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TEXT:

Attached is the final version of targets and timetables without the
Figures and Tables. Thank you all for your help!

===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

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Unable to convert ARMS_EXT:[ATTACH.D44]MAIL467114673.216 to ASCII,
The following is a HEX DUMP:

October 3, 1997

MEMORANDUM TO THE PRESIDENT

FROM: Lawrence Summers
Janet Yellen

SUBJECT: Targets and Timetables for Reducing Greenhouse Gas Emissions

Executive Summary

This memo provides a preliminary evaluation of the likely economic consequences for the United States of a program to attain 1990 CO₂ emissions levels by 2010. It concludes that the attainment of such a goal would necessitate at least a doubling in energy prices and impose substantial economic costs. In contrast, a more gradual emissions reduction path that eliminates emissions growth by 2010-2020 and reduces emissions to 1990 levels thereafter captures nearly identical environmental benefits as the more aggressive approach while entailing costs between one tenth and one third as large.

If attained through domestic emissions reductions alone the "1990 by 2010" target requires a reduction in CO₂ emissions of roughly 30% relative to projected 2010 emissions assuming "business as usual". *The reduction in energy use needed to meet this goal would be comparable to that achieved during the decade of the OPEC price hikes, so that energy price increases of similar magnitude are likely.* Economic analysis and historical precedent suggest that energy price increases of this size would have stagflationary consequences. As in the decade of the oil shocks, both unemployment and inflation would undoubtedly rise, at least for a time.

An "idealized" system of international permit trading among Annex I countries could hypothetically halve the change in carbon emissions prices needed to attain a 1990 by 2010 goal. This would mean paying Russia and other Eastern European countries to reduce emissions in place of the United States. However, such an arrangement could prove infeasible for a number of reasons, including difficulties in establishing adequate enforcement and monitoring mechanisms in the near term. Joint implementation with non-Annex I countries is likely to marginally reduce the impact on energy prices in the United States.

The memo argues that a more gradual timetable for emissions reduction can deliver virtually identical environmental benefits at a fraction of the cost. The aggressive "1990 by 2010" path is extremely inefficient because it requires premature scrapping of capital and foregoes the considerable advantages of waiting for the development of carbon-lean technologies before replacing existing plant and equipment. In contrast, a timetable that eliminates emissions growth in the second decade of the program (2010-2020) and reduces emissions to 1990 levels and below in subsequent decades is consistent with a long-term goal of stabilizing atmospheric CO₂ concentrations. *The total cost of this "back-loaded" approach is likely one third to one tenth that of the "front-loaded" 1990 by 2010 program.* Implementation of the

gradual timetable requires an early, modest increase in the price of carbon emissions, along with a credible commitment to further emissions price increases over time.

In comparison with a more gradual emissions reduction timetable, the environmental benefits of an aggressive abatement target are minimal. For example, the expected difference in global average temperature in 2100 along a fast-takeoff abatement path that attains 1990 emissions by 2010 and a slow-takeoff abatement path that peaks in 2015 and attains 1990 emissions by 2040 is less than 0.05 degrees Celsius. Between now and 2100, global average temperature is expected to rise about 2½ degrees Celsius irrespective of the path chosen for Annex I stabilization, assuming developing countries continue with business as usual.

| The body of this memorandum lays out the rationale for these conclusions.

I. Introduction

The Framework Convention on Climate Change signed at the 1992 earth summit in Rio de Janeiro called for carbon dioxide emissions in 2000 at 1990 levels. Most countries, including the United States, are unlikely to achieve these emissions reductions. But the Rio approach remains historically important, and most quantitative proposals that have been advanced in the run up to Kyoto can be understood as variants of the Rio target and timetable. In particular, a proposal to “stabilize CO₂ emissions at 1990 levels by 2010” (and variants thereof, including a more stringent proposal by several EU countries to stabilize at 10% below 1990 levels by 2010) has received considerable attention.

This memo assesses the consequences for the U.S. economy of a program to attain 1990 CO₂ emissions levels by 2010. It compares the costs and cost effectiveness of this baseline proposal with those of alternative targets and timetables that entail a less rapid initial reduction in CO₂ emissions levels. The conclusions described here rely on the substantial body of economic analysis that has been conducted by researchers worldwide, including the Intergovernmental Panel on Climate Change (IPCC), and Administration economists.

II. 1990 by 2010: The Scope of the Task

To appreciate the ambitiousness of a program to curb U.S. emissions levels to 1990 by 2010 it is necessary to recognize that, by 2010, emissions are likely to exceed their 1990 levels by about 31 percent.¹ As of 1996, energy related carbon emissions were already 9 percent above 1990 levels. Growth in the economy through the end of the next decade would further raise energy use and carbon emissions. Even under an optimistic assumption concerning the pace of improvement of energy efficiency (0.9 percent per year), there would be further increases in carbon emissions of about 22 percent over current levels by 2010 if we continue with business as usual. A substantial increase in the price of carbon emissions will be needed to induce such a large emissions decline.

An increase in the price of carbon emissions--whether achieved through a system of tradeable emissions permits or a carbon tax--creates incentives to reduce emissions in two separate ways: by reducing overall energy use; and by inducing switches among fuels, away from high-carbon fuels like coal and toward low- and no-carbon fuels, such as natural gas and renewable energy. Reasonable estimates suggest that interfuel substitution in response to higher carbon emissions prices could accomplish between 25 and 45 percent of the overall task, with the remainder occurring through reduced energy use. The implication is that overall energy use must decline by about 15% to 18% relative to “business as usual” levels to attain the 1990 by

¹ This assumes a 2.4 percent annual GDP growth rate. Even with a more moderate assumption of 2.2 percent annual GDP growth, carbon emissions in 2010 would exceed their 1990 level by about 28 percent.

2010 emissions target. Energy use *does* respond to changes in the price of energy; but history suggests that the responsiveness is *low* over periods as short as a decade. In particular, the experience of the United States during the 1970s and 1980s suggests that energy prices would need to at least double--as they did during the OPEC oil shock period--to attain a 1990 by 2010 target.

Comparison with the Oil Shocks. Figure 1 shows aggregate energy use in the United States and the relative price of energy over the period 1960 to 1990. During the oil-shock period --1973 to 1984--energy use remained virtually constant in absolute terms while GDP grew about 2.5% per annum in real terms. The relative price of energy rose about 130 percent during these years. Again assuming a 0.9 percent pace of improvement in energy efficiency with constant energy prices, the 130 percent energy price hike served to reduce energy use about 16 percent relative to the "business as usual" baseline. *This experience suggests that an increase in relative energy prices roughly comparable to the 130% OPEC-induced rise will be needed to lower energy use by the 15 to 18 percent required to reach the 1990 by 2010 target. A 130% increase in energy prices translates into a carbon tax of roughly \$170 per ton.*

Model results. Numerous economic/energy models have been used to estimate the impact of a 1990 by 2010 program on energy prices. These models arrive at the same conclusion as was generated above using no model whatsoever: a program to achieve 1990 emissions by 2010 would likely entail *at least* a doubling of energy prices. A broad range of models place the carbon permit price required to achieve 1990 emissions by 2010 in the range of \$80 to \$250 per ton. If fully passed through to energy prices, a permit price of \$100 per ton, for example, entails a 76 percent increase in energy prices. The impact on the prices of different sources of energy are all large, but the effect on coal is particularly severe. The price of coal would more than triple, while the price of a barrel of petroleum would increase by about fifty percent. Gas at the pump would increase in price by about 26 cents. Relative to the BTU tax proposed by the Administration in 1993 a \$100 implicit carbon tax is about 5 times as large. Thus, attaining a goal of 1990 by 2010 would have very large effects on our economy.

Evidence from International Comparisons. A final piece of evidence confirming the conclusion that a strong price signal over a long period of time is necessary to alter energy use comes from comparisons of energy usage between the United States and Europe. It should hardly be surprising that energy use per dollar of GDP is lower in Europe than the United States. Energy prices in Europe have long been substantially higher--roughly double U.S. energy prices. Moreover, major differences in living patterns between the United States and Europe result in higher European energy efficiency. In addition to the geographical "advantage", from an energy efficiency standpoint, of Europe's higher population density, resulting in lower transportation requirements, Europe has locked in place many long-run adaptations to high energy prices. Innovations in the design of housing and transportation systems and the configuration of residential areas have occurred in response to high energy prices. But in spite of its natural advantages and its long history of high energy prices, energy per dollar of GDP is only 44% lower in Europe than in the United States. This means that even if the United States were to

become Europe--energywise per dollar of GDP--its energy savings, even in the long run, would be no greater than 44 percent. This U.S.-Europe comparison supports the conclusions drawn from the natural experiment of the oil shock: namely, a return to 1990 emissions will not occur without very major price measures over a long period of time.

The Role of Technology and the Scope for “No Regrets” Policies. According to the preceding assessment, a large price inducement is necessary to meet a 1990 by 2010 target. Your economic advisers agree on this conclusion. However several of your advisers are more optimistic about the chances of achieving a 1990 by 2010 target. They emphasize the current availability of “no regrets” (cost-saving) technologies that promise substantial opportunities for abatement. A recent report by the Department of Energy research laboratories, for example, catalogues emissions-saving technologies that, by their calculations, are currently “cost effective.” If put in place now, such practices could allegedly reduce emissions by between 30 to 50 percent of the amount needed to reach a 1990 by 2010 target. Even so, the report finds that “aggressive” and “invigorated” government policies--including potentially costly and intrusive regulations and standards--as well as a \$50 carbon tax would be necessary to reach the 1990 by 2010 target.

Your economic advisers agree that there now exist unused technological opportunities for emissions reduction, but we question by what means, over what time frame, and at what expense government policies could change private behavior if such opportunities are currently underutilized. Engineering studies generally ignore the sometimes subtle disadvantages of available cost-saving technologies or overestimate their hypothetical returns. An example is illustrative: significant energy and cost savings could result if consumers replace incandescent bulbs with compact fluorescents. Over the long lifetime of such bulbs there would also be a substantial monetary gain. However, actual adoption of these light bulbs has been slow to date, possibly due to pure inertia, possibly because consumers dislike their color, or perhaps because they apply a high “discount rate” when valuing energy savings that accrue after the purchaser may have switched residence. Several recent studies have demonstrated that the actual returns to home improvement investments, such as attic insulation, often fall short of those predicted by engineering studies.

Regardless of the reasons, if consumers have not adopted “no regrets” measures at a faster rate, it is likely that additional incentives will be necessary for them to change their minds. Rather than stressing the mere availability of alternative technologies, your economic advisers insist on realistic estimates of likely rates of adoption and diffusion and they stress the need for economic incentives--in the form of a higher implicit price for carbon emissions--to induce the adoption of emissions-saving technology. They point out too that the baseline energy demand estimates used to predict the price increase needed to attain a 1990 by 2010 target already assume substantial ongoing improvements in energy efficiency due to the diffusion of existing technologies and the development of new ones. Significant adoption of such technologies is necessary merely to meet this assumed baseline. Finally, it is important to note that the DOE labs study includes as part of its policy package to reach 1990 emissions by 2010 extensive

regulations, including stringent CAFE and appliance standards and national building codes--command and control policies that your economic advisers would oppose--along with a \$50 carbon tax.

To summarize, your economic advisers consider it unrealistic to predict a substantial increase in the pace of adoption of new emissions-saving technologies in the absence of a large increase in the price of carbon emissions--and hence of energy. Based in part on the evidence from the energy shocks of the 1970s, in part on international comparisons, and in part on model results, they are optimistic that such an increase in prices would bring forth a reduction in CO₂ emissions--with larger responses to a given price change likelier the longer the time period for response. The evidence is strong that a very large price increase will be necessary to attain emissions reductions of 20 to 30 percent over a period as short as a decade. *Moreover, other approaches that apparently do not involve large price increases (such as performance standards) will impose even higher costs on the American economy.*

III. Why are the costs of early emissions reductions so high?

The previous section argued that a "1990 by 2010" target would entail high carbon emissions prices and significant economic costs. This section shows that the 1990 by 2010 timepath for emissions reductions is so aggressive as to be inefficient--in the sense of raising substantially the total projected economic cost of reaching a given environmental goal. There are three major reasons why an aggressive takeoff in curtailing emissions raises overall costs: (1) it induces premature obsolescence of the capital stock because it does not allow adequate time for the capital stock to turn over naturally; (2) it provides insufficient lead time to develop and implement new technologies; (3) it causes a significant stagflationary short-term macroeconomic shock. Additionally, an aggressive timetable for emissions reductions does not allow time for the resolution of uncertainty and it does not take advantage of the time-value of money (resources not spent on emissions reductions early on can be invested at a positive return which could purchase more emissions reductions later).

The Role of Turnover of the Capital Stock. The most clear-cut and easily quantifiable reason for the high price tag associated with rapid emissions reductions relates to the need for premature replacement of plant and equipment in response to large increases in the price of carbon emissions. It is expensive enough to replace plants that are fully depreciated, but vastly more so if those plants are still in the prime of their productive lives. Within 20 to 40 years, much of our existing plant and equipment will be ready for replacement anyway; therefore building in greater carbon efficiency at that time will be relatively cheap. *It is important to emphasize that the case we are making here is not based on procrastinating for the sake of avoiding the problem; rather, it is based on simple principles of hard-headed business efficiency.*

The advantage of a more gradual emissions reduction timetable in avoiding the large costs associated with premature obsolescence of the capital stock can be illustrated by

considering electrical power generation. The case of electricity generation is important in its own right since this industry is responsible for 88% of coal use and more than one third of all carbon dioxide emissions in the United States. But the principle concerning the costs of premature replacement

applies broadly because reduced greenhouse gas emissions may entail the accelerated retrofitting of housing and commercial structures, the premature scrapping of vehicles and appliances, and the premature replacement of plant and equipment in energy intensive industries.

Figure 2 illustrates the effect of an accelerated retirement schedule for today's U.S. electric power generation capacity installed during the last 40 years. Imagine, to take an extreme case, that a timetable is adopted that necessitates replacing all power plants with less-polluting technology within ten years. This would require retiring 630 out of 670 gigawatts of generating capacity before the end of its normal life span, or 94 percent of the total. If the timetable were extended so that all power plants instead had to be replaced within 20 years, the accelerated replacement of capacity would affect 450 gigawatts of capacity, or 67 percent of the total. Allowing this additional 10 years for turnover avoids the premature retirement of 27 percent of existing electric power plant capacity. With a 30 year horizon, complete turnover would mean accelerated retirement of only 21 percent of the total capacity and, with a 40 year timetable, there would be almost no additional costs due to premature obsolescence.^{2, 3}

The Advantage of Waiting for Superior Technologies. The example of electric power generation also illustrates a second important reason why a gradual takeoff in curbing greenhouse gas emissions is ultimately less costly: new technologies take a long time to develop. Waiting until these new technologies are available before making expensive emissions-saving investments offers the potential of both lower economic costs and higher environmental payoffs. Under a tight target and timetable with its associated high carbon emissions price, electric utilities will be forced to replace existing capacity in the very near future and to rely on currently available lean-carbon technologies, likely gas-turbine plants. If some delay can be factored in, however, they will be able to install more effective and less costly alternative technologies. A rapid timetable forces long-term investments to be made before superior technologies have been developed and refined.

Implication: The Need for a Credible, Long-Term Price Increase. The example of electricity generation illustrates two general principles. First, the responsiveness of both demand and supply are greater in the long run than in the short run. This means that, with a longer horizon, any given amount of abatement can be accomplished with a smaller increase in

²The distribution has been truncated at 40 years, the average lifespan of existing electric power plants. A few plants of yet older vintage are still in use.

³The same exercise can be performed for coal-fired power plants. These generators produce the most carbon per kilowatt hour of electricity and thus will have a high incidence of replacement even under a moderate abatement plan. If a complete change-over of coal plants were to be accomplished in 10 years, 96 percent of total capacity would be retired early. If retirement occurred over 20 years, only 64 percent would be retired early. Allowing an additional 10 years for turnover would avoid premature retirement of one-third of existing coal-fired plant capacity.

carbon emissions prices. Second, and perhaps even more important for policy, any credible emissions reduction strategy must include both a price increase at the outset and also a clear commitment to maintain and likely increase prices further over time. Without such a commitment, the changes in behavior required to meet even a long-run target of emissions reduction will likely not occur. Consider a utility that today is drawing up its plans for a new power plant. That utility will choose among today's technologies, which vary in their costs and CO₂ emissions. In order to induce the utility to choose a more costly, lean-emissions technology today, it must be clear that CO₂ emissions will be costly enough over the 40 years or more lifetime of the plant to justify a more expensive investment option today. A large cumulative reduction in emissions can be achieved over the long term with only a modest carbon emissions price increase now, but only if the commitment to still higher prices in the future is credible and clear.

Stagflationary Macroeconomic Impact. From a macroeconomic perspective, increases in energy prices constitute an adverse "supply shock." Such developments are stagflationary--even if anticipated--because they raise both inflation and unemployment simultaneously, creating a painful macroeconomic dilemma. As noted above, a plan to attain 1990 emissions levels by 2010 would require a change in energy prices over the first decade of the 21st century at least comparable in magnitude to the two oil shocks of the 1970s. Those shocks are widely acknowledged to have raised both unemployment and inflation. Similarly, the energy price increases required by a 1990 by 2010 program would raise inflation, lower real wages, and raise unemployment. Unemployment in the four years after the first oil shock averaged 7.2 percent in comparison to 5.0 percent in the four years prior; and unemployment rose further, to an average of 8.6 percent, in the four-year aftermath of the second oil shock.⁴ Although the increases in energy prices associated with a treaty to reduce greenhouse gases would be anticipated, rather than a surprise, we should nevertheless expect that the efforts of the Federal Reserve to contain inflation, coupled with likely efforts on the part of workers to recoup real wage losses will lead to a period of higher unemployment.

Furthermore, it is important to note that most model-based estimates of the costs of a program to attain 1990 emissions levels by 2010 assume that resources are fully employed, thereby ignoring these potential short-term effects. Such models therefore provide no assessment of the consequent increases in unemployment.

IV. Quantifying the Economic Costs of Gradual versus Fast Take-off

⁴ There is debate about how much of this was due directly to the oil shocks, because there was a simultaneous decline in productivity growth and transfers of real income to OPEC producers.

The relative costs of gradual versus fast takeoff timetables in curbing CO₂ emissions has recently been analyzed by the Stanford Energy Modeling Forum (EMF-14).⁵ The Stanford group used six large-scale economic/energy models to compare the total projected cost of two alternative emissions reduction time paths--one “frontloaded”, the second more “backloaded”. *Importantly, both paths were designed eventually to stabilize atmospheric concentrations of CO₂ at double the pre-industrial level--550 ppmv.*⁶ Although a high degree of uncertainty is inherent in particular numerical estimates from individual models, the simulations nevertheless point to some robust qualitative conclusions. *The major conclusion to be drawn from this project is that an emissions reductions path characterized by an aggressive initial phase is substantially more costly--3 to 10 times more costly--than a path with a slower takeoff but larger eventual reductions.*

To enable a comparison of the costs of gradual and rapid takeoff strategies, the EMF investigators asked each of six modeling groups to simulate the economic impacts of two alternative strategies to attain stabilization of CO₂ concentrations at 550 ppmv. The first strategy (the WG-1 path) corresponds to an emissions pathway published in 1994 by Working Group 1 (WG-1) of the Intergovernmental Panel on Climate Change (IPCC). The working group computed a set of global CO₂ emissions pathways consistent with stabilization of concentrations at 550 ppmv and several alternative concentration levels. The WG-1 path entails an immediate departure from the baseline or “business as usual” emissions path. Subsequently, Wigley, Richels and Edmonds (WRE) published an alternative set of emissions profiles to achieve the same concentration targets. In contrast to the WG-1 paths, the WRE emissions path was constructed to follow the baseline or “business as usual” scenario in the early years with sharper reductions after this initial phase. Wigley, Richels and Edmonds hypothesized that their more gradual takeoff emissions pathways would yield identical environmental objectives with substantially lower economic costs, for the reasons discussed above. The EMF-14 exercise validates this hypothesis.

The EMF-14 comparison project assessed the total costs to the OECD, the EEFSU (Eastern Europe and the former Soviet Union) and the non-Annex I countries of the WG-1 and WRE pathways to stabilization of CO₂ concentrations at 550 ppmv. The appropriate economic measure of total cost is the present discounted value of losses in future consumption

⁵ To enable meaningful comparisons of results across models, the EMF has coordinated a series of projects in which a number of large scale energy models are used to estimate the impact of given, specified emissions reduction scenarios under common standardized, benchmark assumptions concerning population and economic activity, discount rates, energy resource availability and prices and technology availability.

⁶ All energy models make numerous simplifications and approximations in order to describe the energy sector globally and over the span of a century or more. In particular, all of the models assume full employment, thereby abstracting from the likely short-run macroeconomic costs of an emissions reduction program.

relative to a “business as usual” scenario. Estimates of regional costs depend on the extent of burden sharing--namely, the assumed “division of labor”--between Annex I and non-Annex I countries in controlling emissions as well as the extent of international emissions trading. Recall that, by the end of the next century--by 2100-- assuming “business as usual”--non-Annex I countries will have more than 90 percent of CO₂ emissions. Thus, developing country participation is absolutely essential to achieving stabilization of concentrations. Consistent with the Berlin Mandate, the simulations assumed that the burden of emissions reduction would fall on Annex I countries exclusively during the early decades; that by 2030, non-Annex I countries would begin to participate; and by 2050, a full transition to targets based on equal per capita emissions rights is assumed.

