
6 Each Party would choose its own mechanisms for meeting its national emissions
7 budget (e.g., policies and measures, taxes, national allowances/credit trading
8 systems applied to specific sectors, technology standards, etc.). For example:

- 9
10 1. Parties could adopt national allowance trading systems that would issue to
11 covered sources UCEs authorizing sources to emit greenhouse gases in amounts
12 equal to the number of UCEs they held; or,
13
14 2. Parties could adopt other policies and measures through which domestic entities
15 could earn UCEs whenever their emissions reductions exceeded the reduction
16 required by, or expected from, them. However, hybrid approaches that combine
17 either allowance-based systems or policies and measures systems must provide
18 appropriate accounting between systems and sectors.

19
20 Irrespective of the policy framework chosen for its implementation of national
21 obligations, all Parties must provide annual reports. All international transactions
22 (i.e., sales and purchases of UCEs) must be registered domestically, i.e., accounted
23 for, or debited from national budgets, in order to be legally recognized and binding
24 upon the exporting Party. Similarly, sources could obtain UCEs from foreign
25 Parties provided that the transaction was duly registered by the exporting Party.

26
27 Trading of UCEs. The Parties would jointly establish guidelines to ensure that the
28 transaction process is sufficiently transparent. UCEs would be traded in much the
29 same way that commodities and financial instruments are currently traded.
30 Private exchanges and financial intermediaries would be expected to buy and sell
31 UCEs.

32
33 The market would provide information to potential buyers and sellers as to the
34 availability and cost of UCEs. Parties and domestic entities would consider
35 purchasing UCEs if their cost was less than the cost per tonne of alternative
36 policies and measures. Speculators might purchase UCEs in anticipation of a
37 possible rise in their value. Markets for trading in "UCE futures", contracts by
38 Parties or domestic entities to deliver UCEs in a future year, might also develop.
39 However, those future UCEs could not be used for compliance prior to that future
40 year.

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January 2, 1997

1 No new international organization would need to be created but domestic
2 regulatory authorities would be responsible for ensuring adequate internal
3 measurement and verification, accounting, reporting and compliance disciplines, at
4 a minimum consistent with provisions established under the Convention and its
5 protocols.
6

7 Reporting of UCE transactions. The FCCC requires that all Parties periodically
8 report information, including an annual inventory of net GHG emissions, necessary
9 for demonstrating progress toward the Convention's objectives. National
10 Communications, Compilation and Synthesis reports, and In-Depth Reviews would
11 now incorporate information regarding trading activity.
12

13 While existing FCCC provisions provide an adequate basis for determining the
14 tonnages to be associated with both individual policies and measures, and their
15 associated aggregate emissions reduction effects, the Parties would also agree
16 jointly to develop a standard annual reporting form, and require each Party to
17 provide a full accounting of UCEs held, borrowed, traded, and created through JI.
18 Parties would save UCEs not needed for meeting budgets, then use them or trade
19 them in the future. All reports would be publicly available.
20

21 Annually, Parties will identify UCEs to be retired sufficient to cover net GHG
22 emissions for that year. These UCEs could be from their own allocation, or UCEs
23 purchased, saved, and/or created through JI projects. Each year's emissions would
24 result in a subtraction of UCEs from the balance of the total budget. Therefore, in
25 each annual report, the Party would identify the serial numbers of UCEs retired, in
26 order to demonstrate compliance with budgets, as well as the remaining balance of
27 UCEs. At the point that a Party fails to have sufficient UCEs to cover its annual
28 emissions, the compliance mechanisms discussed below take effect.
29

30 Constituent elements of annual budgets must be detailed enough to provide
31 confidence in each Party's reporting of overall performance. Reliable measurement
32 and reporting of emissions will be critical to a successful GHG trading program,
33 with quality emissions data at the source-specific level, for all sources and gases,
34 being the "gold standard" that allows a Party to define credibly the quantity being
35 traded.
36

37 Since each Party would be ultimately be responsible for the actions of their
38 respective domestic entities to the extent that such actions have an impact on the
39 Party meeting its budgets, Parties would also agree to each require their domestic
40 entities to assume appropriate reporting responsibilities.
41

Predecisional Document

DRAFT

January 2, 1997

1 Compliance. The trading system is designed to foster and facilitate compliance
2 with Parties' emissions budgets. Compliance mechanisms would include rules
3 governing purchases of UCEs, devaluation of UCE tonnages to reflect the degree of
4 non-compliance, fines, and/or trading restrictions (a party would not permitted to
5 sell UCEs until corrective measures are taken). Rules governing the purchases of
6 UCEs could be developed to ensure that limited overages in one period could be
7 debited from the next. To indemnify promised emissions reductions, parties might
8 also be also be required to put up a bond before trading UCEs.