Figure 3 plots the OECD emissions paths in the WG-1 and WRE scenarios. Under the WG-1 scenario, OECD emissions begin to decline immediately and continue to decline for roughly four decades. For example, OECD emissions fall 10 percent below initial levels ten years after implementation. This corresponds roughly to the requirement of a “1990 by 2010” timetable--that emissions decline about 15 percent from their projected 2000 level during the decade between 2000 and 2010. In contrast, OECD emissions along the WRE path continue to rise for roughly two decades--corresponding closely to a plan calling for emissions to peak around 2020--return to 1990 levels around 2040 and decline substantially further in subsequent decades.

Table 1 illustrates a robust conclusion that emerges from this exercise: fast takeoff in emissions reductions greatly increases the costs. Table 1 shows the cost for both the aggressive (WG-1) and gradual (WRE) paths--both with and without idealized international trading of permits. In 10 out of 12 simulations--for six different models with and without permit trading--the costs on the gradual WRE path is less than a third of the cost on the corresponding fast take-off path. Taking account of the likely adverse short-run macroeconomic consequences of an aggressive path would further strengthen this conclusion.

Table 2 illustrates a second, robust conclusion from the EMF-14 exercise: a viable system of international permit trading would very much reduce OECD costs. With global permit trading, the sharp, early emissions reductions required of OECD countries under the aggressive (WG-1) approach would be avoided through the purchase of emissions permits from countries with lower abatement costs. The average reduction in cost is 56 percent.⁷

⁷ The computations in Table 2 verify that the gradual (WRE) path, which permits emissions to depart relatively little from business as usual for several decades, is a substantially less costly than the alternative WG-1 path with its sharper immediate reductions. Since both paths are arbitrarily chosen to conform with the 550 ppmv concentration target, a natural question concerns the characteristics of an optimal or least-cost path for achieving this concentration target. An important recent study by Alan Manne and Richard Richels uses their MERGE model (included in the EMF-14 project) to compute the least-cost path with 550 ppmv stabilization and international permit trading. The optimal path, while not identical to the WRE

Finally, it is important to note that in most of the EMF models, policy actions to raise carbon emissions prices must be taken at the inception of the gradual (WRE) program and a commitment to increasing emissions prices over time is required to achieve additional emissions reductions. Naturally, the required initial carbon emissions price is substantially lower, at the outset, under the gradual (WRE) than under the aggressive (WG-1) path. Thus, although the gradual emissions path initially approximates the business as usual baseline, credible incentives must be put into place immediately, and strengthened over time, to achieve the needed investments in carbon-efficient technologies.

V. The Environmental Consequences of Gradual versus Fast Takeoff.

path, is similar in character. This least-cost path peaks approximately three decades after the initiation of the program and declines thereafter.

While the excess cost of a fast, compared to a gradual emissions reduction path is large, the difference in projected global temperatures over the next century between the fast and the gradual paths is quite small, both in absolute amount and relative to temperature changes expected even if an aggressive policy path is adopted. Under “business as usual” assumptions, average global temperatures are expected to rise about 1 degree Celsius by 2050 and about 2½ degrees Celsius by 2100. An aggressive Annex I emissions reduction path that stabilizes emissions at 1990 levels by 2010 and maintains emissions at the 1990 level thereafter would mitigate this temperature increase by roughly 0.1 degrees by 2050 and 0.2 degrees by 2100.⁸ In contrast, a more gradual Annex I emissions path that peaks around 2015, stabilizes emissions at 1990 levels by 2040, and holds emissions constant at 1990 levels thereafter yields virtually identical environmental benefits: the temperature difference between the aggressive and gradual paths diverges by no more than 0.05 degrees at any time over the next century. Similarly, the temperature differences along the aggressive WG-1 and less aggressive WRE paths--both designed ultimately to stabilize concentrations at 550 ppmv--differ by a maximum of 0.2 degrees over the next several centuries.⁹

The limited climatological impact of even an extremely aggressive emissions reduction program measured in terms of temperature impacts during the next century reflects the extremely long lags involved in the underlying physical processes and the dependence of temperature on the total stock of carbon dioxide in the atmosphere, rather than the flow of emissions at a given time.

Emissions reductions do matter to temperature, but only over an extremely long horizon. The cumulative nature of the process suggests that there is little effect on global temperature from a gradual rather than from a fast abatement takeoff. The addition to the total stock of carbon from a gradual rather than a fast start to abatement adds relatively little to the total atmospheric stock of CO₂ between now and 2100 for four separate reasons: the difference in carbon emissions between a gradual and a fast start over the initial decades of abatement is only a small fraction of total emissions in that period; the stock of CO₂ in the atmosphere is itself the result of many decades of emissions; some of the CO₂ emissions of the early decades will have been re-absorbed; and the most serious build-up in CO₂ under business as usual occurs late in the next century, as a consequence of burgeoning emissions from non-Annex I countries.

Even the potential for a catastrophic environmental event, such as the melting of the West

⁸ Successful stabilization would require very large cuts from “business as usual” in China, India, and other non-Annex I countries.

⁹ If a model assumes that sulfur dioxide emissions decline with the decline in carbon dioxide emissions under climate policy (as predicted, given the extent of sulfur emissions associated with fossil fuel combustion, and incorporated in the IPCC’s IS92 emissions projections), the more aggressive WG-1 path will be *warmer* than the WRE path between 2000 and 2040. This result reflects the negative impact of sulfate aerosols on the greenhouse effect. Early and substantial cuts in fossil fuel combustion, while decreasing the carbon emissions that warm the atmosphere, also decrease the sulfate aerosols that cool the atmosphere.

Antarctic ice sheet, a runaway greenhouse effect (e.g., from release of trapped methane with the melting of the permafrost), or a structural change in ocean currents such as the Gulf Stream, which the preceding abstracts from, does not fundamentally affect the basic trade-offs between the high costs of fast vs. gradual takeoff paths. These factors do, however, add--perhaps greatly--to the urgency of adopting moderate long-term greenhouse gas concentration targets and a program involving an immediate, albeit moderate, increase in the price of CO₂ emissions.

VI. International Trading of Permits

As has already been noted, an effective system of international carbon emissions permit trading among Annex I countries could substantially diminish the cost of a CO₂ abatement program. An Annex I trading system could, potentially, reduce the size of the carbon emissions price to attain a 1990 by 2010 goal by up to 50%. Moreover, joint implementation projects with non-Annex I countries could, hypothetically, reduce this figure by half again.

Although international trading and joint implementation--so-called "where flexibility"--has enormous advantages in theory, your economic advisers are concerned that substantial barriers would stand in the way of implementing any workable analogue of such an idealized system--at least in the near term. Consequently, they stress that Annex I international permit trading and joint implementation between the U.S. and non-Annex I countries realistically can serve only a limited role in reducing the costs associated with meeting a "1990 by 2010" target.

A *hypothetical* example shows how an international trading system would work, and why it would reduce each participant country's abatement costs. Suppose, ideally, that every country adopts a domestic permit system to implement its Kyoto target. Absent international trading, the price of emissions permits would surely differ across countries, reflecting differing marginal costs of abatement internationally. With different permit prices in different national markets, profit-seeking traders would be motivated to buy permits in countries where they are cheap and resell them in countries where they are more expensive. Such arbitrage activities would create an international permit market, bringing permit prices into equality worldwide. This idealized system promotes global efficiency in achieving any worldwide abatement goal. Countries with permit prices below world levels have the incentive to reduce emissions more than they otherwise would in order to profit in the international permit market. Countries with high permit prices would have the incentive to purchase permits, thereby relaxing their Kyoto emissions constraints. The U.S. government could avoid any direct participation in such a system as long as it deems foreign-issued permits presented to the U.S. government by U.S. carbon-emitting entities as valid as those issued by the U.S. government itself.

The preceding description of how an international permit trading system would work provides an idealized picture of its possibilities. But the actual benefits of such a system are apt to fall short of this utopian portrayal in part because countries are not obliged to fulfill their

Kyoto commitments via a domestic permit trading scheme; indeed, few Annex I countries have indicated an intention to do so. For example, consider a government that has decided to limit domestic emissions through regulatory controls. International permit sales that result in tighter domestic constraints could well be politically unpopular so that a government would hesitate before selling its emissions rights to the United States. Similarly, international permit sales by a country that is meeting its Kyoto obligations through domestic carbon or energy taxes would necessitate a hike in those taxes. In either case, international trading would involve government to government negotiations, and difficult political decisions. In contrast, in the idealized system, trades result from profit-oriented transactions among individuals, mediated through the market.

Monitoring and enforcement issues are also likely to be paramount in insuring the workability of international trading. If domestic enforcement is effective in all countries, so that, in the aggregate, consumers and firms in each country actually limit their emissions to the national permit levels, international permit sales by private agents in the country actually translate into lower domestic emissions. But consider the difficulties that can occur with imperfect enforcement. If the government of a country--country X--finds it difficult either to measure domestic emissions or to enforce the purchase of permits by domestic emitters, then reductions in X's emissions may be insufficient to reach the Kyoto target. Those firms or individuals in X that are lucky enough to have been assigned the rights to X's permits will be able to sell them, at a quick profit, on the international market. With imperfect enforcement, international sales, without corresponding domestic emissions reductions, could emanate from countries with the weakest systems of enforcement. To prevent such "paper trades", which profit some participants and increase emissions, many countries, including the United States, will want controls to ensure the integrity of international permits. Buyers, too, will want clear concrete guarantees of the validity of permits so as to be sure they are not being passed counterfeit goods. These controls and guarantees will surely inhibit the efficiency of the market and render some--possibly much--of the estimated savings illusory. In fact, most of the benefits projected from the international sale of permits come from inducing emissions reductions from countries in Eastern Europe and the former Soviet Union--countries with particularly weak tax collection and enforcement mechanisms. Without these countries in the scheme the gains from international trading of permits will be very small.

Joint implementation with non-Annex I countries also has the potential to reduce the U.S. burden of attaining any given timetable. Under this type of approach, U.S. businesses could receive credit for the construction of nuclear, oil, or natural gas electricity generation plants in China if it were confidently expected that China would instead have constructed coal-fired plants with much higher CO₂ emissions. Certification of such credits might be overseen by an international agency to ensure that the projects were emissions-replacing. Such a project-by-project system is likely the most that is feasible in the absence of quantitative targets. Your economics advisers have concerns about even this level of endeavor due to the inherent difficulty in establishing that a particular set of projects has actually reduced a country's emissions, absent a reference path enabling a clear quantitative comparison. For example, the construction of a nuclear power plant in place of a coal-powered plant in China could indirectly

raise CO₂ emissions elsewhere in the Chinese economy--partially offsetting the direct CO₂ reducing effect of the project--if the reduced demand for coal lowers its domestic price and encourages greater use elsewhere in the Chinese economy. A project-oriented approach to joint implementation will, in effect, constitute a limited form of international trading with high transaction costs. As a result, it will probably capture only a small fraction of the total benefits of full international trading. In contrast, model results concerning the benefits of joint implementation treat it as equivalent to idealized international trading.

VII. Recycling of Revenues

The ultimate economic cost of an emissions abatement program depends upon how the revenues realized from carbon taxes or auctioned permits are used. It has been estimated that the efficiency loss from collecting an extra dollar of tax revenue amounts to around 30 cents. If the revenues from a carbon tax or auctioned permits are used to reduce inefficient taxes inhibiting work or investment, the resulting gains would partially offset the micro-efficiency losses from energy curtailment. The simple lesson is that the costs of emissions abatement may be greatly reduced if the revenues from the taxes levied can be put to good use.

So far we have approached the recycling of revenues from the standpoint of microeconomic efficiency. There is also the potential for using the revenues to abate the macroeconomic consequences of the emissions program. The oil shocks are believed by many economists to have resulted in increased unemployment because workers resisted the fall in real wages that was associated with the inflationary impact of higher energy prices. Increased wage demands added inflationary pressures to the economy that could only be suppressed by tighter monetary policy. Thus it might be argued that the effects of the real wage shock on inflation and unemployment could be diminished by lowering payroll or other worker taxes to offset the real wage losses from higher energy prices.

But England's experience points to the need for caution in assessing the potential for revenue recycling to allay the macroeconomic consequences of the rising energy costs. In 1979, immediately after her election, Margaret Thatcher increased the VAT tax and simultaneously decreased the income tax. These two policy changes had offsetting effects on real after tax incomes, and therefore might have been expected to have had no effect on wage bargaining. However, the increase in the VAT tax resulted in an immediately noticeable increase in the CPI. A wage-price spiral ensued as workers attempted to maintain their pre-tax real wages.

VIII. Policy Implications

The foregoing arguments point to the attractiveness, from both an economic and environmental standpoint, of a U.S. policy to raise the price of carbon emissions--either through a carbon tax or a system of auctioned permits--by a moderate amount--for example, between \$5

and \$15 per ton of carbon--in the near term, with further increases scheduled over the longer term. A realistic target and timetable corresponding to such a program would entail continued emissions growth in the first decade of the program, say 2000-2010; elimination of emissions growth in the second decade (2010-2020) and reductions in emissions thereafter. This program entails significant, early policy action and is consistent with a strong U.S. commitment to attaining the ultimate objective of the Framework Convention--namely to stabilize atmospheric concentrations of CO₂ and hence global temperatures.

A program involving gradual increases in the relative price of carbon emissions over time would avoid the substantial macroeconomic consequences of a 1990 by 2010 program. The energy price increases associated with the more moderate program would have a modest impact on family income that could be offset by compensating cuts in other taxes.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 6-OCT-1997 09:02:41.00

SUBJECT: Affirmative Action

TO: Rebecca M. Blank (CN=Rebecca M. Blank/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:

FYI--this is a copy of the original memo that I received.

----- Forwarded by Janet L. Yellen/CEA/EOP on 10/06/97
09:02 AM -----

Richard L. Hayes 07/07/97 06:22:06 PM

Record Type: Record

To: Janet L. Yellen/CEA/EOP
cc: Richard L. Hayes/WHO/EOP
Subject: Affirmative Action

Janet, I am part of the White House affirmative action working group and need your assistance on a very important manner. The administration is moving forward with implementing new regulations to mend existing affirmative action procurement programs so that they will comport with the Supreme Court's 1995 court decision. When finalized later this calendar year, the regulations will modify the way in which the government uses affirmative action measures to obtain goods and services from minority contractors.

A key aspect of these new regulations is a system of industry-specific benchmarks (currently under development at the Commerce Department) that will be used to establish a series of price and evaluation credits to encourage minority contracting. This work has reached a crucial step and we need your help in moving the process along. Commerce has prepared a paper (it will actually be available on Wednesday) and they are asking for help in addressing a number of technical, legal and policy issues that effect their estimation work, especially since we are lacking crucial data for various parameters of their model. As such, we are seeking the assistance of a neutral third-party such as CEA to help "mediate" the development of a final model that Commerce can then estimate. Bill Dickens and others who are no longer with the CEA provided assistance in the past. We are trying to set up a meeting for Friday afternoon with Justice, Commerce and your office (if you are willing to help) to review their paper and decide what issues we can. We will be reporting our findings to Sylvia Mathews as part of a general affirmative action update next Monday. I am available to discuss this issue further with you or a member of your staff if you can help in this regard. I can be reached at 456-5074. This is a very important issue to the President and if we

don't get this correct (or as nearly so as possible), we run the risk of having our efforts challenged in Court and possibly thrown out. Thanks much for your consideration of my request.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Kathleen A. McGinty (CN=Kathleen A. McGinty/OU=CEQ/O=EOP [CEQ])

CREATION DATE/TIME: 7-OCT-1997 13:47:54.00

SUBJECT: electricity restructuring

TO: forrister_d (forrister_d @ btgcinema.com @ inet [UNKNOWN])

READ:UNKNOWN

TO: Peter R. Orszag (CN=Peter R. Orszag/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TO: David B Sandalow (CN=David B Sandalow/OU=CEQ/O=EOP @ EOP [CEQ])

READ:UNKNOWN

TO: TARULLO_D (TARULLO_D @ A1 @ CD @ LNGTWY [UNKNOWN]) (OPD)

READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Shelley N. Fidler (CN=Shelley N. Fidler/OU=CEQ/O=EOP @ EOP [CEQ])

READ:UNKNOWN

TO: Gene B. Sperling (CN=Gene B. Sperling/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TEXT:

just spoke to pena who said that president pushed him hard for our restructuring proposal in light of the comments made by panelists yesterday. this was on my list of "must discuss" topics for us. we do need to come to some agreement here.

on a related note, i underscored for federico the importance of the federal commitment to energy use reductions (also highlighted yesterday) and asked him personally to take responsibility for making sure that is in good shape.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: David B Sandalow (CN=David B Sandalow/OU=CEQ/O=EOP [CEQ])

CREATION DATE/TIME: 7-OCT-1997 20:12:49.00

SUBJECT: climate oversight mtg tomorrow

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Todd Stern (CN=Todd Stern/OU=WHO/O=EOP @ EOP [WHO])
READ:UNKNOWN

TO: Gene B. Sperling (CN=Gene B. Sperling/OU=OPD/O=EOP @ EOP [OPD])
READ:UNKNOWN

TO: Peter R. Orszag (CN=Peter R. Orszag/OU=OPD/O=EOP @ EOP [OPD])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Daniel K. Tarullo (CN=Daniel K. Tarullo/OU=OPD/O=EOP @ EOP [OPD])
READ:UNKNOWN

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

TEXT:

Peter and I suggest the following agenda for our oversight meeting tomorrow:

1. Safety valve/escape clause
 - relationship to int'l treaty
 - trigger price
2. Developing country policy
 - Hill reaction to two-step
 - int'l reaction to two-step
3. POTUS meeting Friday

Other items for discussion soon:

1. electricity dereg
2. early credit
3. concentration goal
4. federal efforts
 - incl NEPA greenhouse gas guidance

5. technology program

6. tax cuts

7. policy roll-out

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 7-OCT-1997 11:43:00.00

SUBJECT: safety valve analyses

TO: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Adele C. Morris (CN=Adele C. Morris/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:

Ray Squitieri called me this morning with some questions about analyses of safety valves. Larry wants to know what our emissions levels will be under different safety valve prices. I mentioned to Ray that I think this is something that we would also be interested in finding out. So, I can do some rough interpolations from existing modeling results, but I will also contact Chris MacCracken to see if SGM can do taxes. Ray has left a message for Richels and will also call Phil Tseng at DOE. We decided on the following safety valve prices: \$10/ton, \$30/ton, \$50/ton. Are there any others that you are interested in?

Joe

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Adele C. Morris (CN=Adele C. Morris/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 7-OCT-1997 18:59:36.00

SUBJECT: T&T discussion on emissions and oil shocks

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

Janet,

The way you wrote up the section on the necessary emissions reductions from baseline and the oil shocks is excellent. It is clear and effective; you straightforwardly and simply addressed fuel switching (which I think is a good idea) and showed that the scope of the task is still very daunting, even if you allow for switching.

By the way, earlier today I dropped off with Alice the corrected version of the tables, along with the figures, in case you didn't have the corrected versions handy. The correct tables are attached below in one file called TABLE1.WPD, if you'd like the electronic version.

Adele

===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D30]MAIL41692797N.216 to ASCII,

The following is a HEX DUMP:

**The Effects of Emissions Pathway on Consumption Losses by OECD Countries,
No International Permit Trading (trillions of 1990 U.S. dollars)**

Model	WRE	WG1	WRE/WG1
CETA	1.83	5.94	0.31
CPBRIVM	0.64	3.25	0.20
FUND	9.82	11.71	0.84
MERGE	0.85	6.12	0.14
MiniCAM	1.58	6.51	0.24
SGM	1.84	6.17	0.30
		Average:	0.34

**The Effects of Emissions Pathway on Consumption Losses by OECD Countries,
International Permit Trading (trillions of 1990 U.S. dollars)**

Model	WRE	WG1	WRE/WG1
CETA	1.86	4.03	0.46
CPBRIVM	0.17	0.99	0.17
FUND	1.47	4.97	0.30
MERGE	0.60	3.24	0.19
MiniCAM	0.54	3.44	0.16
SGM	0.13	1.48	0.088
		Average:	0.23
		Average (Trading + No Trading):	0.28

Table 1

**The Effects of International Permit Trading on Consumption Losses by OECD Countries,
WRE Emissions Pathway to 550 ppmv Stabilization (trillions of 1990 U.S. dollars)**

Model	Trading	No Trading	Trading/No Trading
CETA	1.86	1.83	1.02
CPBRIVM	0.17	0.64	0.27
FUND	1.47	9.82	0.15
MERGE	0.60	0.85	0.71
MiniCAM	0.54	1.58	0.34
SGM	0.13	1.84	0.071
		Average:	0.43

**The Effects of International Permit Trading on Consumption Losses by OECD Countries,
WG1 Emissions Pathway to 550 ppmv Stabilization (trillions of 1990 U.S. dollars)**

Model	Trading	No Trading	Trading/No trading
CETA	4.03	5.94	0.68
CPBRIVM	0.99	3.25	0.30
FUND	4.97	11.71	0.42
MERGE	3.24	6.12	0.53
MiniCAM	3.44	6.51	0.53
SGM	1.48	6.17	0.24
		Average:	0.45
		Average (Trading + No Trading):	0.44

Table 2

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Peter R. Orszag (CN=Peter R. Orszag/OU=OPD/O=EOP [OPD])

CREATION DATE/TIME: 8-OCT-1997 22:48:23.00

SUBJECT: EDF/early action

TO: JONATHAN.GRUBER (JONATHAN.GRUBER @ MS01.DO.treas.sprint.com @ INET @ LNGTWY [UNKNOWN])

READ:UNKNOWN

TO: forrister_d (forrister_d @ btgcinema.com @ inet [UNKNOWN])

READ:UNKNOWN

TO: David B Sandalow (CN=David B Sandalow/OU=CEQ/O=EOP @ EOP [CEQ])

READ:UNKNOWN

TO: Kathleen A. McGinty (CN=Kathleen A. McGinty/OU=CEQ/O=EOP @ EOP [CEQ])

READ:UNKNOWN

TO: William J. Antholis (CN=William J. Antholis/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Daniel K. Tarullo (CN=Daniel K. Tarullo/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TO: Todd Stern (CN=Todd Stern/OU=WHO/O=EOP @ EOP [WHO])

READ:UNKNOWN

TO: Gene B. Sperling (CN=Gene B. Sperling/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TEXT:

In the spirit of trying to make the most out of the 20th-best world in which we find ourselves, here's my best shot. The EDF proposal on early action contained below has some of the elements that could perhaps form an acceptable package. I also don't know how specific we would have to be -- perhaps this issue could be handled by any putative commission. The elements of the EDF package that are encouraging include:

1. The total cost of the program would be capped. EDF effectively caps the total value of the early credits at one year's worth of emissions (1/10 of a decade's budget) -- which seems way too high, but then we're just haggling over price. They have accepted the concept of a cap on the total cost of the program. The lower the cap, the less concern we may have about precisely how the program operates -- but also the less corporate support we would be generating.

2. The reductions would be measured against a baseline. Their baseline

is 1990 plus 10 percent. (One problem with their proposal is that they allow credits for companies who "either make financial expenditures on GHG reductions or achieve a specific GHG reduction." It would likely prove very difficult to evaluate whether expenditures will produce GHG reductions.) We could choose a different baseline. The key point is that they have accepted the necessity of a baseline.

3. The early action program would award points that would earn a benefit later. They basically give "points" for early actions -- and then give away the earmarked permits in the first budget period according to the share of total early action points earned (the relative proportion rule). The same concept could be used to ensure that the early action program did not bias the decision on grandfathering or auctioning. The points earned could be used to give away permits under a grandfathered system or to grant "price preferences" (markdowns) on an auction.

These three elements could form the basis for an early credit plan that would have relatively low cost, be measured against a baseline, and not bias the choice between an auction and a grandfathered system. For example, we could award points for any firm that has its emissions below its 1990 emissions plus 10 percent by 2005; the points would be awarded by the difference between 2005 and 1990 plus 10 percent emissions; and a specific firm's benefit in the first budget period would equal its share of the total points earned multiplied by the total value of the set-aside (either in terms of price preferences or actual permits).

But:

The biggest problem with the approach is that it does force a decision that the permits would be downstream (e.g., at the electric utility level). It is impossible to avoid the implication that early credit forces a decision on where the permits are imposed without: (1) raising problems about double-counting, or (2) thinking that it would be possible to award early credit points to firms not subject to the ultimate permit requirement.

We would have to deny points to firms that were not at the "right" point in the distribution system -- else we would have double-counting. It may be very difficult to limit the credits to a specific part of the distribution system -- e.g., only the electric utilities.

Other elements to note:

A. They include JI in their "early credit" -- they raise the nation's budget in the first budget period for JI conducted before that period. Presumably, this feature would have to be negotiated internationally.

B. Their "pools" seem like quite a red herring to me; but if they really want them, I don't see why we should necessarily oppose them.

-- Peter

----- Forwarded by Peter R. Orszag/OPD/EOP on 10/08/97
10:04 PM -----

Karen_Kenyon @ edf.org
10/08/97 04:55:00 PM

Record Type: Record

To: Peter R. Orszag, Gene B. Sperling

cc:

Subject: URGENT

Attachement #1

A STRUCTURE FOR "EARLY REDUCTIONS": Treatment Under International Protocol

1. As a matter of sovereign domestic policy, GHG Emissions Reductions Created Before the First Budget Period May be Awarded Emission Reduction "Credits" that Can Be Carried Forward into the First, or Subsequent, Budget Period(s).

2. Accounting for Credits Awarded in National GHG Emissions Budget: As Closely as Possible, "Early Reduction" Credits should be Accorded the Same Accounting Treatment with respect to emissions budgets established under a GHG protocol as the Transfer of GHG Emissions Reductions would be During the Budget Period.

Joint Implementation - Credits Generated via Activities in Non-Annex I Countries Without Budgets:

Awarded Credits Added to Acquiring Nation's (first period) Budget

Joint Implementation - Credits Generated via Transactions with Annex I Countries and with Non-Annex I Countries with Budgets:

Awarded Credits Added to Acquiring Nation's (first period) Budget, provided that

Transferring/Host Nation Certifies Reduction Transfer and Subtracts Transferred Reductions from Its (first period) Budget

Domestic Afforestation:

With Forest/ Sink Baseline, Awarded Credits Added to (first period) Budget

Without Forest/Sink Baseline, Awarded Credits Subtracted from (first period) Budget

Domestic Projects and "Company Caps":

In absence of sector- or economy wide GHG emissions budget or cap, Awarded Credits Subtracted from (first period) Budget

EARLY REDUCTION OF GREENHOUSE GAS EMISSIONS

The early reduction of greenhouse gas emissions is critical from both an economic and environmental perspective. Economically, early reductions begin the process of reducing emissions from "business-as-usual" growth to levels closer to GHG commitment levels established as part of the Kyoto Protocol process (see the Early Reduction Credit graph below. Note the dates and emissions budget levels are for illustrative purposes only).

EARLY REDUCTION CREDIT (Embedded image moved to file: PIC19504.PCX)

To the extent that early reductions are produced, they lessen the burden on the economy by creating a more gradual path for emissions reductions over time and avoiding the need for precipitous change. From the individual company perspective, early reductions offer the opportunity to phase-in investments consistent with strategic plans, to build a compliance reserve of early emissions reductions, to gain valuable experience in anticipation of the new policy environment, and to influence both public opinion and the public policy process.

Environmentally, early reductions are important because these reductions represent emissions not in the atmosphere and not contributing to global warming.

The challenge is to create incentives for individual companies to produce early reductions prior to the first budget period. The succeeding sections describe a proposal to create such incentives.

Outline of a Voluntary Early Reduction Agreement

The basic incentive proposed in this agreement is that companies that produce early reductions would receive in the first legally binding budget period allowances or emissions reduction credits from the government for those early reductions. This incentive would operate in the context of a structure of mutual government and industry commitments.

The government would commit to insuring that any Kyoto Protocol submitted for ratification to the US Senate would contain the following elements:

- ? decadal emissions budgets
- ? comprehensive inclusion of all greenhouse gases, sources, and sinks
- ? international emissions trading
- ? banking and borrowing (for compliance purposes)
- ? joint implementation for credit
- ? developing country commitments.

In addition, the Administration would commit to granting allowances for early reductions as described below. The Administration could establish

the commitment to provide credit for early reductions through:

- ? moral commitment
- ? executive agency contract
- ? legislative authority

Industry would commit to:

- ? join a voluntary GHG reduction pool, and
- ? either make financial expenditures on GHG reductions or achieve a specific GHG reduction.

The GHG reduction pool would:

- ? provide the government with a legal entity responsible for monitoring, tracking and reporting upon member companies' emissions performance
- ? enforce members' GHG commitments
- ? operate a GHG reduction trading system.

THE MECHANICS OF EARLY REDUCTIONS AND ALLOWANCES

The figure above describes the relationship between commitments, performance and crediting.

The basic commitment is expressed either as:

- ? a specific level of expenditure for the purpose of producing GHG reductions, or
- ? a specific GHG reduction commitment.

In either case, for purposes of determining qualification for Early GHG Reductions Credits (EGRCs), the number of tons reduced either through expenditure commitments or through actions stemming from reduction commitments, will be evaluated against the benchmark of 1990 emission levels plus 10%.

In order to qualify for EGRCs, emissions growth above the benchmark must be offset (shown as the cross-hatched area above). Offsets can be secured from any means acceptable to the pool including but not limited to:

- ? joint implementation (with or without early international credits)
- ? carbon sequestration
- ? emissions reductions from non-carbon sources
- ? efficiency improvements
- ? vehicle retirements
- ? fuel conversions
- ? transactions with nations or entities authorized to sell sovereign allowances
- ? transactions with other pool participants or non-pool participants if their reductions meet pool criteria.

Offsets or reductions below the benchmark qualify for EGRCs (shown as the

shaded area above).

EGRCs will be provided by the government in the form of a guaranteed quantity of allowances taken from the first legally binding budget (see "First Budget" above in the diagram). This base quantity is termed the "pre-allocation". For example, the figure 10% or one year's equivalent emissions from the first decadal budget has been widely discussed. In addition, any joint implementation reductions that qualify for early international credit would also be added to the pre-allocation provided by the government since these would be added to the U.S. emissions budget.

The number of EGRCs to be converted into allowances would be determined in the aggregate on the basis of overall pool performance. For example, the shaded area shown in the figure above would be the number of EGRCs produced by pool participants. If this quantity is less than or equal to the pre-allocation, then these EGRCs would be directly converted into allowances.

However since the pre-allocation by the government may be limited and the number of EGRCs produced could be greater than the pre-allocation, an allocation rule for the transformation of EGRCs into allowances is required. The first step in this process is to determine the number of EGRCs. Irrespective of whether the pool participant has a monetary or tonnage reduction commitment, allocations will be based upon reductions produced relative to the benchmark, i.e.

$$\{(1990 \text{ levels} + 10\%) + \text{Offsets}\} - (\text{Cumulative Actual Emissions}) = (\text{Total EGRCs})$$

After the total number of EGRCs has been determined, this number needs to be compared to the pre-allocation plus any internationally creditable JI:

$$(\text{Total EGRCs}) - \{(\text{pre-allocation}) + (\text{Internationally Creditable JI})\}$$

If the total number of EGRCs is less than the pre-allocation (PA) and the number of internationally creditable JI reductions (ICJI), then each of the EGRCs would be converted into an allowance for the first budget period. However, since the pre-allocation plus any internationally creditable JI may be oversubscribed, either priority access rules (first in time, first in allocation) or relative proportional allocation rules need to be adopted. Priority access would reward early participants while relative proportionality would reward the largest reductions.

A relative proportion rule would operate in the following manner:

$$\{(\text{PA} + \text{ICJI})/\text{EGRCs}\} = \text{Allowance Reward Rate}$$

The allowance reward rate would be multiplied by the EGRCs produced by each of the pool entities to yield the specific allowance allocation for each pool member. By the above formula, the total number of allowances issued would exactly equal the pre-allocation plus the number of internationally creditable JI reductions.

A priority allocation rule would function as above with the exception that

[illegible]

[illegible]

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M_\('P?_`,`/_`\_\_\_\_X?\`S_]MT=O(V\3;PMO!____[_`^\_`P#_`^`
M_P#E',____;=;R-O\$V\+;P?____^S`-K_Q0##_4'PO_\$',+_P@#\('PO_#
M',+_Q'##_0'P_\$',7_P@##\('PO_\$';;_Q'##_0'P_%,+_Q'#!\('P
M____A_P#/_VWIV\C;Q-O"VV'____L_P#____C_P#/
M_VWIV\C;Q-O"VV'____L_P#_`?\_QP#\_\_\_\_U?\`S_]MT=O(V\3;
MPMO!____[_`?\_)`#%)`#\*)/\_`____O_,_P#/_VWIV\C;Q-O"VV'
M____L_P#]\DD'"1))\$DD',HD____^_`S`_`,`;=;R-O\$V\+;P?____
M_`^S`_`/W\_R20`Q20`RB3\_\_\_\_[\_S/\`S_]MT=O(V\3;PMO!____[_`^`
M_?_)`)'D221))`#*)/_`____O_,_P#/_VWIV\C;Q-O"VV'____L_P#_
M_`?\_QP#\_\_\_\_U?\`S_]MT=O(V\3;PMO!____Q_&`-`_`/\_`____
M____^_`,`;=;R-O\$V\+;P?____\;_R`#>_P#____C____
M_P#/_VWIV\C;Q-O"VV'____&_P#&_P#>_P#____C_P#/_VWIV
MV\C;Q-O"VV'____&_`@`WO\`U?\_`,`/\_PP##\_`,`P\_#`,7_Q0#_,\('S_#
M'-+_P@#9\('____@_P#/_VWIV\C;Q-O"VV'____'\8`W\_`U/_`#
M',+_P@#\('P?_`,`;_P@#\('P?_`,`;3_P@#T\('V?_`,`;_
MX^`S\_]MT=O(V\3;PMO!\_\_\_\_[\_`^T_\$',+_P@#\('P?_`,`;_P@#\('P
MP?_`,`;3_P@#\$_`D`PO_`,`+_Q'##_0'PO_`,`+_Q'#"_4`Q?\_`,`;_Q'#"
M_\('P?_`,`+_Q'#" \('PO_\$'/_`\_\_\_\_VO\`S_]MT=O(V\3;PMO!____
MQ_&`-`_`/\_`,`;P@#\('P?\_`,`;\_P@#\('P?\_`,`;\_P@#\$\_4`P?_`_
M',+_P@#\('P?_`,`;_P@#\('P?_`,`+_P@#\('P?_`,`+_P@#\('P
MPO_`,`;3_P@#% \('PO_`,`;_P@#\('P?_`,`+_P@#\('P?_`,`+_P@#_
M____]G_`,`;=;R-O\$V\+;P?____\;_R`#>_P#5\('P_\$',+_Q'#!
M_\('P?_`,`;3_P@#\$ \('PO_`,`+_P@#\('P?_\$'/_Q'##\('P?_`,`+_
MP@#!\('PO_`,`;3_P@#%_8`P?\_`,`;\_P@#!\8`P?_`,`;_Q'#____
M_]O_`,`;=;R-O\$V\+;P?____\;_`/\_`,`+\_`-[_`-7\_P@#% \('Q/\_`,`;_
MP@#!\('Q/_`,`;3_P@#" \('PO_`,`;_P@##_0'P_\$',_P@#\('PO_#
M',+_P@#\('Q/_`,`;7_P@#% \('P?_`,`;_P@#% \('P_\$'/_`____
MV?`S\_]MT=O(V\3;PMO!\_\_\_\_QO\_%,\_P@#>\_P#5\('PO\_`,`;_P@#\('P
MP?_`,`;_P@#\('Q/_`,`;3_P@#" \('PO_`,`;_P@#\('PO_`,`;_P@#_
M_\('P?_`,`;_P@#\('P?_`,`+_P@#\$ \('Q?_`,`+_P@#" \('PO_`,`+_
MP@#!\('P?_`,`+_P@#____]G_`,`;=;R-O\$V\+;P?____\?_PP#"
M_P#?_P#5\('P_#`/\_PP##\_`,`Q?\_%,\_P@#\('PO\_`,`;_P@#_0'
MP_\$',+_P@#_0'PO_`,`+_P@#\$_8`PO\_\$'/\_PP##\_0'PO\_`,`+_Q'#_
M____]K_`,`;=;R-O\$V\+;P?____^S`\_`/_`\_\_\_\_^\_`,`;_
M;=;R-O\$V\+;P?____\?_Q@#,_P#&\('RO\`\_\_\_\_+\_P#\_\_\_\_\$\_8`____
M_W_`,`;=;R-O\$V\+;P?____\;_R`#\*\('Q?\`PO\`R?`_`_* \('____
M____Q^`Q"0`____W_`,`;=;R-O\$V\+;P?____\;_`/\_`,`+\_`,`;G\_`,`;_
M,C_`,`G_`/W\_S)(`20#>DO____R_4DQ@#____S?\`S_]MT=O(V\3;PMO!
M____QO_%,_P@#+_P#_P#*_X`RYC(PDD`RY+_`^`[@(\$\$)^`P#9',____
M;=;R-O\$V\+;P?____\?_PP#`_P#,_P#&_P#+_P#]\N2',-),J2____^G_
MQ23/_`/\_`_P#/_VWIV\C;Q-O"VV'____9_P#%_P#,_P#]\J2',1),J2____
M____^7_Q233/_`/\_`_P#/_VWIV\C;Q-O"VV'____9_P##_P#!\0'R?`\_`_
M____(P#%20#____ZO_\$)-@`\_\_\_\_W\_`,`;=;R-O\$V\+;P?\_\_\_\_\;\_R`#>
M_P#_`?\_R`#____Y?_%)`-4`PK;\$/_`____P#/_VWIV\C;Q-O"VV'____&
M_`@`WO\`\_\_\_\_V\_%)`-4`PK8`P[;\$/_`____P#/_VWIV\C;Q-O"VV'

[illegible]

[illegible]

MS_JMT=O(V\3;PMO!___R/\P?\PO\WO___D_LDWO_\$/_W_R@#!_\
MP?_#,'_PP#!_P?_#,'_PP#!_P?_#,'_PP#!_P?_#,'_PP#!
M_P?_#,'_Q@#___W_R_S_JMT=O(V\3;PMO!___R/_&-[_/_XO_+
M)#_Q#]_\8'PO_#','_';'_';'_';'_';'_';'_';'_';'_';'_';'_'
M'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_'
M'_';'_';'_';_Q0#___W_R_S_JMT=O(V\3;PMO!___R?\$_-/_/_X?*
M)+_Q#]_\8'P_''_';_PP#!_P?_#,'_PP#!_P?_#,'_PP#!_P?
MP?_#,'_PP#!_P?_#,'_R#___W_R_S_JMT=O(V\3;PMO!___S?_
MWOW___+ \<'S?+_)/_Q#_/?_R@#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!
M_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!
M_P#!_P#!_P#!_4'___]\O_','_';=';R-O\$V\+;P?___\?_PP#"(\WO___+
M_P#%)#,_\HDY?\$/_Q_&/_Q#!_P?_#,'_PP#!_P?_#,'_PP#!
MPP#!_P?_#,'_PP#!_P?_#,'_Q@#___W_R_S_JMT=O(V\3;PMO!
M___QO_''-/_/_R_)\\$DD220'RO_*)._Q#_/?_Q@##_<'P?'P?'
MP?\P?\P?\P?\P?\P?\P?\P?\P?\P?\P?\P?\P?\P?\P?\P?\P?
MP?\P?\P?\P?\P?\P?_%/_/?+_P#/ VWIV\C;Q-O"V'___& P##_(_
MX^___+_P#%)#(\LDZ/_\$/ _T/_*_,'_PP#!_P?_#,'_PP#!_P?
MP?_#,'_PP#!_P?_#,'_R#___W_R_S_JMT=O(V\3;PMO!___QO\
MP_X?___+_P'D221))'#_HDZO_\$/_T/_&/_Q#!_P#!_P#!_P#!
M_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!
M_4'___]\O_','_';=';R-O\$V\+;P?___\; R#>_P#2_\'_P#_\'_P?_#
M'_;_PP#!_P?_#,'_PP#!_P?_#,'_PP#!_8'___]\O_','_';=';
MR-O\$V\+;P?___\; R#>_P#2_\'_P#_\'_T'PO_\$','_';'_';'_';'_';'_';
M'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_'
M'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_';'_'
Q0#___W_R_S_JM
MT=O(V\3;PMO!___[\^TO_\'_P#=_,7_Q#!_P?_#,'_PP#!_P?
MP?_#,'_PP#!_@_']\O_','_';=';R-O\$V\+;P?___^S_'+_P#\^\
MW0#%_\<'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'_P?
M/_/?+_P#/ VWIV\C;Q-O"V'___L_P#_]_'RB3R_\0'_B_H'P?_#
M'_;_PP#!_P?_#,'_PP#!_8'___]\O_','_';=';R-O\$V\+;P?___^S_
M/_S_*)/3_Q#_'+_QP#"_\0'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'
MP?\P?_%/_/?+_P#/ VWIV\C;Q-O"V'___&_@'WO___-\LD]?_\$
M/_XO_''+_QP#!_P?_#,'_PP#!_@_']\O_','_';=';R-O\$V\+;
MP?___\; R#>_P#_S_RB3W_\0'_K_H'P?'P?'P?'P?'P?'P?'P?'P?'P?'P?'
MP?_%/_/?+_P#/ VWIV\C;Q-O"V'___L_\'R0#-)/P'_K_\<'PO_\$
M'_;_PP#!_P?_'\^T#/_VWIV\C;Q-O"V'___)\(P?'W_\'&
M_TD^O_\$/_Z_''+_QP#!_P#!_P#!_P#!_4'___]\O_','_';=';R-O\$
MV\+;P?___\C_PP#!_(\WO___#\XD/_\$/_]/_*/_R#___W_R_\
MS_JMT=O(V\3;PMO!___R/\P?\PO\WO___0)/W_Q#___3_QP##_\
MP?_%/_/?+_P#/ VWIV\C;Q-O"V'___(P#!_P#"_P#>_P#_\D___"
M_\0'_T_\<'P_)'/_/?+_P#/ VWIV\C;Q-O"V'___(\8'WO\^?_0
M)/_Q/_\$/__O_')'/_/?+_P#/ VWIV\C;Q-O"V'___)\0'W_']_/____
M)/_Q_\$/__O_-/_/^_)_P#/ VWIV\C;Q-O"V'___L_P#T_\D___*
M_\0'_^_\'_Z_C_','_';=';R-O\$V\+;P?___\C_Q#@_P#Q_\D___-
M_\0'____\3_R@#___K_R/\S_JMT=O(V\3;PMO!___R/_&-[_/_SR3_
M_]#_Q#___Q/_*_/_Q#___?_Q^\S_JMT=O(V\3;PMO!___S/_"-[_
M'.S_SR3_] +_Q#___Q/_*_/_Q@#___; P_S_JMT=O(V\3;PMO!___
MR/_&-[_/.G_SR3_]7_Q#___Q/_\$,G_Q@#___; P_S_JMT=O(V\3;
MPMO!___R/_\$_.#_.'; SR3_]C_Q#___Q/_\$,G_Q@#___; P_S_JM
MT=O(V\3;PMO!___[\^X_)/_/_V_\$/___\$_\0'R?_&/_Q@#___#
M_',_';=';R-O\$V\+;P?___\G_P@#!_P#?_P#@_]_D___=\0'____\3_Q#2
M_\8'_P_P#/ VWIV\C;Q-O"V'___(_P?'_"_-[_/_SR3_^\#_Q#_
M___Q/_\$_-+_Q@#___#_','_';=';R-O\$V\+;P?___\C_''_'+_-'_[-_O_
MSR3_/_Q#___Q/_\$_-+_Q@##_\8'_G_P#/ VWIV\C;Q-O"V'___(
M_P#!_P#"_P#>_P#8_\D___F_\0'____\3_Q#;_\8'_G_P#/ VWIV\C;