9
10 As in the case of reporting, Parties would agree to establish a compliance regime for
11 their domestic entities since each Party would be ultimately responsible for the
12 actions of their respective domestic entities to the extent that such actions have an
13 impact on a Party meeting its budgets.
14
15

Borrowing Against Future Targets: An Option Paper
(rev 1/2/97)

In defining the form of the target for next steps under the FCCC, the United States in its December "non-paper" urged consideration of both banking and borrowing. The former may require additional consideration of specific mechanisms for accounting, but it has so far met with little resistance. The concept of borrowing, on the other hand, has been harshly criticized, and will need to be significantly and persuasively elaborated in order to meet with general approval, and to be considered for incorporation into agreements on next steps under the Convention. This paper seeks to provide a brief explanation of how a borrowing regime might work, and to discuss the possible advantages and disadvantages of implementing such a regime in the agreement.

Borrowing Defined

The concept of borrowing is familiar to all who are involved in any financial transactions -- it involves taking a loan against future earnings in order to pay current obligations. In the case of the climate, current obligations would equate to current levels of allowable emissions (or emissions in a given target year); future earnings would equate to emissions reduced above and beyond the target set for a future year.

Also in a manner similar to financial transactions, costs could be associated with emissions borrowing. These include risks of the borrower defaulting on the loan; opportunity costs to the lender of not making a more profitable investment elsewhere; and institutional problems associated with the transaction. Unlike most financial transactions, however, some additional risks may be associated with an emissions borrowing regime, including impacts to the environment from delayed reductions.

Notwithstanding the differences between financial borrowing and emissions borrowing, some of the solutions applied in the financial arena seem applicable in both cases. For example:

- A high risk loan is often accompanied by a higher interest rate to the borrower; the analogous situation could call for the borrower to pay more in the way of future reductions for any emissions used in the current period.
- Financial transactions are also often accompanied by requirements that the borrower put up collateral; in the case of emissions borrowing, a bond might be posted to ensure that funds would be available to "buy" emissions should the borrower default on the loan, or another entity might guarantee the shortfall.

Borrowing D R A F T (1/2/97)

P 2

- Financial transactions are also often limited in terms of the amount that can be borrowed -- either as a fixed total, or as a percentage of future earnings; emissions borrowing might have a similar limit (for example, a country or firm might be prohibited from borrowing more than 10 percent of its total emission reduction obligation).
- Finally, defaulting borrowers are usually assessed a penalty; a similar penalty might be applied toward a defaulting emissions borrower -- either in the form of a monetized fine, or in the form of an additional reduction obligation.

Advantages and Drawbacks

A financial world without borrowing would be difficult to imagine. It is rare that a firm has internal capital resources adequate to fully finance its future growth. Similarly, responding to any significant climate change mitigation strategy without a parallel option for borrowing can also be expected to impose considerable economic constraints on the system: it clearly reduces flexibility in terms of planning; and it may require the premature retirement of capital stock in order to meet strict deadlines.

However, the climate system and mitigation responses are not fully analogous to financial markets. Political considerations, cost to the environment of inaction, and the lack of an established institution infrastructure all make the prospect of borrowing more complex when emissions are considered.

Political Considerations: A number of contentious issues surround the climate change debate, including the level of the target, emissions trading and JI, and involving developing countries. Adding another complex issue to the already volatile mix may generate unwanted controversy. Political support for a borrowing regime may also be limited.

Currently, while the business community could be expected to favor a borrowing provision, most would not likely support a target WITH such a provision any more than a target without borrowing -- even though it will be the target, not the borrowing provision that will raise ire. However, some "groups" (e.g., EEI) have already indicated their interest in such a provision, and may provide some limited support.

Borrowing D R A F T (1/2/97)

P 3

The NGO community overall can be expected to object to the delay in action, and accuse proponents of a borrowing regime of seeking to derail the process. Many have already argued against emissions trading on the grounds that it will reduce the incentive for immediate domestic reductions and that it spreads the obligation to Parties with no commitments (e.g., developing countries); a borrowing regime would likely be more objectionable. However, it should be noted that EDF, a proponent of trading, also supports the notion of borrowing.

Finally, the broad international community can also be anticipated to be unsympathetic. Developing countries will see this as another attempt by Annex I Parties to renege on their commitments, and other OECD countries, particularly the EU, have already expressed skepticism. Support may come from JUSCANZ, particularly Australia and New Zealand, and possibly Canada. If a borrowing regime is to be included in the U.S. program, it will be critical to develop a strategy for overcoming some of this international opposition.