MQ-O"V\ (\8'WO\U?)/_ Z? \$/_ \$ \0'V _&/_ Y \S _JM
MT=O(V\3;PMO! _R? \$ _ - _ + _ T"3 _ ^O _Q # _ Q/_ \$ _ -O _Q @## \8'
M _> _P#/_ VW1V\C;Q-O"V\ _L _P#0 \D _N \0' _\3 _Q #D \8'
M _> _P#/_ VW1V\C;Q-O"V\ _ - _P#2 _P#+ _P#) \<'S"3Q _P# ^ \0'
M \3 _Q #D \8'S _\ _! _P#,_P#/_ VW1V\C;Q-O"V\ _ - _P#1 \('R _\'
MR?' \))+"'^2P@#]DL0' _\3 _Q #DDL8'PY+&' :2P@# _D@"2R _\S _JM
MT=O(V\3;PMO! _S?'T\^P?'R _\R?' \29('20#JD@!)'/V2Q # _
MQ/_ \$ _V2Q@#%D@!)'/Z2'\$D'R _\S _JMT=O(V\3;PMO! _S?'TO\R _+
M' "0'PDD' _9('PDD' _)+\$/ _\$ _\ _P#._ _;=';R-O\$V\+;P? _\;
MR'#2 _P#+ _P#) _P!) _,-)/N2' _,-)/R2Q # _ Q/_ ^\PP#*_P#/_ VW1
MV\C;Q-O"V\ _& _\@'TO\R _\R? _"_,I)/O __,I)/K _Q0# _ Q/_
M'\^PP#*_P#/_ VW1V\C;Q-O"V\ _(@ _P#+ _P#) \('Q4D'^?' \Q4D'^O _%
M/_ _\$ _\ _P#" '\$D'R?' \S _JMT=O(V\3;PMO! _[\^R?' ('/G _R #X
M \8' _\3 _Q @#T _\@'P? \$/_3 _QP#) _P#/_ VW1V\C;Q-O"V\ _L _P# _
M _SO \$/_ _\$ _\8' ? _&/_ Q #+ _P#/_ VW1V\C;Q-O"V\ _L _P# _
M _SO \$/_ _\$ _\8' ? _&/_ Q #+ _P#/_ VW1V\C;Q-O"V\ _) _P#!
M \('W _\ _\[_Q # _ Q/_ &/_W _Q @#S \0'R _\S _JMT=O(V\3;PMO!
M _R/_ "_, ' _PP#> _P# _SO \$/_ _\$ _\8' ? _&/_ Q #+ _P#/_ VW1
MV\C;Q-O"V\ _ (_P#! \('P?' \WO\ _\[_Q # _ Q/_ &/_ _] _\$
M',O _ _;=';R-O\$V\+;P? _\C _\,' _P@#! _P#> _P# _SO \$/_ _\$
M \8' _0 \0'X _\$ _O _ _;=';R-O\$V\+;P? _\C _PP#! \('WO\ _
M \[_Q # _ Q/_ &/_ _T/_ " _# _Q #+ _P#/_ VW1V\C;Q-O"V\ _) \('
MP?' \W _\ _\[_Q # _ Q/_ &/_ _T/_ " _# _Q #+ _P#/_ VW1V\C;Q-O"
MV\ _L _P# _SO \$/_ _\$ _\8' _0 \<'PO \$ _K _Q #+ _P#/_ VW1
MV\C;Q-O"V\ _) \4'WO\ _\[_Q # _ Q/_ &/_ _T/_ " _+ _QP#7
M \0'R _\S _JMT=O(V\3;PMO! _R/_ &/_ -[_/_ _\0' _\3 _Q @# _
M _JG _QP#7 \0'R _\S _JMT=O(V\3;PMO! _R\^X _\ _\[_Q # _
MQ/_ &/_ _V? _\,'/_ Q #0 \0'R _\S _JMT=O(V\3;PMO! _R\^X _\ _
M \[_Q # _ Q/_ &/_ _V? _\,'/_ Q @# _\0'R _\S _JMT=O(V\3;PMO! _
MR/_ &/_ -[_/_ _\0' _\3 _Q @# _ ^/_ Q @# _\0'R _\S _JMT=O(V\3;
MPMO! _R/_ &/_ -[_/_ _\0' _\3 _Q @# _ ^/_ Q @## \0'Q _\$ _O _
M', _;=';R-O\$V\+;P? _^S _/_ _\0' _\3 _Q @# _ ^/_ Q @## \8'
MQ? _\$ _O _ _;=';R-O\$V\+;P? _\G _Q #? _P# _SO \$/_ _\$ _\8'
M _L \8'Q? _\$ _O _ _;=';R-O\$V\+;P? _\C _Q @#> _P# _SO \$/_ _
M _\$ _\8' _L \8'P _&/_O _ _;=';R-O\$V\+;P? _\C _\3 _-[_/_ _
M _ _\0' _\3 _Q @# _^S _Q @## \8'R _\S _JMT=O(V\3;PMO! _R\^
MQ\^WO\ _\[_Q # _ Q/_ &/_ _]? _&/_O _ _;=';R-O\$V\+;P? _
M \C _Q @#> _\ _P#3/_ _\$ _\ _P#._ _;=';R-O\$V\+;P? _\G _Q #?
M _P# _SO \$ _-# _R #2 _\S _(' _-# _PP#8 _P#2 \8' _U \8'R _\S _JM
MT=O(V\3;PMO! _[\^ _\[_Q #0 _\@'TO # _ _R0#/_ \,'UO # _-+
MQ@# _? _Q #+ _P#/_ VW1V\C;Q-O"V\ _& _P#! \8'WO\ _\[_Q #0
M _\,'R/_ % _3 _PP#! \4'P? # _/_ PP#% _\,'P _# _+ _PP#! _\,'P _"_,
MPP#\$ _\('P? # _3 _PP#\$ \8'T/_ &/_ _] _\$ _O _ _;=';R-O\$V\+;P? _
M _\,' _Q @#> _P# _SO \$ _-# _PP# _\<'P _% _\,' _PP# _\('P _"_,
MPP## _\,'PO # _\,' _PP# _\<'P _\,'/_ Q0## \8'T/_ &/_ _] _\$ _O _ _
M;=';R-O\$V\+;P? _^S _/_ _\0'T/_ _\,'/_ PP#! _\,'P _# _/_ PP#"
M _\,'P? # _; _R ## _\,'P? # _+ _PP#! _\,'P _# _\,' _PP# _\,'P? # _/_
MPP#2 \8' _W \0'R _\S _JMT=O(V\3;PMO! _R?' \P? _"- _/_ _
M \0'T/_ _\,'; _Q ## _\,'P _# _+ _PP#! _\,'QO _('/_ PP#! _\,'PO # _\,'
MPP## _\,'P? # _+ _PP#! _\,'P _# _-+ _Q @# _? _Q #+ _P#/_ VW1V\C;Q-O"
MV\ _ (\('P? # _-[_/_ _\0'T/_ # _? _PP#! _\,'P _# _/_ PP##
M _\('P? _"_,? _PP## _\,'PO # _\,' _PP# _\,'P? # _/_ PP#! _\,'PO _\,'/_
MPP#2 \8' _W \0'R _\S _JMT=O(V\3;PMO! _R\^P? _"_, _-[_/_ _
M _ _\0'T/_ # _? _PP#! _\,'P _# _/_ PP## \4'Q _# _/_ PP# _\,'P? #

M',+ PP#! \, 'P _ #,' PP#" \, 'Q _ #' -+ Q@# _ ? Q`#+ P#/ VWIV\C;
MQ-O"V\ (P#! \('P? \ WO\ _ _ \[Q`#0 \ @`PO _ ' / PP## \, '
MP _ %,' ? R0#" \ <`PO \_ ' / QP## \ 8`P _ %`-# Q@# \_ \ <`PO _ #' -+ _ /
MRO _ \$ _ O _ , _ ;=';R-O\$V\+;P? _ \C PP#! \('WO\ _ _ \[Q`#0 \ @`
MP _ &' / PP## \, 'Q/ _ #,' C R`\$ \('P? _ #,' / P@#! \, 'Q/ _ ",' PP#\$
M \0`Q? \_ \$ \_ -# Q@# \_ \ <`U? _ # / RO _ \$ _ O _ , _ ;=';R-O\$V\+;P? _ \G
MP@#! P#? P# _ SO _ \$ / PP#J _ , X? _ &' , [PP#& _ , 'P? _ #,' P@#!
M \4`PO \_ &' / R/ \_ \$ \_ O \_ , \_ ;=';R-O\$V\+;P? \_ ^S \_ / \_ . \0`[O _ %
M`? QP#A \ 8`SO _ #,' ; PP#! \4`P? \_ ",' Q@# \_ \C Q`#+ P#/ VWIV\C;
MQ-O"V\ () P#! \('W _ \ _ _ \[Q`#N \4`Z/ _ %`+ Q@# \_ \ 8`P _ #
M', ' PP## \, 'QO _ # / RO _ \$ _ O _ , _ ;=';R-O\$V\+;P? _ \C P@#! \, '
MWO\ _ _ \[Q`# \_ Q/ \_ &' , [ Q@## \, 'P? \_ #,' / Q@## \, ' \_ \* \0`
MR _ \S]MT=O(V\3;PMO! _ R\`P? \_ ",' ; \_ -[ \_ / \_ . \0` _ \3
MQ@# _ , \, 'QO _ #,' PP% _ \4`PO _ # / RO _ \$ _ O _ , _ ;=';R-O\$V\+;P? _
M \C _ , ' P@#! P#> P# _ SO _ \$ / _ \$ \ 8`SO _ #,' ; PP#! \, 'Q _ #
M',+ PP# \K Q`#+ P#/ VWIV\C;Q-O"V\ (\, 'P? _ " _ -[_ / _ .
M \0` \_ \_ \3 Q@# \_ , \, 'QO \_ #,' PP## \ <`PO _ %` / R/ _ \$ _ O _ , _ ;=';
MR-O\$V\+;P? _ \G P@#! P#? P# _ SO _ \$ / _ \$ \ 8`SO _ #,' ; PP#!
M \, 'Q/ _ %` , 3 Q`# \C Q`#+ P#/ VWIV\C;Q-O"V\ L P# _ SO _ \$
M / _ \$ \ 8` \_ W \0`R _ \S]MT=O(V\3;PMO! QO\`P? _ &' -[_ / _
M _ . \0` \_ \3 Q@# \_ ? Q`#+ P#/ VWIV\C;Q-O"V\ & P#! \ 8`
MRO _ " _ , ; P@#* P# _ SO _ \$ / _ \$ \ 8` \_ W \0`R _ \S]MT=O(V\3;
MPMO! _ U _ \PO\`Q\`PO\`R? \ \_ \_ \[ Q`# _ Q/ _ &' / _] _ \$ _ O _
M', _ ;=';R-O\$V\+;P? _ \G Q0#) P#" P#\$ P#" P#) P# _ SO _ \$ / _
M _ \$ \ 8` \_ W \0`R _ \S]MT=O(V\3;PMO! _ R/ _ &' , G _ , + _ , 7 PP#)
M _ \ P#3 / _ \$ _ \ P# _ , _ ;=';R-O\$V\+;P? _ \C _ , [_ , + _ , ?
M', G _ / _ . \0` \_ \3 Q@# \_ \D`SO _ # -3 PP#W \0`R _ \S]MT=O(
MV\3;PMO! _ R\`SO\`PO\`Q\`PO\`R? \ \_ \_ \[ Q`# _ Q/ _ &' , [_
MPP## \, 'P? _ #,' PP## \('P? _ #,' / P@#! \, 'Q/ _ #,' / Q@#U \0`R _ \
MS]MT=O(V\3;PMO! _ R/ _ &' , K P@## P#" \('RO\` \_ \_ \[ Q`# _
MQ/ _ &' , [PP## \, 'P? _ #,' PP#" \ <`PO \_ ' / Q0#" \ 8`] ? _ \$ _ O _ , _
M;=';R-O\$V\+;P? _ \C Q@#> P# _ SO _ \$ / _ \$ \ 8`SO _ (, + PP#!
M _ , \, 'PO _ #,' PP#" \, 'P? _ #,' + PP#! \, 'PO _ # / ? Q`#+ P#/ VWIV\C;
MQ-O"V\ (P#C P# _ SO _ \$ / _ \$ \ 8`SO _ (, + PP#! \, 'PO _ #
M', ' PP#" \, 'P? _ #,' + PP#! \, 'PO _ # / ? Q`#+ P#/ VWIV\C;Q-O"V\
M _ (P#C P# _ SO _ \$ / _ \$ \ 8`SO _ # / PP#! \, 'P? _ #,' + PP#!
M _ , \, 'PO _ #,' PP#" \ <`PO \_ # / ? Q`#+ P#/ VWIV\C;Q-O"V\ (\ 8`
MWO\ _ _ \[Q`# _ Q/ _ &' , [PP## \, 'P? _ #,' PP#" \, 'P? _ #,' +
MPP#! \, 'PO _ #,' ; PP#W \0`R _ \S]MT=O(V\3;PMO! _ R/ _ &' -[_ / _
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M;=';R-O\$V\+;P? _ \; _ , + _ , / _ -[_ / _ . \0` _ \3 Q@#J \ <
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M _ Q/ _ &' . O Q0# _ \ ? Q`#+ P#/ VWIV\C;Q-O"V\ \_ & \_ \ @`WO\ _
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M _ SO _ \$ / _ \$ \ 8` \_ W \0`R _ \S]MT=O(V\3;PMO! _ [\ _
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[illegible]

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M_____^'_=';R-O\$V\+;P?_____X?]M
MT=O(V\3;PMO!_____JO_VW_;?)M_VWT;=)MT=O(V\3;PMO!
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,

end

===== END ATTACHMENT 1 =====

===== ATTACHMENT 2 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

RFC-822-headers:

Received: from conversion.pmdf.eop.gov by PMDF.EOP.GOV (PMDF V5.0-4 #6879)

id <01IOKKVI4TB400G1I2@PMDF.EOP.GOV>; Wed, 08 Oct 1997 16:56:15 -0400 (EDT)

Received: from storm.eop.gov (storm.eop.gov)

by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01IOKKVDZUNK00L0IV@PMDF.EOP.GOV>; Wed,

08 Oct 1997 16:56:08 -0400 (EDT)

Received: from edf.org ([192.111.219.1]) by STORM.EOP.GOV (PMDF V5.1-7 #6879)

with ESMTP id <01IOKKV1U6EW007F1E@STORM.EOP.GOV>; Wed,

08 Oct 1997 16:55:57 -0400 (EDT)

Received: from edfny.edf.org ([172.22.3.5]) by gateway.edf.org with SMTP id

<8547>; Wed, 08 Oct 1997 17:00:11 -0400

Received: from notesgw.edf.org by edfny.edf.org id aa10533; Wed,

08 Oct 1997 16:43 -0400 (EDT)

Received: by notesgw.edf.org (Lotus SMTP MTA v1.05 (274.9 11-27-1996))

id 8525652A.0072F5B1 ; Wed, 08 Oct 1997 16:55:40 -0400

X-Lotus-FromDomain: EDF

===== END ATTACHMENT 2 =====

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 9-OCT-1997 15:57:59.00

SUBJECT: Escape clause language

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

----- Forwarded by Janet L. Yellen/CEA/EOP on 10/09/97
03:57 PM -----

Peter R. Orszag
10/09/97 11:11:30 AM
Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: Escape clause language

Please find attached a first stab at different ways of presenting the safety valve. The first includes the safety valve in the international treaty; the second two do not.

I am not at all sure that I have gotten these down accurately. Please send along comments and corrections.

Message Sent

To: _____
Daniel K. Tarullo/OPD/EOP
Todd Stern/WHO/EOP
Kathleen A. McGinty/CEQ/EOP
David B Sandalow/CEQ/EOP
JONATHAN.GRUBER @ MS01.DO.treas.sprint.com @ INET @ LNGTWY
Janet L. Yellen/CEA/EOP
Gene B. Sperling/OPD/EOP

===== ATTACHMENT 1 =====
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D29]MAIL45208518F.216 to ASCII,
The following is a HEX DUMP:

SAFETY VALVE

Alternative 1: An explicit safety valve in the treaty

International treaty

- This alternative would include the safety valve in the international treaty. In other words, our binding international obligation would be defined as “1990 by XX *unless* the economic costs are excessive.” Our submission would define “excessive” economic costs as a permit price above \$Y.
 - A possible permutation of this approach would be to require all countries that invoke the safety valve clause to devote an amount equal to an agreed price (e.g., \$Y) multiplied by the excess emissions to carbon-reducing activities (e.g., tax cuts for energy-efficiency and R&D, government investments in R&D, purchases of permits internationally, investments in projects abroad, etc.).

This approach effectively moves from a binding *target* to a binding *obligation* (1990 by XX *or* \$Y per ton). In making this shift, we could note that President Clinton has always emphasized the need for a binding and *realistic* target.

Public stance

- “Climate change is the premier environmental challenge of the 21st century, and President Clinton has therefore committed this nation to reducing our greenhouse gas emissions to 1990 levels by XX. But we have to be realistic: If it turns out that this goal is just too expensive, we have to protect the economy while still taking a solid first step in addressing climate change. So our international obligation also includes a safety valve that limits the permit price to \$Y per ton (y cents per gallon of gasoline).

Some will say that it is impossible to meet our target of 1990 by XX without the permit price exceeding the ceiling. But the President believes that with our R&D effort, our tax cuts, and most importantly with the ingenuity of the American people and businesses, we can do it. And whatever happens, we will have made a *moderate but disciplined* first step in reducing greenhouse gas emissions while continuing to grow the economy.

This proposal allows us to balance the need for a binding target with the need for a realistic one. The honest answer is that given the uncertainty involved -- for example, over the likely role of technology -- we can't know what's realistic until we get started.”

Q: Is the target binding?

A: Yes, but our international obligation clearly also states that the costs of meeting that target must be reasonable. So we're bound to a credible first step, not to economic suicide. What's important here is that we take a moderate but disciplined first step in addressing climate change.

Alternative 2: No safety valve in treaty, but regular reviews

International treaty

- This alternative would *not* include the safety valve explicitly in the Kyoto treaty. Rather, it would only include the safety valve in our domestic implementing legislation.
- International obligations would be re-evaluated every few years, in light of new information about the costs and benefits of addressing climate change.

Public stance

- “President Clinton has committed to reducing our greenhouse gas emissions to 1990 levels by XXX. But mindful of the need to avoid undue economic harm, he has also proposed a safety valve in case the costs of meeting that target are excessive. There is substantial uncertainty surrounding how quickly the economy will grow, how rapidly technology will develop and diffuse, and how easily industry will adapt to the need to reduce greenhouse gases. Given this uncertainty, the only way to have a realistic approach is to re-evaluate our obligations on a regular basis.”

Q: Is the target binding?

A: Yes, but our obligations will be re-evaluated on a regular basis as we learn more about the science and economics of climate change.

Alternative 3: No safety valve in treaty, stress that many actions are available for us to make the target

International treaty

- This alternative would *not* include the safety valve explicitly in the Kyoto treaty. Rather, it would only include the safety valve in our domestic implementing legislation.

Public stance

- “Climate change is the premier environmental challenge of the 21st century, and President Clinton has therefore committed this nation to a binding target of reducing our greenhouse gas emissions to 1990 levels by XX.

With our R&D effort, our tax cut package, and our Federal energy efficiency efforts, we believe that we can make this target while continuing to grow the economy.

But no one would expect this President, any future President, or any future Congress to impose excessive costs on the economy. If it turns out that this goal is just too expensive, we have to protect the economy while still taking a solid first step in addressing climate change. So the President has also proposed a safety valve, that will limit the economic costs involved by allowing more permits to be sold.”

Q: Is the target binding?

A: Yes. And with our tradeable permits system, our R&D effort, our tax cut plan, and our Federal energy efficiency plan, we believe that we can meet our target without imposing undue harm on the economy. But just to be safe, the President has also proposed a safety valve to ensure that the permit price does not rise above a certain level.

DEVELOPING COUNTRIES

The Steinberg Doctrine: “The United States will not assume binding obligations until developing countries make adequate commitments in terms of their own obligations.”

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Peter R. Orszag (CN=Peter R. Orszag/OU=OPD/O=EOP [OPD])

CREATION DATE/TIME: 9-OCT-1997 11:11:38.00

SUBJECT: Escape clause language

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: David B Sandalow (CN=David B Sandalow/OU=CEQ/O=EOP @ EOP [CEQ])

READ:UNKNOWN

TO: Todd Stern (CN=Todd Stern/OU=WHO/O=EOP @ EOP [WHO])

READ:UNKNOWN

TO: Gene B. Sperling (CN=Gene B. Sperling/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TO: JONATHAN.GRUBER (JONATHAN.GRUBER @ MS01.DO.treas.sprint.com @ INET @ LNGTWY [UNKNOWN])

READ:UNKNOWN

TO: Kathleen A. McGinty (CN=Kathleen A. McGinty/OU=CEQ/O=EOP @ EOP [CEQ])

READ:UNKNOWN

TO: Daniel K. Tarullo (CN=Daniel K. Tarullo/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TEXT:

Please find attached a first stab at different ways of presenting the safety valve. The first includes the safety valve in the international treaty; the second two do not.

I am not at all sure that I have gotten these down accurately. Please send along comments and corrections.===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D39]MAIL41601418W.216 to ASCII,
The following is a HEX DUMP:

SAFETY VALVE

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DEVELOPING COUNTRIES

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RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 9-OCT-1997 14:33:10.00

SUBJECT: "package 2"

TO: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Adele C. Morris (CN=Adele C. Morris/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:

Earlier this week we asked Battelle to do some runs for us looking at the effects of different safety valve prices (\$10, \$30, \$50). Last night I modified this request to have them model the package 2 proposal. Here are the runs we have asked for:

1990 in 2015 without safety valve

1990 in 2015, safety valve: \$10 in 2005, \$20 in 2010, \$30 in 2015, and \$30 in all

subsequent years

1990 in 2015, safety valve: \$10 in 2005, \$20 in 2010, \$30 in 2015, \$40 in 2020,

\$50 in 2025, etc.

1990 in 2020 safety valve: \$10 in 2005, \$17 in 2010, \$24 in 2015, \$30 in 2020, and

\$30 in all subsequent years

1990 in 2020, safety valve: \$10 in 2005, \$17 in 2010, \$24 in 2015, \$30 in 2020,

\$37 in 2025, \$44 in 2030, etc.

Note that we already have the 1990 in 2020 without safety valve run.

We should get the results from these runs sometime this afternoon. I will draft a short memo summarizing the key results (permit prices, emissions, GDP losses, foregone consumption) for you. Also, Jon Gruber has asked for these results, so I will send them to him as well. If you have any suggestions or further requests, let me know.

Joe

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:10-OCT-1997 10:48:49.00

SUBJECT: Fast Track Speech attached

TO: Jon D. Haveman (CN=Jon D. Haveman/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D45]MAIL45589328D.216 to ASCII,
The following is a HEX DUMP:

The Continuing Importance of Trade Liberalization

Janet L. Yellen, Chair
Council of Economic Advisers
15 September 1997
National Association of Business Economists
New Orleans, Louisiana

The basic goals of the Clinton Administration's economic policies are simple and uncontroversial. First, to secure rising living standards now and in the future. And second, to ensure that the benefits of a rising standard of living are extended to all Americans. To attain these ends, the Administration's economic agenda has been based on three key policy initiatives: deficit reduction, investing in people through education and training, and opening markets worldwide to U.S. goods and services.

It is this third initiative--promoting free and fair trade--that I will focus on today. From his first days in office, President Clinton has advocated an outward-looking, "internationalist" trade policy. During the first four years of the Clinton Administration, over 200 trade agreements were ratified and implemented, some relatively large in scope--such as NAFTA and the Uruguay Round of GATT--others relatively small, but all vital to our nation's competitive future. President Clinton intends to extend and build upon this record during the Administration's next four years.

The single most important next step in the Administration's effort to open markets abroad and expand trade is for Congress to renew the President's authority to negotiate trade agreements on a "fast track" basis. This so-called "fast-track authority" allows the President to negotiate

trade agreements with other countries, and then requires Congress to take an up or down vote on the *entire* agreement. In other words, Congress cannot in effect reopen negotiations by adding or deleting individual provisions of a trade agreement by amendment during Congressional debate. Instead, Congress must vote on the agreement as a whole. Of course, the final decision as to whether the trade agreement--in its entirety--is approved or disapproved is still in the hand's of Congress. Fast-track authority simply allows the President to seek approval or disapproval for the agreement as a whole.

Every President since 1974 has gotten fast-track authority from Congress. Why is it so important? The answer is that fast track lends credibility to trade negotiations. Under fast track, the parties to a trade agreement know that any provisions that are agreed upon cannot later be renegotiated individually, nor can such renegotiation be threatened.

History tells us that fast-track negotiating authority is critical: in the early 1970s, Congress failed to ratify the Kennedy Round GATT agreement in its entirety, and, as a result the Europeans refused to negotiate further trade agreements with the United States. For this reason, in 1974, Congress developed and passed legislation providing the President with fast track negotiating authority, and giving the President the credibility he needs to negotiate international trade agreements.

So, why do we need fast track authority today? And, what would the Administration use it for? The Clinton Administration would focus on three key areas for its use.

The first use for fast-track negotiating authority would be to complete the agenda that was established in the Uruguay Round of GATT negotiations. At the end of the Uruguay Round negotiations, the United States, along with other countries, pushed for a timetable at which negotiations in different areas would resume. We did that, as did Europe and other countries, because we wanted more out of the Uruguay Round than we got. This year, we begin again the negotiations on government procurement; next year, we will begin intellectual property rights discussions; then we will begin talks on agriculture; then on services. Government procurement is a trillion-dollar market for the United States in Asia alone over the next decade; agriculture, a \$600-billion market globally; services, \$1.2 trillion market. The United States wants better access to those markets. And, we must have fast track authority before beginning discussions in these areas, otherwise countries will not put meaningful offers for market access on the table.

The second major use for fast-track authority is to extend the information technology agreement or ITA. The recently concluded ITA will reduce to zero tariffs on a range of information technology products: semiconductors, computers, telecommunications equipment, faxes, phones, integrated circuits -- a huge array of products in which U.S. firms tend to be highly competitive. The U.S. tariff barriers in those areas are either very low or zero. Asia's tariffs in these areas averaged 30 percent. With the ITA, the United States agreed -- with 43 other countries -- that tariffs on information technology products should be brought to zero across the board in all countries, by roughly the year 2000. We already have agreement among our trading partners for an ITA-2 -- which would expand the scope of the products encompassed by this extremely ambitious initiative. And, fast-track authority would be needed

to expand that arrangement.

We are also considering seeking similar kinds of agreements in a number of other individual sectors where the United States is very competitive but global barriers tend to be high -- areas such as environmental equipment and services, medical equipment and technology, and transportation equipment. In all of these areas, it would be necessary to have fast track authority to negotiate a reduction of trade barriers.

Finally, the third area that fast-track will be used is for more comprehensive market access agreements with individual countries. Thus far, Chile has been identified as the first and most likely country for this kind of arrangement. Today, every major economy in this hemisphere--save the United States--has a preferential trade agreement with Chile. In practice, this means that U.S. firms face tariffs in Chile that make their goods 11 percent more expensive than those of competing firms from other countries. This is a serious competitive disadvantage.

The pace with which preferential trade agreements are being negotiated between and among countries around the world is fast. The United States could easily be left behind through inaction. Since 1992, other countries have negotiated 20 preferential trade agreements in Latin America and Asia that exclude the United States. The European Union has begun a process that will culminate in a free trade agreement with Brazil, Argentina, and other MERCOSUR nations; President Chirac of France has even gone so far as to declare that the economic interests of Latin America "lie not with the United States, but with Europe." And within South America itself, the

four MERCOSUR countries are attempting to extend their preferential trade arrangements to encompass the entire continent. Moreover, other countries are aggressively pursuing expanded foreign trade. For example, China has targetted a number of Latin American countries--including Chile, Mexico, and Brazil--for increased bilateral trade.

It is clear: now, more than ever, continued engagement with the global economy will require an active effort on the part of the United States. And, an extension of fast track authority must be an integral component of this effort. But, let's go back to a fundamental and important question: why is free trade so important? Why should we be concentrating so much effort in pushing for more open foreign markets, and how does freer trade contribute to the Administration's goal of securing higher living standards for all Americans? In short, what are the benefits of free trade for the U.S. economy? I will use the remainder of my time to address this question--which, in fact, speaks to my own comparative advantage as an economist.

I would begin by first saying that one of the benefits of free trade is not, as is sometimes supposed, an improved overall current account or trade balance. The Administration's policies do indeed affect the current account, but it is its budget, saving, and investment policies, not its trade liberalization policies, that do so. The current account is a macroeconomic phenomenon that reflects the gap between what we as a nation invest and what we save. The large budget deficits of the 1980s and early 1990s reduced the amount of saving that was available to cover the nation's investment in plant and equipment (investment was choked off too, but not by as much), and this shortfall had to be filled by importing goods from abroad. In an important

sense, the nation was overconsuming in the 1980s, financing its consumption binge by borrowing output from foreigners. The result was a large and persistent trade deficit.

Today, we still face a trade deficit, but for a very different reason. Reducing the government's budget deficit has left more room for investment in plant and equipment by the private sector. And invest it has: since 1993, real business fixed investment has grown nearly nine percent per year on average, a much faster rate than that of the preceding ten years. This rate of investment is above the rate at which Americans save--even with the federal government dissaving less by virtue of its smaller budget deficit. So, once again the shortfall is made up for by borrowing output from abroad, with the result being a current account deficit. But there is a big difference between borrowing in order to invest--as the economy is doing now--and borrowing in order to consume, as we did in the 1980s. In fact, running a trade deficit in order to expand the nation's productive capacity is not new to American history--in the 1800s, we did much the same thing in order to build up the nation's infrastructure, most notably during the railroad construction boom a century ago.

So, it is not the gap between imports and exports that is relevant as far as trade policy is concerned. But the level of trade--the "openness" of the U.S. economy--does matter. In recent years, the United States has seen rapid growth in its degree of exposure to the world economy: real U.S. imports of goods and services grew at an average rate of 11 percent over the past four years, while real exports grew at an average rate of 10 percent per year. In the current recovery, export growth has been responsible for roughly a third of overall GDP growth. The United

States now exports an amount equal to 13 percent of its GDP every year and imports an amount equal to 15 percent of GDP; to put these figures in perspective, the corresponding figures for the 1960s were four and five percent, respectively. The American economy is now more open than at any time in its history.

What are the benefits of an open economy? Economists generally recognize two broad classes of benefits, the first being static, the second dynamic. I would like to discuss each in turn.

Ever since the work of Adam Smith and David Ricardo, economists have recognized that trade helps an economy by allowing it to specialize in what it does best. Adam Smith argued that specialization--the division of labor--enhances productivity, but noted that the degree to which an individual or a nation could specialize depended critically on the extent of its market. We all know the story of Robinson Crusoe, who, alone and isolated, had to do everything for himself: farm, weave cloth, build shelter, and so on. But if a group of Robinson Crusoes can trade amongst themselves, each can specialize in the production of what he or she is best at doing--thus producing more than would be possible were their attentions divided among goods which they are less skilled at making--and then can trade with his or her neighbors for the goods which they in turn are good at producing.

It might even be the case that one individual (or country, to drop the Robinson Crusoe

analogy) is better than anyone else at producing *every* good. Such an argument is often invoked in order to “prove” that the U.S. cannot benefit from trade with a country such as Mexico. But it turns out that the argument in favor of free trade still carries the day. All that is required is for a country to be *relatively* less skilled than another in the production of some good in order for it to benefit from trade. This is, of course, the doctrine of comparative advantage--the fundamental (if perhaps counterintuitive) principle that underlies the theory of international trade.

This, in a nutshell, is the “classical” view of the benefits of free trade. It is important to note that the benefits from trade under the classical doctrine are primarily static in nature--that is, they affect the *level* of output. Moving from a situation in which there is less trade (or no trade) to one in which trade is freer raises output, but this is more along the lines of a one-time increase (even though it might take a number of years for the benefits from trade to be fully felt). This is not to dismiss the significance of these static benefits: for example, some economic historians have argued that most of the economic growth that occurred in the classical world was rooted in the expansion of markets that took place as a result of increased sea trade around the Mediterranean.

Recently, a new view of international trade has emerged which argues that increased trade actually raises an economy’s *rate of growth*. If this is in fact the case, it makes the case for trade liberalization an even more compelling one. Raising the growth rate of the nation’s economy, even by a few tenths of a percentage point per year, has vastly more significance for long-run living standards than even a relatively large one-off increase in the level of output; the reason, of

course, is that a small increase in the economy's rate of growth cumulates over time to yield large gains.

What is the rationale behind the new trade theory--in other words, what is the source of the "dynamic" benefits from trade? Well, we know that economic growth has two sources: either we can increase the amount of inputs (capital, labor, and raw materials) that we feed into the productive process, or we can make those inputs more productive, through innovations in technology, better education and training, and so on. (In fact, this latter factor is necessary if the economy is to grow in per-capita terms in the long run, as sooner or later simply accumulating more inputs will run up against the law of diminishing returns.) The static benefits of trade represent a one-off increase in this latter factor: specialization lets us allocate labor and capital to the production of goods that we are relatively good at producing, making a given amount of labor and capital more productive in a manner that is not unlike an improvement in managerial technique.

The new view of international trade also focusses on this second factor, but argues that international trade can actually increase the rate of innovation and technological change. One economist has summarized the argument with the following catena:

- International trade leads to greater competition;
- Competition induces greater innovation; and,
- Innovation (*i.e.*, technological change) drives economic growth.

(It's a simple notion once you think about it--though it will probably win the economists who thought it out a Nobel prize some day.)

In a sense, the emphasis of the new trade theory on the dynamic benefits of international trade comes full circle to Adam Smith. Although Smith's contribution to trade theory is generally seen as providing an argument in favor of free trade that highlighted the role of specialization in raising productivity, he also pointed out that specialization, by acquainting workers with a specific productive process, could give them insight into how such processes might be improved--thus fostering innovation. New trade theory also incorporates elements of Joseph Schumpeter's theory of "creative destruction," in which the competition that is a fundamental feature of a capitalist economy serves as a motive force for the economy's progress.

The new view of international trade represents a valuable contribution to academic economics. But theory alone cannot provide an airtight argument in favor of trade liberalization. There is, however, a large body of empirical literature which attempts to determine what drives economic growth across countries. Unsurprisingly, investment in physical capital--plant and equipment--and investment in human capital--education, for instance--are two factors which have a profound influence on economic growth. But these same studies have also found that an economy's degree of openness--as proxied, say, by the amount that it imports and exports relative to its overall output--has an effect on its rate of growth.

In an ideal world--the world in which economists live--free trade unambiguously benefits the economy *taken as a whole*. This is true in the real world as well, although the ideal case

masks the fact that some will gain from freer trade, but others may lose--even though on net the winners could compensate the losers and still have something left over. In practice, increased globalization will induce reallocations of labor and capital across sectors as the focus of American industry moves to the production of those goods and services which we are relatively good at producing. Because our economy is not frictionless, these adjustments sometimes involve lengthy periods of dislocation until the reallocation of labor and capital across industries is complete.

Policy makers advocating freer trade must be aware of this fact, and the Clinton Administration has realized from the beginning that it is the government's duty to minimize the impact of this dislocation by speeding up the adjustment process however it can. For example, one of the key provisions of NAFTA involved monitoring those industries that were in danger of being adversely affected by the free trade agreement, and the Administration committed itself early on to providing for dislocated workers through retraining programs. And, more generally, the Administration's commitment to investing in people through education and training serves as a strong complement to its policy of trade liberalization: since freer trade tends to benefit skilled workers most, the United States enjoys greater benefits from trade to the extent that more of its workers are highly skilled. In the end, though, those who would point to the short-term adverse effects of trade liberalization should not lose sight of an important point: Trade liberalization might adversely affect a small fraction of American workers in their role as producers, but it benefits all workers in their role as consumers.

Bottom line is: the benefits of increased openness and increased international trade are wide ranging -- more efficient utilization of resources, faster productivity growth, higher quality goods, and lower prices, all of which raise living standards.

Finally, in closing, I would note that I have said nothing of the benefits of trade that arise simply from the fact that it links the economic interests of nations more closely. John Maynard Keynes once argued that the greatest tragedy visited upon Europe by the First World War was the disruption of the system of international trade that was a hallmark of the European economy before 1914. The eventual breakdown in the world trading system and resulting deterioration of Europe's economy was a proximate cause of the Second World War, and kept living standards in Europe and the U.S. much lower for much longer than was necessary by prolonging the Great Depression. It is only in recent years that the scope of international trade has returned to the level seen before the Great War.

The United States is now more closely tied to the rest of the world by trade than at any other time in its history. How the U.S. economy performs relative to the economies of other nations will depend critically on how we promote our commercial interests abroad. Aggressive pursuit of trade liberalization, for which fast track authority is a prerequisite, is the best way to ensure that the U.S. maintains its position as the strongest and most innovative economy in the world.

**Clinton Presidential Records
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Collection: 2013-0518-F

Bucket: CEA

Creation Date: 10/14/1997

Subject: mtg w/ Japanese

Creator: David B Sandalow CN=David B
Sandalow/OU=CEQ/O=EOP [CEQ]

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Sanders D. Korenman (CN=Sanders D. Korenman/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:14-OCT-1997 09:30:27.00

SUBJECT: Draft Memo to Race Initiative Due Today

TO: Amy N. Finkelstein (CN=Amy N. Finkelstein/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Rebecca M. Blank (CN=Rebecca M. Blank/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Maria J. Hanratty (CN=Maria J. Hanratty/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Sarah J. Reber (CN=Sarah J. Reber/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

The President's Initiative on Race has requested ideas for possible race related policy announcements. We discussed three at the cluster meeting:

1. UI reform
2. After-school care
3. Pell Grants or other college aid.

I will draft a short memo with a few sentences on each. Please send me additional ideas, as well as comments on my memo when you get it.

Thanks,

Sandy

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:14-OCT-1997 16:19:38.00

SUBJECT: EDF/early action

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

----- Forwarded by Janet L. Yellen/CEA/EOP on 10/14/97
04:19 PM -----

Peter R. Orszag
10/08/97 10:48:11 PM
Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: EDF/early action

In the spirit of trying to make the most out of the 20th-best world in which we find ourselves, here's my best shot. The EDF proposal on early action contained below has some of the elements that could perhaps form an acceptable package. I also don't know how specific we would have to be -- perhaps this issue could be handled by any putative commission. The elements of the EDF package that are encouraging include:

1. The total cost of the program would be capped. EDF effectively caps the total value of the early credits at one year's worth of emissions (1/10 of a decade's budget) -- which seems way too high, but then we're just haggling over price. They have accepted the concept of a cap on the total cost of the program. The lower the cap, the less concern we may have about precisely how the program operates -- but also the less corporate support we would be generating.
2. The reductions would be measured against a baseline. Their baseline is 1990 plus 10 percent. (One problem with their proposal is that they allow credits for companies who "either make financial expenditures on GHG reductions or achieve a specific GHG reduction." It would likely prove very difficult to evaluate whether expenditures will produce GHG reductions.) We could choose a different baseline. The key point is that they have accepted the necessity of a baseline.
3. The early action program would award points that would earn a benefit later. They basically give "points" for early actions -- and then give away the earmarked permits in the first budget period according to the share of total early action points earned (the relative proportion rule).

The same concept could be used to ensure that the early action program did not bias the decision on grandfathering or auctioning. The points earned could be used to give away permits under a grandfathered system or to grant "price preferences" (markdowns) on an auction.

These three elements could form the basis for an early credit plan that would have relatively low cost, be measured against a baseline, and not bias the choice between an auction and a grandfathered system. For example, we could award points for any firm that has its emissions below its 1990 emissions plus 10 percent by 2005; the points would be awarded by the difference between 2005 and 1990 plus 10 percent emissions; and a specific firms' benefit in the first budget period would equal its share of the total points earned multiplied by the total value of the set-aside (either in terms of price preferences or actual permits).

But:

The biggest problem with the approach is that it does force a decision that the permits would be downstream (e.g., at the electric utility level). It is impossible to avoid the implication that early credit forces a decision on where the permits are imposed without: (1) raising problems about double-counting, or (2) thinking that it would be possible to award early credit points to firms not subject to the ultimate permit requirement.

We would have to deny points to firms that were not at the "right" point in the distribution system -- else we would have double-counting. It may be very difficult to limit the credits to a specific part of the distribution system -- e.g., only the electric utilities.

Other elements to note:

A. They include JI in their "early credit" -- they raise the nation's budget in the first budget period for JI conducted before that period. Presumably, this feature would have to be negotiated internationally.

B. Their "pools" seem like quite a red herring to me; but if they really want them, I don't see why we should necessarily oppose them.

-- Peter

----- Forwarded by Peter R. Orszag/OPD/EOP on 10/08/97
10:04 PM -----

Karen_Kenyon @ edf.org
10/08/97 04:55:00 PM
Record Type: Record

To: Peter R. Orszag, Gene B. Sperling
cc:
Subject: URGENT

Attachement #1

A STRUCTURE FOR "EARLY REDUCTIONS": Treatment Under International Protocol

1. As a matter of sovereign domestic policy, GHG Emissions Reductions Created Before the First Budget Period May be Awarded Emission Reduction "Credits" that Can Be Carried Forward into the First, or Subsequent, Budget Period(s).

2. Accounting for Credits Awarded in National GHG Emissions Budget: As Closely as Possible, "Early Reduction" Credits should be Accorded the Same Accounting Treatment with respect to emissions budgets established under a GHG protocol as the Transfer of GHG Emissions Reductions would be During the Budget Period.