Environmental Impacts: It would be difficult if not impossible to determine the precise environmental/climate impacts of any specific delay in emissions reductions. However, it is clear that the relatively small levels of reductions being contemplated (e.g., even a 20% reduction below 1990 levels by Annex I Parties) will have only a minimal impact on long-term climate change. Delaying some subset of these reductions would thus likely be of marginal additional consequence, if the effects of such a delay were even detectable. Conversely, a possible advantage of a borrowing regime is that the target itself might be set higher -- ultimately providing an added environmental benefit rather than reducing the effectiveness of the existing benefit. There is perhaps more evidence to support the claim that any delay will reduce the incentive to develop new technologies to combat climate change; however, this must be balanced against the desire to maximize flexibility and minimize the costs of taking action.

Institutional Infrastructure: There are several components to this issue. First, unlike in the model of a financial system, it is not clear how the lending process would be structured; currently no banks, venture capital or government loan agencies exist to institute an international borrowing regime. Secondly, the analogy of "future earnings" against which borrowing occurs may not apply -- at this time most proposals (including the current version of the U.S. draft protocol) for the new legal instrument include only a single target, not multiple targets for multiple periods. Finally, there is no legal infrastructure which might facilitate compliance. For standard financial procedures, a well established judicial and criminal system operates to insure appropriate practice, at

Borrowing D R A F T (1/2/97)

P 4

both the national and interantional levels. Creating such a structure in the climate context might prove difficult.

Possible Solutions

Some solutions to these barriers do exist. The current convention (and likely subsequent agreements) place the obligation to reduce on governments. Inasmuch as governments seek to comply, they will also need to create internal processes to determine the level of emissions reductions needed -- and could in the process establish accounting procedures to assess borrowing. It is also unlikely that the first target set would be adequate to fully address the climate problem; in this case, subsequent targets are almost certain -- and could even be made explicit in the agreement (e.g., a Kyoto Mandate on the agreement to agree). In a similar manner, while no legal structure may exist to insure compliance, this is a problem with the all aspects of legally binding next steps -- and the resolution to this problem in the instrument could be applied to any borrowing regime.

Options for the Future

In light of these issues, the following options might be considered with respect to a borrowing regime::

- Do not allow borrowing;
- Do not allow borrowing at this time, but leave open the option for including a borrowing regime in the next phase;
- Allow restricted borrowing by:
 - (a) limiting the amount that can be borrowed;
 - (b) discounting the borrowed reductions (e.g., so that a ton borrowed must be paid back with more than one ton of reductions);
 - (c) limiting the countries that can borrow;
 - (d) allowing borrowing only up to the amount that has been "banked" by another country;
- Allow unrestricted borrowing.

It is clear that for any choice except the first, considerably more work would be required to operationalize the concept. A task force would need to be created and a draft proposal would need to be tabled (probably by the March 1997 AGBM) in order to have any chance of a successful outcome.

Borrowing D R A F T (1/2/97)P 5Linkages and Tactics

The linkage between the borrowing and the trading concepts might also be appropriately considered in making any decision on this matter. We have already determined that including the flexibility provided by trading will be a high priority for inclusion in the agreement. However, our assumption is that trading WILL draw in trading partners -- and absent information on the price and transaction costs of a trading system, we cannot be certain this will indeed occur. Conversely, a borrowing regime could be implemented unilaterally, and would provides flexibility even in the absence of a trading regime.

It should also be noted that including a proposal for a borrowing regime may be desirable for tactical reasons. We may choose to include the concept in our text, and be prepared to give it up in exchange for something we want more later in the process.

SEEGC 9960



United States Department of State

Assistant Secretary of State for Oceans and
International Environmental and Scientific Affairs

Washington, D.C. 20520

CA: JAF
RP
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DECEMBER 19, 1996

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FROM: Eileen B. Claussen

Attached is the final summary sent in by Ambassador Mark Hambley from Geneva. My apologies if you were not already on the distribution list.

CLIMATE NEGOTIATIONS

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Final Observations and Assessment:

One year from today, on December 13, 1997 the Parties to the Framework Convention on Climate Change will have completed their negotiations with a new binding agreement designed to curb greenhouse gas emissions and, potentially, some kind of new "Kyoto Mandate." With the Parties to the AGBM now having put forth their views on the various features which they would like to see in this agreement, it is clear that there is little consensus except in two areas:

-- First, the science. As one non-Annex I delegate told our Canadian colleague on December 12, some success can be attributed to the latest session (of AGBM-5) because, for the first time, there was no questioning of the science or questioning about whether it might be premature to proceed with an agreement by any delegation.