Joint Implementation - Credits Generated via Activities in Non-Annex I Countries Without Budgets:

Awarded Credits Added to Acquiring Nation's (first period) Budget

Joint Implementation - Credits Generated via Transactions with Annex I Countries and with Non-Annex I Countries with Budgets:

Awarded Credits Added to Acquiring Nation's (first period) Budget, provided that

Transferring/Host Nation Certifies Reduction Transfer and Subtracts Transferred Reductions from Its (first period) Budget

Domestic Afforestation:

With Forest/ Sink Baseline, Awarded Credits Added to (first period) Budget

Without Forest/Sink Baseline, Awarded Credits Subtracted from (first period) Budget

Domestic Projects and "Company Caps":

In absence of sector- or economy wide GHG emissions budget or cap, Awarded Credits Subtracted from (first period) Budget

Attachment #2

EARLY REDUCTION OF GREENHOUSE GAS EMISSIONS

The early reduction of greenhouse gas emissions is critical from both an economic and environmental perspective. Economically, early reductions begin the process of reducing emissions from ?business-as-usual? growth to levels closer to GHG commitment levels established as part of the Kyoto Protocol process (see the Early Reduction Credit graph below. Note the

dates and emissions budget levels are for illustrative purposes only).

EARLY REDUCTION CREDIT
(Embedded image moved to file: PIC19504.PCX)

To the extent that early reductions are produced, they lessen the burden on the economy by creating a more gradual path for emissions reductions over time and avoiding the need for precipitous change. From the individual company perspective, early reductions offer the opportunity to phase-in investments consistent with strategic plans, to build a compliance reserve of early emissions reductions, to gain valuable experience in anticipation of the new policy environment, and to influence both public opinion and the public policy process.

Environmentally, early reductions are important because these reductions represent emissions not in the atmosphere and not contributing to global warming.

The challenge is to create incentives for individual companies to produce early reductions prior to the first budget period. The succeeding sections describe a proposal to create such incentives.

Outline of a Voluntary Early Reduction Agreement

The basic incentive proposed in this agreement is that companies that produce early reductions would receive in the first legally binding budget period allowances or emissions reduction credits from the government for those early reductions. This incentive would operate in the context of a structure of mutual government and industry commitments.

The government would commit to insuring that any Kyoto Protocol submitted for ratification to the US Senate would contain the following elements:

- ? decadal emissions budgets
- ? comprehensive inclusion of all greenhouse gases, sources, and sinks
- ? international emissions trading
- ? banking and borrowing (for compliance purposes)
- ? joint implementation for credit
- ? developing country commitments.

In addition, the Administration would commit to granting allowances for early reductions as described below. The Administration could establish the commitment to provide credit for early reductions through:

- ? moral commitment
- ? executive agency contract
- ? legislative authority

Industry would commit to:

- ? join a voluntary GHG reduction pool, and
- ? either make financial expenditures on GHG reductions or achieve a specific GHG reduction.

The GHG reduction pool would:

- ? provide the government with a legal entity responsible for monitoring, tracking and reporting upon member companies' emissions performance
- ? enforce members' GHG commitments
- ? operate a GHG reduction trading system.

THE MECHANICS OF EARLY REDUCTIONS AND ALLOWANCES

The figure above describes the relationship between commitments, performance and crediting.

The basic commitment is expressed either as:

- ? a specific level of expenditure for the purpose of producing GHG reductions, or
- ? a specific GHG reduction commitment.

In either case, for purposes of determining qualification for Early GHG Reductions Credits (EGRCs), the number of tons reduced either through expenditure commitments or through actions stemming from reduction commitments, will be evaluated against the benchmark of 1990 emission levels plus 10%.

In order to qualify for EGRCs, emissions growth above the benchmark must be offset (shown as the cross-hatched area above). Offsets can be secured from any means acceptable to the pool including but not limited to:

- ? joint implementation (with or without early international credits)
- ? carbon sequestration
- ? emissions reductions from non-carbon sources
- ? efficiency improvements
- ? vehicle retirements
- ? fuel conversions
- ? transactions with nations or entities authorized to sell sovereign allowances
- ? transactions with other pool participants or non-pool participants if their reductions meet pool criteria.

Offsets or reductions below the benchmark qualify for EGRCs (shown as the shaded area above).

EGRCs will be provided by the government in the form of a guaranteed quantity of allowances taken from the first legally binding budget (see 'First Budget' above in the diagram). This base quantity is termed the 'pre-allocation'. For example, the figure 10% or one year's equivalent emissions from the first decadal budget has been widely discussed. In addition, any joint implementation reductions that qualify for early international credit would also be added to the pre-allocation provided by the government since these would be added to the U.S. emissions budget.

The number of EGRCs to be converted into allowances would be determined in the aggregate on the basis of overall pool performance. For example, the shaded area shown in the figure above would be the number of EGRCs produced by pool participants. If this quantity is less than or equal to the pre-allocation, then these EGRCs would be directly converted into allowances.

However since the pre-allocation by the government may be limited and the number of EGRCs produced could be greater than the pre-allocation, an allocation rule for the transformation of EGRCs into allowances is required. The first step in this process is to determine the number of EGRCs. Irrespective of whether the pool participant has a monetary or tonnage reduction commitment, allocations will be based upon reductions produced relative to the benchmark, i.e.

$$\{(1990 \text{ levels} + 10\%) + \text{Offsets}\} - (\text{Cumulative Actual Emissions}) = (\text{Total EGRCs})$$

After the total number of EGRCs has been determined, this number needs to be compared to the pre-allocation plus any internationally creditable JI:

$$(\text{Total EGRCs}) - \{(\text{pre-allocation}) + (\text{Internationally Creditable JI})\}$$

If the total number of EGRCs is less than the pre-allocation (PA) and the number of internationally creditable JI reductions (ICJI), then each of the EGRCs would be converted into an allowance for the first budget period. However, since the pre-allocation plus any internationally creditable JI may be oversubscribed, either priority access rules (first in time, first in allocation) or relative proportional allocation rules need to be adopted. Priority access would reward early participants while relative proportionality would reward the largest reductions.

A relative proportion rule would operate in the following manner:

$$\{(PA + ICJI)/\text{EGRCs}\} = \text{Allowance Reward Rate}$$

The allowance reward rate would be multiplied by the EGRCs produced by each of the pool entities to yield the specific allowance allocation for each pool member. By the above formula, the total number of allowances issued would exactly equal the pre-allocation plus the number of internationally creditable JI reductions.

A priority allocation rule would function as above with the exception that this calculation would be performed iteratively according to the date of participation in the pool such that early participants would receive the greatest benefit since their EGRCs would likely be discounted least.

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MV\C;Q-O"V\ &_@\`WO\`U?_""/_PP##_`\`P_`#`,7_Q0#,\('S_"
M`-+\_P@#9 \(' @\_P#/\_VWIV\C;Q-O"V\ \_`\8`W\_`\U/_#
M`+_P@#! \('P?_""'_P@#! \('P?_""_3_P@#T \('V?_""/_
MX/\`S\_]MT=O(V\3;PMO! [/\`T_`\$`,+_P@#! \('P?_""'_P@#! \(
MP?_""_3_P@#\$ \D`PO\_""+\_Q`##\0`PO\_""+\_Q`#" \4`Q?\_"";\_Q`#"
M \('P?_""+_Q`#" \('PO\_`\$`/\_ VO\`S_]MT=O(V\3;PMO!_
MQ_&-`\_`/_`'\_P@#" \('P?\_""'\_P@#! \('P?\_""'\_P@#\$ \4`P?_"
M`+_P@#" \('P?_""'_P@#" \('P?_""+_P@#! \('P?_""+_P@#! \(
MPO_""_3_P@#% \('PO_""'_P@#! \('P?_""+_P@#! \('P?_""+_P@#_
M [G_`,\_;;=';R-O\$V\+;P? \_\;\_R`#>_P#5 \('P_`\$`,+_Q`#!
M \('P?_""_3_P@#\$ \('PO_""+_P@#! \('P?_`\$`/_Q`## \('P?_""+_
MP@#! \('PO_""_3_P@#% \8`P?\_""'\_P@#! \8`P?_""'_Q`#_
M]O_`,\_;;=';R-O\$V\+;P? \_\;\_/\_`'_+_`-[\_`-7_P@#% \('Q/_`'\_`_
MP@#! \('Q/_`'\_`_3_P@#" \('PO_""'_P@##\0`P\_`\$`,_P@#! \('PO_"
M`'\_P@#" \('Q/\_`'_`\_7\_P@#% \('P?\_""'\_P@#% \('P\_`\$`/\_`
MV?\`S\_]MT=O(V\3;PMO! QO\_`%`'_P@#>_P#5 \('PO_""'_P@#! \(
MP?_""'_P@#! \('Q/_`'\_`_3_P@#" \('PO_""'_P@#! \('PO_""'_P@#"
M \('P?_""'_P@#" \('P?_""+_P@#\$ \('Q?_""+_P@#" \`,`PO_""+_
MP@#! \('P?_""+_P@# [G_`,_;;=';R-O\$V\+;P? _\?_PP#"
M_P#?_P#5 \('P_`#`/_PP##_`\`Q?_`%`'_P@#" \('PO_""'_P@#" \0`
MP_`\$`,+_P@#" \0`PO\_""+\_P@#\$ \8`PO_`\$`/_PP##\0`PO\_""+\_Q`#_
M [K_`,\_;;=';R-O\$V\+;P? ^S\_`/_`^`_`/\_`^`\_`_
M;=';R-O\$V\+;P? _\?_Q@#,_P#& \('RO\`+\_P# \$ \8`_
M \W_`,\_;;=';R-O\$V\+;P? \_\;\_R`#* \('Q?\`PO\`R?\`\_\* \(`_
M Q/\`Q`0` \W\_`,_;;=';R-O\$V\+;P? _\;_/_`'\_+\_`'_G_`'\_`_
M`\_C\_`,`G\_`/W_S)(20#+DO R_ \4DQ@# S?\`S_]MT=O(V\3;PMO!
M QO_`%`'_P@#+_P#_P#*_X`RY(\PDD`RY+_`^`[@#\$_)^`\_P#9`_,_`

[illegible]

M`,\*V',2V',\*V',2VQ@#\_\_\_[S^S\_]MT=O(V\3;PMO!\_\_\_R/\_\$\_.#`_/_
M___,P`DT`"V',2V',*V',2V',*V',2V',*V',2V',*V',2V',*V',2V',*V'
M',2V',*V',2V',*V',2V',*V',2V',*V',2V',*V',2V',*V',2V',*V',2V'
M',*V'+;%/___O_,P#/VWIV\C;Q-O"V'___(\8'WO'___\S_''3-
M',*VP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML(
MQK;";,VP@#&ML('QK;";,*VQ0#___[S^S_]MT=O(V\3;PMO!___S/_"
M'-[_/____*_(D`"3*,6VP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&
MML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;";,*VQ0#___[S^S_]M
MT=O(V\3;PMO!___R/_&`-[\_/\_\_\_\_)\_,D`"3(+8`Q+8`PK8`Q+8`PK8`
MQ+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`
MPK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`PK;\$/____O_,P#/
M_VWIV\C;Q-O"V'___(\0'X^`___\?_Q23*,*V',*V',2V',*V',2V'
M',*V',2V',*V',2V',*V',2V',*V',2V',*V',2V',*V',2V',*V',2V',*V'
M',2V',*V',2V',*V',2V',*V',2V',*V',2V',*V',2V'+;\$/___O_,P#/
M_VWIV\C;Q-O"V'___L_P#___QO_()),@`P[;&*,VP@#&ML('QK;";,V
MP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;%;
M'/___O_,P#/VWIV\C;Q-O"V'___&_P#!_8'WO'___\3_RB3%;,V
MQ@#`ML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;"
M';,VP@#&ML('QK;";,VQ0#___[S^S_]MT=O(V\3;PMO!___QO`P?_&
M'-[_/____"_\LDP?_\$'+8`Q+;'+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`
MQ+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`
MPK8`Q+8`PK8`Q+8`PK8`Q+8`ML0`\_\_\_^\_\S\_`,_`:=;R-O\$V\+;P?___^S_
M'/___!_\HDP_\$',*V',*V'+;,"*VQ@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$
MM@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$
MM@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`
M'-[_/____O_+),/_Q0##ML('QK;";,VQ@#%ML('QK;";,VP@#&ML('QK;";
M';,VP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML('P[;\$/___O_,P#/
M_VWIV\C;Q-O"V'___&_\@`WO'\\_\_\_\LDQ?\_%',VP@#&ML('P[;&`,6V
MP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;";
M';,VP@##ML0`\_\_\_^\_\S\_`,_`:=;R-O\$V\+;P?___\?_Q@#?_P#___O_RB3'
M_`4`PK8`PK8`Q+8`PK8`PK;&`,VQ@##M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`
MM@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`
MM@#`M@#\$M@#`ML0`\_\_\_^\_\S\_`,_`:=;R-O\$V\+;P?\_\_\_C\_`/_/_`^?_+),C_
MQ0`V',2V',\*V',2V',\*V',2V',\*VQ@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$
MM@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`
MM@#\$M@#`VQ0#\_\_\_[R\_`S_]MT=O(V\3;PMO!___R?_%`,O\_`,`K\_`/_
M^/_`*),K_Q@#&ML('QK;";,VR@#&ML('QK;";,VP@#&ML('QK;";,VP@#&
MML('QK;";,VP@#&ML('QK;";,VQ@#___[R_`S_]MT=O(V\3;PMO!___
MR/_&`,K\_P@##\('RO`___V_`HDS/\_&`;VP@#&ML('QK;*`+;`,`VP@#&
MML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML8`___^_\O_
M',_`:=;R-O\$V\+;P?\_\_\_C\_`,`+`,`G\_`,`7\_`,`K\_`/_`]/_+
M),W_Q`#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`ML<`M@#\$M@#`M@#\$M@#`
MM@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$
MM@#`M@#\$M@#`VQ0#___[R_`S\_]MT=O(V\3;PMO!\_\_\_R^`P?_\$`,O\_`,`?_
M',K_P#T`.HOTP##M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$M@#`M@#\$ML8`PK8`PK8`
MQ+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`PK8`Q+8`
MPK8`Q+8`PK8`Q+8`PK8`P[;\_`^`SP#/\_VWIV\C;Q-O"V'\_\_\_)P#!\_(`
MS^`Q\_`RO`\_\_\_Q\_`LDT/_\$`,2VP@#&ML('QK;";,VP@#%ML8`P[;\$_`,2V
MP@#&ML('QK;";,VP@#&ML('QK;";,VP@#&ML('QK;";,VP@#\$ML0`___^_
M_`O\_`,`\_`:=;R-O\$V\+;P?___]G_`,`?`,`K_`/\_`[_`+)-+\_P#\_`,`T`___]
M_`O\_`,`\_`:=;R-O\$V\+;P?___\R_`#+\_P##\_P##\_P#\*\_P#\_`^[_RB34_`\
M_P#-`/\_`?+_P#/_VWIV\C;Q-O"V'___&_\@`WO'\\_\_\_L\_`LDU?_`^`
MS0#___W_R_`S\_]MT=O(V\3;PMO!\_\_\_[(`K_`HDU`___^`S0#___W_
MR_`S\_]MT=O(V\3;PMO!\_\_\_R?\_`,`'\_`-`\_`/_`Z?\_`*)-K_Q`#T\_`_`TP#\_`

M_W_R\`S\_JMT=O(V\3;PMO!\_\_\_R/\`#,\`P@#>\_P#\_`^?_RR3;\0`]/_&
M',+_Q0#!_\`P?\_#,\`PP#!_\`P?\_#,\`PP#!_\`P?\_#,\`PP#!_\`
MP?_#,\`PP#!\_\`P?_#,\`PP#!\_\`@___]\O_`,`;=;R-O\$V\+;P?_
M_\C_`,`;+`-[\_/\_YO\_\*)-W\_Q`#T_\8`P\_`,`;`,`;`,`;`,`;`-
M',`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`-
M',`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`\_Q0#\_\_\_W\_R\_\`
MS_JMT=O(V\3;PMO!___R/\`P?`\PO\`WO\`___D_\LDWO_\$`/W\_R@#!\_\`
MP?_#,\`PP#!\_\`P?_#,\`PP#!\_\`P?_#,\`PP#!\_\`P?_#,\`PP#!\_\`
M_\`P?\_#,\`Q@#___W_R_\`S\_JMT=O(V\3;PMO!\_\_\_R/\_&`-[_/_XO_+
M)_#_Q`#]\8`PO_#,\`P?\_#,\`PP#!_\`P?\_#,\`PP#!_\`P?\_#,\`PP#!_\`
M',`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`-
M',`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`\_Q0#\_\_\_W\_R\_\`S_JMT=O(V\3;PMO!___R?_\$`-[_/_X?_*
M)+_Q`#]\8`P_`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`\_PP#!\_\`P?_#,\`PP#!\_\`P?_#,\`PP#!\_\`
MP?_#,\`PP#!\_\`P?_#,\`R`#___W_R_\`S_JMT=O(V\3;PMO!___S?\
MWO\`\_\_\_+\_\<`S?_+)_/_Q`#\_`?_R@#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!
M_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!
M_P#!_P#!_`4`___]\O_`,`;=;R-O\$V\+;P?___`?\_PP#"\_\(`WO\`___+
M_P#%)`#,\`HDY?_\$`/\_Q\_&`/_Q`#!\_\`P?_#,\`PP#!\_\`P?_#,\`
MPP#!_\`P?\_#,\`PP#!_\`P?\_#,\`Q@#___W_R_\`S_JMT=O(V\3;PMO!
M___QO_`'-[\_/\_R\_\`)\$DD220`RO\_\*)`?_Q`#\_`?_Q@##_\<`P?`\P?\
MP?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?\
MP?`\P?`\P?`\P?`\P?`\_`?/_`?+\_P#/\_VW1V\C;Q-O"V\`___&_P##_\(`
MX^\`\_\_\_+\_P#%#)\_(\LDZ/\_\$`/_T/_*`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`\_PP#!\_\`P?_#,\`PP#!\_\`
MP?_#,\`PP#!\_\`P?_#,\`R`#___W_R_\`S_JMT=O(V\3;PMO!___QO\
MP_\`X?`\`\_\_\_+\_P`D221))`#\_\HDZO\_\$`/_T/_&`/\_Q`#!_P#!_P#!_P#!
M_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!_P#!
M_\4`\_\_\_]\O\_`,`;=;R-O\$V\+;P?\_\_\_\;\_R`#>_P#2_`\`_P#_`,`P?_#
M',_PP#!_\`P?\_#,\`PP#!_\`P?\_#,\`PP#!_\`8`___]\O_`,`;=;`
MR-O\$V\+;P?___\;_R`#>\_P#2\_`\`\_P#\_`,`-T`PO_\$`,`;`,`;`,`;`,`;`,`;`,`;`-
M',`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`,`;`\_Q0#\_\_\_W\_R\_\`S_JM
MT=O(V\3;PMO!___[\`TO\_`\`\_P#=`_7_Q`#!\_\`P?_#,\`PP#!\_\`
MP?_#,\`PP#!\_\`@___]\O_`,`;=;R-O\$V\+;P?___^S_`,`+_P#_`\`
MW0#%_\<`P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?`_`%
M/_`?+\_P#/\_VW1V\C;Q-O"V\`___L_P#_]`\_RB3R\_\0`___B_\H`P?_#
M',_PP#!_\`P?\_#,\`PP#!_\`8`___]\O_`,`;=;R-O\$V\+;P?___^S_`
M/_S_`\*)/3\_Q`#_`^+\_QP#"\_\0`P?`\P?`\P?`\P?`\P?`\P?`\P?`\P?\
MP?`\P?`_`?/\_`?+_P#/_VW1V\C;Q-O"V\`\_\_\_&\_\`@`WO\`___-_\LD]?_\$
M/_XO_`,`+_QP#!_\`P?\_#,\`PP#!_\`@\_\_\_]\O\_`,`;=;R-O\$V\+;`
MP?___\;_R`#>\_P#\_\S\_RB3W\_\0`___K_\H`P?`\P?`\P?`\P?`\P?`\P?\
MP?`\_`?/_`?+\_P#/\_VW1V\C;Q-O"V\`___L_`\R0#-)/P`___K_\<`PO_\$
M',_PP#!_\`P?\_`\`T`#/_VW1V\C;Q-O"V\`\_\_\_)\_\(`P?`\W\_`\`___&
M_\TD^O_\$`/\_Z\_`,`+\_QP#!\_P#!\_P#!\_P#!\_`4`\_\_\_]\O\_`,`;=;R-O\$
MV\+;P?___\C_PP#!_\(`WO\`___#\XD/_\$`/\_]/\_`*`,`;`,`;`,`;`,`;`,`;`,`;`\_R`#___W_R_\`
MS_JMT=O(V\3;PMO!___R/\`P?`\PO\`WO\`___0)/W_Q`#\_\_\_3\_QP##\_\`
MP?`\_`?/_`?+\_P#/\_VW1V\C;Q-O"V\`___(_P#!_P#"_P#>_P#_\`D\_`"
M_\0`\_\_\_T\_\<`P_`)/\_`?+_P#/_VW1V\C;Q-O"V\`\_\_\_(\_\8`WO\`^?_0
M)/_Q/_\$`/\_O\_`)/_`?+\_P#/\_VW1V\C;Q-O"V\`___)_\0`W\_`\`_]/
M)/_Q_`\$`/_O_`-/\_`^_`)\_P#/\_VW1V\C;Q-O"V\`___L_P#T_\`D\_`*
M_\0`\_\_\_^\_\`_\`Z\_\C\_`,`;=;R-O\$V\+;P?\_\_\_\C\_Q`#@_P#Q_\`D\_`-
M_\0`\_\_\_\3\_R@#\_\_\_K\_R^\`S_JMT=O(V\3;PMO!___R/_&`-[_/_SR3_
M_]#_Q`#\_\_\_Q/\_`*_`/\_Q`#___?_Q^\`S\_JMT=O(V\3;PMO!\_\_\_S/\_`"-[_
M'.S_SR3_]`+\_Q`#___Q/_`\*\_`/_Q@#___;_P_\`S_JMT=O(V\3;PMO!___
MR/_&`-[\_/\_G\_SR3\_]7\_Q`#___Q/_\$`,`G_Q@#___;_P_\`S_JMT=O(V\3;
MPMO!___R/_\$`\_#\_`,`;\_SR3\_]C\_Q`#___Q/_\$`,`G_Q@#___;_P_\`S_JM