-- And second, there seems to be unanimity that whatever future steps are taken must be legally binding -- at least no delegation suggested otherwise.

On other aspects of the debate, however, there is little shared agreement, and it is difficult to see how all of the pieces of this particular negotiating puzzle -- complicated in and of themselves -- can be put into place within the one year of time (and 20 days of formal negotiations) remaining before Kyoto.

Country groupings remain essentially unchanged, but with some noteworthy points. The EU, while showing some strain, is moving forward with a framework text; JUSCANZ shows broad agreement except on differentiation; the Eastern European countries were essentially silent, although Russia made some positive soundings in favor of emissions trading and JI; the G-77/China shows new factions emerging, with new-found cohesion among a geographically broad range of OPEC countries, new voices from China, and some signs of flexibility from China. Following are our observations concerning the key pieces of the legal instrument which will have to be negotiated, and our assessment of where Parties stand on each and their prospects:

Policies and Measures

Interventions of Parties to date reflect two broad camps: The EU which favors at least some mandatory PAMs, and other Parties led by the U.S. but including Australia, New Zealand, and many leading G-77/China members who are either hostile to the idea (e.g., the U.S.) or do not favor them for trade reasons (e.g., Brazil). Other countries, including Canada and to a lesser extent, Japan, also do not favor mandatory PAMs but appear willing to compromise on the issue in limited, non-controversial ways, by seeking to find areas such as public education where a few common policies might be

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harmonized. Aviation and bunker fuels seem to be the key interest in PAMs in the EU; some in JUSCANZ have also favored PAMs as a mechanism for engaging developing countries.

Prospects: In the end, this may be the least controversial area to be negotiated. The European suggestions are completely unacceptable, but one gets the sense that they will in the end not hold to the extreme tax policies which they are suggesting be harmonized. The immediate concern is Chairman Estrada who wants to begin compiling lists, only one of which would be controversial. The issue will be what Parties are asked to do with these lists, and with three sessions remaining, there is much time for mischief -- e.g., establishing a mechanism in the instrument for further efforts over time to work towards "harmonization."

Quantified Emission Limitations and Reduction Objectives (QERLOS or Targets and Timetables)

The only text which has been presented which specifies numbers is that submitted by the AOSIS countries. Neither the EU nor the U.S., Japan, or Russia have indicated any specific numbers. The public pressure on the EU to come up with a significant reduction scenario (such as 5-10 percent reductions by 2005 or 10 to 15 percent by 2010) is considerable, as is evidenced by the strong expectations voiced by the European NGOs. One suspects that realism may very well be cast out the window by EU Ministers this Spring. In part, this may be in reaction to the view, common among EU delegates, that the U.S. has backslid on its commitment and will come up with a number so modest as to receive worldwide derision and opposition. Sensing that the negotiations will fail as a result, the EU may decide it can afford once more to adopt a high-minded hortatory position, knowing full well that this position will not be adopted and that it need not fear having ever to implement it. Moreover, our call for "legally binding" targets seems no longer to moderate European rhetoric in the absence of strong proposals on "compliance." To some extent, Europeans see "legally binding" targets as little different from an "aim" -- a point brought home to us quite bluntly in our December 12 discussion with international NGOs.

On the structure/form of the target, several delegations appear to be quite intrigued by our multi-year concept. Even Chairman Estrada had positive things to say about it. We will have to amplify what we mean and provide details, but this concept appears to us to be a winner, although "borrowing" ran into strong skepticism. Our rejection of near-term targets also came under repeated barrages of fire from Europeans and NGOs, who equate our position with a rejection of near-term action.

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Prospects: We will have trouble with the level for the reasons stated; we should not have difficulty in the concept of a multi-year target (although the EU and others would like to see one running from 2005-2015, rather than one from 2010-2020. It is not likely that negotiations in March will yield any conclusive results on this issue, although expectations are high that additional options for targets will be presented at that session.

Differentiation: We will need to find a better response to the differentiation issue if we are to come to agreement by Kyoto. With our own JUSCANZ house sharply divided over this issue (Norway sharply criticized our categorical rejection of the concept on the floor -- the only country to do so), and with other countries wanting differentiation in one form or another, we find it difficult to see how we can dismiss differentiation out of hand. This is particularly the case with Australia aggressively (and with some impact) working this issue on the margins with both Annex I and non-Annex I countries.

Among the countries which have articulated their support for some kind of differentiation concept are: Norway, Australia, Japan, Russia, Canada, France, Mexico and Korea to name just a few, along with a number of developing countries who may be thinking about their future commitments. We will also have to confront differentiation directly in considering how to bring in Korea and Mexico, and perhaps Turkey.

Prospects: Hopefully, we will see some additional text from the proponents of differentiation telling us how the concept would work. We expect considerable intersessional work on this issue, strongly pushed by Norway and Australia. Perhaps we need to run some of the numbers for the existing proposals or come up with our own proposal in order to slay this dragon. However, the manner in which we bat down differentiation is at least as important as the substance of our arguments. We cannot win in this negotiation without a core of countries supporting our positions. At the moment, our differences over differentiation are dividing us from countries who would normally be allied to our efforts -- or who could be persuaded to come on board.

Joint Implementation and Emissions Trading: Joint implementation with credit (along with our graduation concepts under Article 4.1) received the greatest resistance from developing countries. They simply do not appear willing at this point to accept the concept. Even the EU is somewhat cool to the concept, and we do not believe they will -- in the end -- back up those countries which are strong proponents (including the U.S., New Zealand, Norway, and to a somewhat lesser extent, the Dutch and the UK). Emissions trading appears to be a less controversial subject. Most countries want to know more about it, but there is not the vocalized resistance to this concept as it is not yet well understood.

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Prospects: As indicated in an earlier report, JI will be a tough sale. Emissions trading is eminently doable, provided we follow-up soon with a clear and uncomplicated proposal outlining how the system could work internationally. However, in order to ensure the strong opposition to JI does not prematurely remove the option from consideration, the U.S. will need to make bilateral discussions -- including one with Chairman Estrada -- a priority.

Banking and Borrowing: Both concepts took a number of direct hits from a variety of sources, with most of the verbal criticism continually heaped on borrowing. Our careful explanations of the restrictions which would need to be developed to ensure compliance and verifiability did little to assuage the large number of skeptics.

Prospects: Banking is probably a doable concept, while borrowing looks extremely difficult at this point. No one else supports it, and many have spoken against it both publicly and privately. We need to flesh out what we mean by both concepts if we are to bring more countries on board.

Advancing Article 4.1

It was fortunate that the EU came up with Annex "X", a kind of graduation mechanism which took most of the direct criticism from the G-77/China, rather than our own proposals. Whether these attacks were coordinated and deliberate are unknown. It seemed to us that the G-77 was browbeating the EU into submission, in the hopes that this would ease their task in confronting the U.S. proposals. At least the first part of this strategy (if there was one) worked: the EU has muttered something about Annex X referring only to prospective OECD members, although we are still not clear as to what they mean and, we suspect, the EU does not as yet know itself.

Prospects: This is one of two issues which Chairman Estrada bluntly told us were non-starters in this round of negotiations (the other being JI with credit). We told him equally bluntly otherwise, but it took a fight on the floor on December 12 to even get us the possibility of a further hearing on this key issue.

With persistence and additional discussion, we can probably work out something along our "continuum" concept, although at this point, it is not clear exactly where. For the first time, however, thought seems now to be given in some quarters to the possibility of a "Kyoto Mandate", as a result of our position.

In any case, it will be incumbent upon us to work with other willing countries (developed and developing) to get some constructive proposals on the floor to move us forward -- possible but difficult. (An example might be the renewal of the ever-popular country studies program or others related to capacity building.)

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Protocol or Another Legal Instrument:

Korea is the only country which has (privately) expressed its preference to us for an amendment. Most other countries (including the EU, Japan, Russia) have come out in favor of a protocol. Others (like China, India and key G-77/China members) have tended to take our view that substance should be decided before form.

Prospect: It seems likely that a protocol will be the end result and certainly would be compatible with our various proposals. We would probably get some points if we could announce our support for a protocol sooner, rather than later -- especially keeping the consideration in mind that we can always fall back on an amendment idea if this seems more appropriate by Kyoto. Some critical legal issues, including those with respect to overlapping responsibilities of possible protocol and convention institutions (e.g., the COPs, subsidiary bodies) need to be resolved.

Compliance: We are thus far the only country to have addressed the compliance issue in any detail. There is general interest in many of our ideas. Japan has a proposal mirroring the IEA country review process, building on existing FCCC mechanisms.

Prospects: We are currently in the driver's seat on this issue. Provided we can back it up in terms of actual text by the next meeting, we can probably remain the principal drafters of this portion of the anticipated agreement.