MT=O(V3;PMO! [^X_ / _V_ \$/_ '0'R_? &/_Q@#_#_ M',_ _;=';R-O\$V+;P? _G_P#@!_P#?_P#@_]D_ =\0_ \3_Q'#2 M_\8'_ P_P#/ _VW1V\C;Q-O"V\ (\,P?_ '"-[_-[_SR3_ ^#_Q'#_ M_ Q/_\$'_+_Q@#_#_ _;=';R-O\$V+;P? _\C_ _;'+_ _-[_-O_ MSR3_ ^/_Q'#_ Q/_\$'_+_Q@##_ \8'_ G_P#/ _VW1V\C;Q-O"V\ (M_P#!_P#"_P#>_P#8_ \D_ F_\0'_ _\3_Q'#;_ \8'_ G_P#/ _VW1V\C; MQ-O"V\ (\8'WO\U?_ /)/_Z?_ \$/_ \$_\0'_V_ &/_Y_ \S_]M MT=O(V3;PMO! _R?_ \$'_ _-+_T'3_ ^O_Q'#_ Q/_\$'_-O_Q@##_ \8'_ M_ >_P#/ _VW1V\C;Q-O"V\ _L_P#0_ \D_ N_\0'_ _\3_Q'#D_ \8'_ M_ >_P#/ _VW1V\C;Q-O"V\ _-P#2_P#+_P#)_ \<'S'3Q_P#^_\0'_ M_\3_Q'#D_ \8'_S_ _!_P#,_P#/ _VW1V\C;Q-O"V\ _-P#1_ \('R_ \ MR? \))+""/^2P@#]DL0'_ \3_Q'#DDL8'PY+&_.2P@#_D@'2R_ \S_]M MT=O(V3;PMO! _S? \T^P? \R_ \R? \29('20#]D@!)/V2Q'#_ MQ/_\$_.V2Q@#%D@!)/Z2'\$D'R_ \S_]MT=O(V3;PMO! _S? \TO\R_ + M'"0'PDD'_9('PDD'_)+\$/ _\$ _\P#_. _;=';R-O\$V+;P? _\;_ MR'#2_P#+_P#)_P!_ _-)/N2'_-)/R2Q'#_ Q/_ ^\PP#*_P#/ _VW1 MV\C;Q-O"V\ _&_ \@TO\R_ \R?_ '"_1)\O_ _1)\K_Q0#_ Q/_ M_ \^PP#*_P#/ _VW1V\C;Q-O"V\ _@_P#+_P#)_ \('Q4D'^?\Q4D'^O_% M/_ _\$ _\P#" '\$D'R? \S_]MT=O(V3;PMO! _[^R?_ ('/G_R_#X M_\8'_ _\3_Q@#T_ \@P?_ \$/_3_QP#)_P#/ _VW1V\C;Q-O"V\ _L_P#_ M_ SO_ \$/_ _\$ _\8'_ ?_ &/_/ _Q'#+_P#/ _VW1V\C;Q-O"V\ _L_P#_ M_ SO_ \$/_ _\$ _\8'_ ?_ &/_/ _Q'#+_P#/ _VW1V\C;Q-O"V\ _)_P#! M_ \('W_ _ _\Q'#_ Q/_&/_W_Q@#S_ \0'_R_ \S_]MT=O(V3;PMO! M_ R/_ '"_ ' _PP#>_P#_ SO_ \$/_ _\$ _\8'_ ?_ &/_/ _Q'#+_P#/ _VW1 MV\C;Q-O"V\ (P#!_ \('P? \WO\ _\Q'#_ Q/_&/_ _)_ \$ M_ O_ _;=';R-O\$V+;P? _\C_ _;_P@#!_P#>_P#_ SO_ \$/_ _\$ M_\8'_ _0_\0'_X_ \$,_O_ _;=';R-O\$V+;P? _\C_ PP#!_ \('WO\ M_ \Q'#_ Q/_&/_T/_ _'#_Q'#+_P#/ _VW1V\C;Q-O"V\ _)_ \(' MP? \W_ _ _\Q'#_ Q/_&/_T/_ _'#_Q'#+_P#/ _VW1V\C;Q-O" MV\ _L_P#_ SO_ \$/_ _\$ _\8'_ _0_ \<'PO_ \$_-K_Q'#+_P#/ _VW1 MV\C;Q-O"V\ _)_ \4'WO\ _\Q'#_ Q/_&/_T/_ _;+_QP#7 M_\0'_R_ \S_]MT=O(V3;PMO! _R/_&_-[_/_ _ _\0'_ _\3_Q@#_ M_]G_QP#7_\0'_R_ \S_]MT=O(V3;PMO! _R^X_ _ _\Q'#_ MQ/_&/_V?_ _/_Q'#0_\0'_R_ \S_]MT=O(V3;PMO! _R^X_ _ M_ \Q'#_ Q/_&/_V?_ _/_Q@#_ \0'_R_ \S_]MT=O(V3;PMO! MR/_&_-[_/_ _ _\0'_ _\3_Q@#_ ^/_Q@#_ \0'_R_ \S_]MT=O(V3; MPMO! _R/_&_-[_/_ _ _\0'_ _\3_Q@#_ ^/_Q@##_\0'_Q_ \$,_O_ M_ _;=';R-O\$V+;P? _^S_/_ _ _\0'_ _\3_Q@#_ ^/_Q@##_\8'_ MQ?_ \$,_O_ _;=';R-O\$V+;P? _\G_Q'#?_P#_ SO_ \$/_ _\$ _\8'_ M_ L_\8'_Q?_ \$,_O_ _;=';R-O\$V+;P? _\C_Q@#>_P#_ SO_ \$/_ _ M_ \$ _\8'_ _L_\8'_P_ &/_O_ _;=';R-O\$V+;P? _\C_ _;_3_-[_/_ M_ _\0'_ _\3_Q@#_ ^S_Q@##_\8'_R_ \S_]MT=O(V3;PMO! _R^ M_Q^ \WO\ _\Q'#_ Q/_&/_ _]?_&/_O_ _;=';R-O\$V+;P? M_ \C_Q@#>_ \P#3/_ _\$ _\P#_. _;=';R-O\$V+;P? _\G_Q'#? M_P#_ SO_ \$_-#_R_#2_ \S_ ('_#_PP#8_P#2_\8'_ _U_\8'_R_ \S_]M MT=O(V3;PMO! _[^ _ _\Q'#0_ \@TO_#_ _R0#/_ \UO_#_-+_ M_Q@#_ ?_Q'#+_P#/ _VW1V\C;Q-O"V\ _&_P#!_ \8'WO\ _\Q'#0 M_ \R/_ %_3_PP#!_ \4'P?_#_/_PP#%_ \P_#_+_PP#!_ \P_ '"_ ' MPP#\$_ \('P?_#_3_PP#\$_ \8'T/_&/_ _)_ \$,_O_ _;=';R-O\$V+;P? M_ \;_ ' _Q@#>_P#_ SO_ \$_-#_PP#_ \<'P_ %'_ 'PP#"_ \('P_ '"_ ; MPP##_ \PO_#'_ 'PP#"_ \<'P_ _/_Q0##_\8'T/_&/_ _)_ \$,_O_ _; M_ ;=';R-O\$V+;P? _^S_/_ _ _\0'_T/_ _/_PP#!_ \P_#_/_PP#" M_ \P?_#_ ;_R_##_ \P?_#_+_PP#!_ \P_#'_ 'PP#"_ \P?_#_/_ MPP#2_\8'_ _W_\0'_R_ \S_]MT=O(V3;PMO! _R? \P?_ '"_ -_/_ _

M_\0'T/_';;_Q'##_\`P\_#'+\_PP#!\_\`QO_(_/_PP#!_\`PO_#'_
MPP##_\`P?\_#'+\_PP#!\_\`P_#'+_Q@#_?_Q'#+_P#/_VWIV\C;Q-O"
MV_(\`P?\_#'-[\_\`_._\0'T/_'?_PP#!_\`P_#'_/_PP##
M_\`P?\_""?\_PP##\_\`PO_#'_PP#!_\`P?\_#'\_/\_PP#!\_\`PO_"/_
MPP#2_\`8'\_W\_\0'R\_\`S_JMT=O(V\3;PMO!_R\`P?\_""'\_-[\_\`_/
M_._\0'T/_'?_PP#!_\`P\_#'\_/\_PP##\_\`4'Q_#'_/_PP#!_\`P?_#'
M'+_PP#!_\`P\_#'\_PP#!\_\`Q_#'-+_Q@#_?_Q'#+_P#/_VWIV\C;
MQ-O"V_(P#!_\`P?\_\`WO_\`Q'#0\_\`@_PO_"/_PP##_\`
MP_%'?_R0#"_\`<PO\_"/\_QP##\_\`8'P_%'-#_Q@#._\`<PO_#'-+_/_
MRO_\$_,O_`,`;=';R-O\$V\+;P?_C_PP#!_\`WO\\_\`Q'#0_\`@_
MP_&'/_PP##_\`Q/\_#',C\_R#\$\_\`P?_#'_/_P@#!_\`Q/_#',_PP#\$
M_\0'Q?_\$_-#_Q@#._\`<U?\_#/\_RO\_\$\_,O\_`,`;=';R-O\$V\+;P?_G_
MP@#!_P#?_P#_SO_\$/_PP#J_\`X?\_&'[\_PP##&\_\`P?_#',_P@#!
M_\`4'PO\_&'/\_R/\_\$\_,O\_`,`;=';R-O\$V\+;P?_^S_/_\0'[O_%
M'.?_QP#A_\`8'SO\_#',;PP#!\_\`4'P?_#',_Q@#_C_Q'#+_P#/_VWIV\C;
MQ-O"V_(P#!_\`W\_\`Q'#N_\`4'Z/\_%'+\_Q@#.\_\`8'P_#'
M',_PP##_\`QO\_#/\_RO\_\$\_,O\_`,`;=';R-O\$V\+;P?\_C\_P@#!\_\`
MWO_\`Q'#\_Q/\_&'[\_Q@##\_\`P?_#'_/_Q@##_\`*_\0'
MR_\`S\_JMT=O(V\3;PMO!\_R\`P?_""'_-[_\`_._\0'_\3_
MQ@#._\`QO\_#',\_PP##\_\`4'PO_#/_RO_\$_,O_`,`;=';R-O\$V\+;P?_
M_C_`,`P@#!_P#>_P#_SO_\$/_\$_\`8'SO\_#',;PP#!\_\`Q_#'
M'+_PP#_\`K\_Q'#+\_P#/\_VWIV\C;Q-O"V\\_(\`P?_""'-[_\`_/_.
M_\0'_\3_Q@#._\`QO\_#',\_PP##\_\`<PO_%/_R/_\$_,O_`,`;=';
MR-O\$V\+;P?_G_P@#!_P#?_P#_SO_\$/_\$_\`8'SO_#',;PP#!
M_\`Q/_%',3_Q'#_C_Q'#+_P#/_VWIV\C;Q-O"V_(L_P#_SO_\$_
M/_\$_\`8'\_W\_\0'R\_\`S_JMT=O(V\3;PMO!_QO\`P?\_&'-[\_\`_/
M_._\0'_\3_Q@#_?_Q'#+_P#/_VWIV\C;Q-O"V_(P#!_\`8'
MRO_"";_P@#*_P#_SO_\$/_\$_\`8'\_W\_\0'R\_\`S_JMT=O(V\3;
MPMO!_U_\`PO\`Q\`PO\`R?_\`Q'#_Q/_&'/_\$_,O_
M_,;=';R-O\$V\+;P?_G_Q0#)_P#!_P#\$_P#)_P#_SO_\$/_
M_\$_\`8'\_W\_\0'R\_\`S_JMT=O(V\3;PMO!_R/_&',G_+',_7_PP#)
M_\`P#3/\_\$\_\`P#_`,`;=';R-O\$V\+;P?_C_`,`+`,`?_
M',G_/_\0'_\3_Q@#._\`D'SO\_#'-3\_PP#W\_\0'R\_\`S_JMT=O(
MV\3;PMO!_R\`SO\`PO\`Q\`PO\`R?\_\`Q'#_Q/_&'[_
MPP##_\`P?\_#',\_PP##\_\`P?_#'_/_P@#!_\`Q/\_#'\_/\_Q@#U\_\0'R\_\`
MS_JMT=O(V\3;PMO!_R/_&',K_P@##_P#!_\`RO\\_\`Q'#_
MQ/_&'[_PP##_\`P?\_#',\_PP#!\_\`<PO_"/_Q0#"_\`8']?\_\$\_,O\_`,`
M;=';R-O\$V\+;P?_C_Q@#>_P#_SO_\$/_\$_\`8'SO_(_+_PP#!
M_\`PO\_#',\_PP#!\_\`P?_#',+_PP#!_\`PO_#'/?_Q'#+_P#/_VWIV\C;
MQ-O"V_(P#C_P#_SO_\$/_\$_\`8'SO\_(\_+\_PP#!\_\`PO_#'
M',_PP#!_\`P?\_#',+\_PP#!\_\`PO_#'/?_Q'#+_P#/_VWIV\C;Q-O"V_
M_(P#C_P#_SO_\$/_\$_\`8'SO\_#'\_/\_PP#!\_\`P?_#',+_PP#!
M_\`PO\_#',\_PP#!\_\`<PO_#'/?_Q'#+_P#/_VWIV\C;Q-O"V_(\`8'
MWO_\`Q'#\_Q/\_&'[\_PP##\_\`P?_#',_PP#!_\`P?_#',+_
MPP#!_\`PO\_#',;PP#W\_\0'R\_\`S_JMT=O(V\3;PMO!_R/_&'-[_\`_/
M_._\0'_\3_Q@#._\`D'P?\_#',+\_QP#"\_\`<P_&',+_Q0#U_\0'R_\`
MS_JMT=O(V\3;PMO!_[\`\_\`Q'#_Q/_&'[_R##_\`P?_#'
M',_P@#!_\`P\_""',\_PP#\$\_\`0'Q/_\$/7_Q'#+_P#/_VWIV\C;Q-O"V_
M_&_P#!_P##_P#>_P#_SO_\$/_\$_\`8'[O\_#/\_QO\_\$\_,O\_`,`
M;=';R-O\$V\+;P?_`,`+`,`/_-[_\`\_.\_\0'\_\3\_Q@#J\_\`<
M_&_\0'R_\`S\_JMT=O(V\3;PMO!\_QO\`PO\`P\_\`WO_\`Q'#_
M_&_Q/_&'_O_Q0#_?_Q'#+_P#/_VWIV\C;Q-O"V_(P@_`WO_
M_\`Q'#\_Q/\_&'/\_\$\_,O\_`,`;=';R-O\$V\+;P?\_`,`R_#>_P#_
M_&_SO_\$/_\$_\`8'\_W\_\0'R\_\`S_JMT=O(V\3;PMO!_[\`_

[illegible]

M'/_;+,_;+,_;+,_;-;=;'R-O\$V\+;P? /_';+ P@#"_ \(' MPO "'/3'_;+ P@#" \(' PO #'/# Q`#! \(' PO "''+ P@#R '\0`P? "''+ MP@#" _\,\V_\$,' P@## P#" \('\O_\$',' P@## P#" _\,\V_\$',' P@#! M '\0`P? "'-?-?'_=;'R-O\$V\+;P? X?]MT=O(V\3; MPMO! A_VWIV\C;Q-O"VV' M ^'_;=;'R-O\$V\+;P? X?]MT=O(V\3;PMO! M A_VWIV\C;Q-O"VV' M ^'_;=;'R-O\$V\+;P? X?]MT=O(V\3;PMO! M A_VWIV\C;Q-O"VV' M _'^_ '=;'R-O\$V\+;P? X?]MT=O(V\3;PMO! M _'=;'R-O\$V\+;P? X?]MT=O(V\3;PMO! M A_VWIV\C;Q-O"VV' M _'^_ '=;' MR-O\$V\+;P? X?]MT=O(V\3;PMO! M A_VWIV\C;Q-O"VV' M _'^_ '=;'R-O\$ MV\+;P? X?]MT=O(V\3;PMO! M A_VWIV\C;Q-O"VV' M _'^_ '=;'R-O\$V\+; MP? X?]MT=O(V\3;PMO! M A_VWIV\C;Q-O"VV' M _'^_ '=;'R-O\$V\+;P? M X?]MT=O(V\3;PMO! A M_VWIV\C;Q-O"VV' M _'^_ '=;'R-O\$V\+;P? M X?]MT=O(V\3;PMO! A_VWI MV\C;Q-O"VV' M _'^_ '=;'R-O\$V\+;P? M X?]MT=O(V\3;PMO! A_VWIV\C; MQ-O"VV' M _'^_ '=;'R-O\$V\+;P? M X?]MT=O(V\3;PMO! A_VWIV\C;Q-O" MV' M _'^_ '=;'R-O\$V\+;P? M X?]MT=O(V\3;PMO! A_VWIV\C;Q-O"VV' M _'^_ '=;'R-O\$V\+;P? MX?]MT=O(V\3;PMO! A_VWIV\C;Q-O"VV' M _'^_ '=;'R-O\$V\+;P? X?]M MT=O(V\3;PMO!]O_VW_;?]M_VWT;=)MT=O(V\3;PMO! M_]O_]O_V_;]OTV]K;S=O&VV;P=O!]O_]O_V_;]OTV]K; MS=O&VV;P=O!]O_]O_V_;]OTV]K;S=O&VV;P=O! M_]O_]O_V_;]OTV]K;S=O&VV;P=O!]O_]O_V_;]OTV]K; MS=O&VV;P=O!]O_]O_V_;]OTV]K;S=O&VV;P=O! M_]O_]O_V_;]OTV]K;S=O&VV;P=O!]O_]O_V_;]OTV]K; MS=O&VV;P=O!]O_]O_V_;]OTV]K;S=O&VV;P=O! M_]O_]O_V_;]OTV]K;S=O&VV;P=O!]O_]O_V_;]OTV]K; MS=O&VV;P=O!]O_]O_V_;]OTV]K;S=O&VV;P=O! M_]O_]O_V_;]OTV]K;S=O&VV;P=O!]O_]O_V_;]OTV]K; MS=O&VV;P=O!]O_]O_V_;]OTV]K;S=O&VV;P=O! M_]O_]O_V_;]OTV]K;S=O&VV;P=O!]O_]O_V_;]OTV]K; MS=O&VV;P=O!]O_]O_V_;]OTV]K;S=O&VV;P=O! M_]O_]O_V_;]OTV]K;S=O&VV;P=O! B_] MR/_\$_+ P?;',''%'Q<7*BHJE'24"PL+(2\$A-#0T!,3\$!IT-*BHJ/S_!,3\$ M'IT--#0T2TM+!,3\$!IT-/S_!,3\$!,3\$-#0T2TM+!,3\$!,3\$/S_!,3\$!,3\$ M!,3\$!,3\$!,3\$!,3\$!,3\$"PL+(2\$A-#0TE'24'IT-*BHJ/S_E'24'IT--#0T M2TM+!,3\$!IT-/S_ 5%!I4!,3\$-#0T2TM+8&!@!,3\$/S_ 5%!I4!,3\$!,3\$2TM+ M8&!@!,3\$!,3\$8&!@!,3\$!,3\$!,3\$!IT-*BHJE'24E'24'IT--#0T2TM+E'24

M'IT-/S_5%14E`24-#0T2TM+8&!@!,3\$/S_5%14:VMK!,3\$2TM+8&!@=G9V
M!,3\$5%14:VMK@("!,3\$:FIJ@("!,3\$!,3\$IT--#0TE`24E`24'IT-/S_5%14
ME`24E`24-#0T2TM+8&!@E`24/S_5%14:VMKE9652TM+8&!@=G9VH*"@5%14
M:VMK@("JJJ8&!@=G9VBXN+!,3\$=G9VBHJ*H*"@!,3\$IT-E`24E`24E`24
M-#0T2TM+E`24E`24/S_5%14:VMKE`242TM+8&!@=G9VH\*"@5%14:VMK@("MJJJ8&!@=G9VBXN+M;6U:VMK@("E965P,#`@("E965JJJU=75-#0TE`24
ME`24E`24/S_E`24E`24E`242TM+8&!@E`24E`245%14:VMK@("JJJ8&!@
M=G9VBXN+M;6U:VMK@("E965P,#`=G9VBXN+H*"@R\O+BHJ*H*"@M;6UW]_?
ME`24E`24E`24E`242TM+E`24E`24E`245%14:VMKE`24E`248&!@=G9VBXN+
MM;6U:VMK@("E965P,#`=G9VBXN+H*"@R\O+@("E965JZNKU=75E965JJJJ
MP,#`ZNKJE`24E`24E`24E`24E`24E`24E`24:FIJE`24E`24O[^_=G9V
MBHJ*H*"@R\O+@("E965JJJU=75BHJ*H*"@M;6UW]_?E965JJJP,#`ZNKJ
,JJJO[^_U=75____
,

end

===== END ATTACHMENT 1 =====

===== ATTACHMENT 2 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

RFC-822-headers:

Received: from conversion.pmdf.eop.gov by PMDF.EOP.GOV (PMDF V5.0-4 #6879)

id <01IOKKVI4TB400G1I2@PMDF.EOP.GOV>; Wed, 08 Oct 1997 16:56:15 -0400 (EDT)

Received: from storm.eop.gov (storm.eop.gov)

by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01IOKKVDZUNK00L0IV@PMDF.EOP.GOV>; Wed,

08 Oct 1997 16:56:08 -0400 (EDT)

Received: from edf.org ([192.111.219.1]) by STORM.EOP.GOV (PMDF V5.1-7 #6879)

with ESMTP id <01IOKKVIU6EW007F1E@STORM.EOP.GOV>; Wed,

08 Oct 1997 16:55:57 -0400 (EDT)

Received: from edfny.edf.org ([172.22.3.5]) by gateway.edf.org with SMTP id

<8547>; Wed, 08 Oct 1997 17:00:11 -0400

Received: from notesgw.edf.org by edfny.edf.org id aa10533; Wed,

08 Oct 1997 16:43 -0400 (EDT)

Received: by notesgw.edf.org (Lotus SMTP MTA v1.05 (274.9 11-27-1996))

id 8525652A.0072F5B1 ; Wed, 08 Oct 1997 16:55:40 -0400

X-Lotus-FromDomain: EDF

===== END ATTACHMENT 2 =====

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Lawrence J. Haas (CN=Lawrence J. Haas/OU=OMB/O=EOP [OMB])

CREATION DATE/TIME:14-OCT-1997 09:27:52.00

SUBJECT: IMPORTANT -- Heads up on line-item veto

TO: Karen E. Skelton (CN=Karen E. Skelton/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Craig T. Smith (CN=Craig T. Smith/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Bruce N. Reed (CN=Bruce N. Reed/OU=OPD/O=EOP@EOP [OPD])
READ:UNKNOWN

TO: Thurgood Marshall Jr (CN=Thurgood Marshall Jr/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: FOLEY_M@A1@CD@LNGTWY (FOLEY_M@A1@CD@LNGTWY [UNKNOWN]) (WHO)
READ:UNKNOWN

TO: Doris O. Matsui (CN=Doris O. Matsui/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Maria Echaveste (CN=Maria Echaveste/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Emily Bromberg (CN=Emily Bromberg/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Mickey Ibarra (CN=Mickey Ibarra/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Ann F. Lewis (CN=Ann F. Lewis/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP@EOP [CEA])
READ:UNKNOWN

TO: Ron Klain (CN=Ron Klain/O=OVP@OVP [UNKNOWN])
READ:UNKNOWN

TO: Barry J. Toiv (CN=Barry J. Toiv/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Gene B. Sperling (CN=Gene B. Sperling/OU=OPD/O=EOP@EOP [OPD])
READ:UNKNOWN

TO: Rahm I. Emanuel (CN=Rahm I. Emanuel/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Sylvia M. Mathews (CN=Sylvia M. Mathews/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Minyon Moore (CN=Minyon Moore/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Elena Kagan (CN=Elena Kagan/OU=OPD/O=EOP@EOP [OPD])
READ:UNKNOWN

TO: Stephen B. Silverman (CN=Stephen B. Silverman/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Barbara Chow (CN=Barbara Chow/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: John L. Hilley (CN=John L. Hilley/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Robert B. Johnson (CN=Robert B. Johnson/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Lynn G. Cutler (CN=Lynn G. Cutler/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Fred DuVal (CN=Fred DuVal/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Sidney Blumenthal (CN=Sidney Blumenthal/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Michael Waldman (CN=Michael Waldman/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP@EOP [CEA])
READ:UNKNOWN

TO: Joseph P. Lockhart (CN=Joseph P. Lockhart/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Michael D. McCurry (CN=Michael D. McCurry/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Paul E. Begala (CN=Paul E. Begala/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TO: Robert S. Bell (CN=Robert S. Bell/OU=OMB/O=EOP@EOP [OMB])
READ:UNKNOWN

TO: John Podesta (CN=John Podesta/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Marjorie Tarmey (CN=Marjorie Tarmey/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: David S. Beaubaire (CN=David S. Beaubaire/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Kris M Balderston (CN=Kris M Balderston/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Elisa Millsap (CN=Elisa Millsap/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Kevin S. Moran (CN=Kevin S. Moran/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Jordan Tamagni (CN=Jordan Tamagni/OU=WHO/O=EOP@EOP [UNKNOWN])
READ:UNKNOWN

CC: Elizabeth R. Newman (CN=Elizabeth R. Newman/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Russell W. Horwitz (CN=Russell W. Horwitz/OU=OPD/O=EOP@EOP [OPD])
READ:UNKNOWN

CC: June G. Turner (CN=June G. Turner/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Carole A. Parmelee (CN=Carole A. Parmelee/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Angelique Pirozzi (CN=Angelique Pirozzi/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Anne E. McGuire (CN=Anne E. McGuire/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Stacey L. Rubin (CN=Stacey L. Rubin/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Suzanne Dale (CN=Suzanne Dale/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Laura K. Capps (CN=Laura K. Capps/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Debbie B Bengtson (CN=Debbie B Bengtson/O=OVP@OVP [UNKNOWN])
READ:UNKNOWN

CC: Lori L. Anderson (CN=Lori L. Anderson/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Michelle Crisci (CN=Michelle Crisci/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Sara M. Latham (CN=Sara M. Latham/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

CC: Jason S. Goldberg (CN=Jason S. Goldberg/OU=WHO/O=EOP@EOP [WHO])
READ:UNKNOWN

TEXT:

Apologies. In case you don't already know, the meeting has been moved to
9:30 a.m.

----- Forwarded by Lawrence J. Haas/OMB/EOP on 10/14/97
09:18 AM -----

Lawrence J. Haas
10/13/97 06:03:08 PM
Record Type: Record

To: See the distribution list at the bottom of this message
cc: See the distribution list at the bottom of this message
Subject: IMPORTANT -- Heads up on line-item veto

Although this is NOT yet public information, the White House plans to
announce on Tuesday, October 14, that the President has used his line-item
veto authority on the Defense appropriations bill.

To help you explain the President's decision to your constituencies, OMB's
Jack Lew and Gordon Adams will hold a briefing on Tuesday morning, 9 a.m.,
in the Roosevelt Room, to outline the particulars.

We hope you find the briefing useful. We are trying to respond to the
concerns that many of you raised about having a sufficient heads-up and
understanding beforehand, so you can better do your own thing.

Please let me know whether you think we've left anyone off this list.

Message Sent

To:

John Podesta/WHO/EOP@EOP
Sylvia M. Mathews/WHO/EOP@EOP
Robert S. Bell/OMB/EOP@EOP
Rahm I. Emanuel/WHO/EOP@EOP
Paul E. Begala/WHO/EOP@EOP
Gene B. Sperling/OPD/EOP@EOP
Michael D. McCurry/WHO/EOP@EOP
Barry J. Toiv/WHO/EOP@EOP
Joseph P. Lockhart/WHO/EOP@EOP
Ron Klain/OVP@OVP
Janet L. Yellen/CEA/EOP@EOP
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Lynn G. Cutler/WHO/EOP@EOP
Maria Echaveste/WHO/EOP@EOP
Robert B. Johnson/WHO/EOP@EOP
Doris O. Matsui/WHO/EOP@EOP
John L. Hilley/WHO/EOP@EOP
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Thurgood Marshall Jr/WHO/EOP@EOP
Stephen B. Silverman/WHO/EOP@EOP
Bruce N. Reed/OPD/EOP@EOP
Elena Kagan/OPD/EOP@EOP
Craig T. Smith/WHO/EOP@EOP
Minyon Moore/WHO/EOP@EOP
Karen E. Skelton/WHO/EOP@EOP

Message Copied

To:

Jason S. Goldberg/WHO/EOP@EOP
Carole A. Parmelee/WHO/EOP@EOP
Sara M. Latham/WHO/EOP@EOP
June G. Turner/WHO/EOP@EOP
Michelle Crisci/WHO/EOP@EOP
Russell W. Horwitz/OPD/EOP@EOP
Lori L. Anderson/WHO/EOP@EOP
Elizabeth R. Newman/WHO/EOP@EOP
Debbie B Bengtson/OVP@OVP
Jordan Tamagni/WHO/EOP@EOP
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Kevin S. Moran/WHO/EOP@EOP
Suzanne Dale/WHO/EOP@EOP
Elisa Millsap/WHO/EOP@EOP
Stacey L. Rubin/WHO/EOP@EOP
Kris M Balderston/WHO/EOP@EOP
Anne E. McGuire/WHO/EOP@EOP
David S. Beaubaire/WHO/EOP@EOP
Angelique Pirozzi/WHO/EOP@EOP
Marjorie Tarmey/WHO/EOP@EOP

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:15-OCT-1997 19:40:16.00

SUBJECT: non-price triggers

TO: ORSZAG_P (ORSZAG_P @ A1 @ CD @ LNGTWY [UNKNOWN]) (OPD)
READ:UNKNOWN

TO: david.wilcox (david.wilcox @ treas.sprint.com @ inet [UNKNOWN])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: jonathan.gruber (jonathan.gruber @ treas.sprint.com @ inet [UNKNOWN])
READ:UNKNOWN

CC: Adele C. Morris (CN=Adele C. Morris/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

CC: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

CC: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:

Revised.===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D83]MAIL41221778C.216 to ASCII,
The following is a HEX DUMP:

ADVANTAGES / DISADVANTAGES OF VARIOUS POSSIBLE ECONOMIC TRIGGERS

Desirable characteristics of a trigger:

- related to cost of limiting emissions
- built-in stabilizer for macro-economy
- simplicity/conducive to public salesmanship

Yet to be discussed:

- (i) Would this go in the treaty?
- (ii) What is it that would be "triggered on"? If the response is to be the sale of additional emission permits, what would be the quantity and price?

First-best trigger:

- **Price of Carbon Permit**

Advantages:

- (1) Specifically addresses the possibility that emissions reductions would result in high costs, and thus insures against uncertainty in an economically desirable way;
- (2) Once the price level of the trigger is set, then the answer to item (ii) above is clear.

Disadvantage:

The price of carbon emission permits may not be a widely understood concept.

(The possibilities that follow are economic triggers *other* than the price of carbon. Ranking is preliminary; principals may not agree.)

Second-best trigger:

- **Permit price*Quantity-of-permits/GDP**

Advantage: The formula contains the carbon price, and thereby responds to the onerousness of emission limitations per se.

Disadvantage: it is more complicated than some of the other possibilities, and does not allow the President to say "I promise that if X [an easily-understood bad thing] happens, the constraint will be loosened."

Third-best trigger

- **growth below 2%**

Advantages: (1) Acts as an automatic stabilizer (as do the others).
(2) Encompasses both the possibility of slowdown in long-term growth and the possibility of cyclical downturns. Both are relevant: (i) slow growth of either sort could be the result of onerous emissions restrictions, (ii) slow growth of either sort, even if the result of standard macroeconomic factors, might still lead one to choose less aggressive emissions reductions (assuming environmental benefits are a “normal” good).

Disadvantages: (1) a measure of GDP will not fully reflect the economic costs of the policy because declines in consumption will be masked by some increases in investment, (2) the trigger does not address situations where climate policy negatively impacts high economic growth years (e.g., imagine that under climate policy, GDP grows at 2.2%, but under the counterfactual, GDP would have grown at 3%), (3) the shadow price of the quantitative emissions constraint is lower if growth falls, not higher.

Fourth-best triggers:

- **recession**

Advantage: Very easily explained and understood.

Disadvantages: (1) Doesn't get at slow long-term growth. (2) Unlikely to be triggered often.
(3) In the year following a recession, output gap is usually still high.

- **output gap above 1%**

Advantage: May address short-term cyclical conditions better than a recession trigger.

Disadvantages: (1) Doesn't get at long-term growth. (2) Not explainable to public.
(3) Partly subjective even within economists' paradigm.

- **unemployment above 7%**

Advantage: easily explained and understood

Disadvantages: (1) Unrelated to long-term growth. (2) An imperfect measure even of short-term cyclical conditions: the natural rate of unemployment moves around.
(3) Probably bears the least connection to emissions of any of the measures.

- **a committee (Sec.Treas, Chair Fed. Res., etc.) judges "economic distress"**

Disadvantage: very subjective/political/ad hoc.

- **some attempt to judge whether economic slowdown is attributable to climate change policy**

Disadvantage: even more subjective/political/ad hoc.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:15-OCT-1997 15:36:36.00

SUBJECT: updated version of safety valve memo

TO: Peter R. Orszag (CN=Peter R. Orszag/OU=OPD/O=EOP @ EOP [OPD])
READ:UNKNOWN

TO: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: jonathan.gruber (jonathan.gruber @ treas.sprint.com @ inet [UNKNOWN])
READ:UNKNOWN

TO: Adele C. Morris (CN=Adele C. Morris/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:

The attached memo updates an earlier version by including recent modeling results that assessed the effects of a safety valve that start at \$10/ton in 2005 and increase to \$50/ton in 2015 (or 2020, depending on scenario). The bottom line remains unchanged -- low safety valve prices (\$30/ton or \$50/ton) do not get us anywhere near our target of 1990 by 2015 (or 2020). Further, the safety valve must increase in time to actually eliminate emissions growth.

Joe

===== ATTACHMENT 1 =====
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D82]MAIL40108578D.216 to ASCII,
The following is a HEX DUMP:

MEMORANDUM

DATE: October 15, 1997

RE: An assessment of the economic effects and emissions reductions under 1990 in 2015 and 2020, with and without a safety valve

An analysis of a proposal to stabilize emissions at the 1990 level in either 2015 or 2020 with a low price safety valve indicates that the price schedule under consideration is incompatible with these targets and timetables. According to SGM, employing safety valve prices between \$10 and \$30 results in minor economic effects (measured in terms of lost GDP relative to business as usual). However, these permit price ceilings also result in carbon emissions reductions that are roughly a quarter of what is necessary to achieve the specified targets and timetables. Even a safety valve price of \$50/ton gets less than half of the necessary reductions to meet either goal. Further, the safety valve price needs to increase with time to maintain percentage cuts relative to the business as usual. A flat safety valve price for the time beyond the target year merely delays increases in emissions relative to business as usual -- it does not eliminate emissions growth.

Proposal

Target and Timetable	Domestic Implementation	Safety Valve (ramp up between start and target years)
1990 by 2015 <i>or</i> 1990 by 2020	tradeable carbon permit system starting in 2005	Prices -- 2005: \$10/ton 2015 <i>or</i> 2020: \$30/ton <i>or</i> \$50/ton

Assessment

To assess the effects of these targets and timetables on the economy and on carbon emissions, we had the following scenarios modeled with SGM.

Scenario	T&T	Domestic Implementation	Safety Valve
2015, no SV	1990 by 2015	2005: permit system	none
2015, SV(30)	1990 by 2015	2005: permit system	2005: \$10; 2015: \$30; >2015: \$30
2015, SV(>30)	1990 by 2015	2005: permit system	2005: \$10; 2015: \$30; >2015: ↑\$2/year
2015, SV(50)	1990 by 2015	2005: permit system	2005: \$10; 2015: \$50; >2015: \$50
2015, SV(>50)	1990 by 2015	2005: permit system	2005: \$10; 2015: \$50; >2015: ↑\$4/year
2020, no SV	1990 by 2020	2005: permit system	none
2020, SV(30)	1990 by 2020	2005: permit system	2005: \$10; 2020: \$30; >2020: \$30
2020, SV(>30)	1990 by 2020	2005: permit system	2005: \$10; 2020: \$30; >2020: ↑\$1.3/year
2020, SV(50)	1990 by 2020	2005: permit system	2005: \$10; 2020: \$50; >2020: \$50
2020, SV(>50)	1990 by 2020	2005: permit system	2005: \$10; 2020: \$50; >2020: ↑\$2.6/year

Results

The following chart indicates that safety valve prices set at low levels (e.g., \$10-\$50) result in carbon emissions reductions of much smaller magnitudes than would be expected under the same targets and timetables without safety valves. The safety valve scenarios do result in much smaller losses in GDP, but the trade-off is clear: substantially fewer emissions reductions are the cost of less economic pain.

Scenarios	Emissions ¹			Permit Price			GDP Loss ²		
	2010	2015	2020	2010	2015	2020	2010	2015	2020
2015, no SV	1416 (-18%)	1350 (-25%)	1350 (-28%)	\$83	\$145	\$172	\$16 billion	\$29 billion	\$34 billion
2015, SV(30)	1639 (-5%)	1687 (-7%)	1756 (-6%)	\$20	\$31	\$31	\$3 billion	\$3 billion	\$2 billion
2015, SV(>30)	1639 (-5%)	1687 (-7%)	1717 (-8%)	\$20	\$31	\$40	\$3 billion	\$3 billion	\$4 billion
2015, SV(50)	1594 (-8%)	1610 (-11%)	1675 (-10%)	\$31	\$50	\$50	\$5 billion	\$7 billion	\$6 billion
2015, SV(>50)	1594 (-8%)	1610 (-11%)	1604 (-14%)	\$31	\$50	\$70	\$5 billion	\$7 billion	\$10 billion
2020, no SV	1450 (-16%)	1400 (-23%)	1350 (-28%)	\$71	\$122	\$173	\$13 billion	\$23 billion	\$34 billion
2020, SV(30)	1657 (-4%)	1722 (-5%)	1757 (-6%)	\$17	\$23	\$31	\$2 billion	\$1 billion	\$1 billion
2020, SV(>30)	1657 (-4%)	1722 (-5%)	1757 (-6%)	\$17	\$23	\$31	\$2 billion	\$1 billion	\$1 billion
2020, SV(50)	1627 (-6%)	1660 (-8%)	1677 (-10%)	\$23	\$37	\$50	\$3 billion	\$4 billion	\$6 billion
2020, SV(>50)	1627 (-6%)	1660 (-8%)	1677 (-10%)	\$23	\$37	\$50	\$3 billion	\$4 billion	\$6 billion

model: SGM

Scenario	Emissions			GDP		
	2010	2015	2020	2010	2015	2020
BAU	1729	1808	1871	\$9.185 trillion	\$9.880 trillion	\$10.591 trillion

¹ The percent changes are relative to business as usual in that year.

² The GDP losses are calculated relative to business as usual GDP in that year.

model: SGM

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:16-OCT-1997 15:01:57.00

SUBJECT: draft talking pts. for JY to defend GCC pgm.

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

CC: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

CC: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

CC: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

CC: Adele C. Morris (CN=Adele C. Morris/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

Zachary M. Candelario (CN=Zachary M. Candelario/OU=CEA/O=EOP [CEA])

READ:UNKNOWN

Daniel K. Chang (CN=Daniel K. Chang/OU=CEA/O=EOP [CEA])

READ:UNKNOWN

TEXT:

Here are my draft talking points. We have yet to do it in Q&A form.
Comments welcome from all. We want to have it done for Wednesday, when
POTUS is expected to announce GCC plan.

Joe (or anyone): are you thinking about possible responses to the
questions Dirk got from Murkowski?

Zach (or Dan): can you please chase down the information on the
Roosevelt story? Start with Dorris Goodwin Kearns' book "A __ Time"

JF===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D84]MAIL441255889.216 to ASCII,
The following is a HEX DUMP:

JF 10/16/97

DRAFT TALKING POINTS, TO DEFEND AN AGGRESSIVE GCC PROGRAM

We will protect the environment, and at the same time protect the economy.
Vigorous economic growth and environmental protection must go hand in hand.

The President has spent five years growing the economy, and laying the foundations to sustain that growth into the future. He is not going to endanger that record now. "I have worked far too hard to revitalize the American economy to jeopardize our progress now." [Oct. 1, 1997, WH meeting with weather forecasters.]

The U.S. will not go along with an agreement that threatens sustained economic growth.

While the President is deeply committed to reducing carbon emission, no one could reasonably expect that he -- or future administrations or Congresses -- would allow the costs of this effort to become extreme. That's why we have built in regular economic reviews, to monitor our progress and re-assess how the economy is responding.

Economic models are always subject to a great deal of uncertainty, and forecasts are all the more so. In this case we are talking about unexplored territory.

Fifteen years ago, we never thought we would see an unemployment rate under 5 percent, a core inflation rate of under 2.5 percent, and a Federal budget deficit well under \$50 billion. But that's what has happened. So a degree of modesty with regard to our forecasting abilities is appropriate.

The economics of technological progress, for example, is a big unknown. The processes of invention, innovation, diffusion, and learning, fall under the sway of other Muses at least as much as under the dictates of the goddess of Economics.

The President has faith in the American people, in their ingenuity and determination to overcome obstacles.

In 1941, President Roosevelt called the leaders of industry to the White House, and asked how much, with an all-out effort, they could increase their production of war-related materials and equipment. He then announced to the American people goals that were more ambitious by an order of ___ %. In the end, those goals were attained. The key was national mobilization in the face of a shared global threat. Climate change is a shared global threat. We might not be able to replicate the achievement of 1941. The American people are not all familiar with the new threat.

But the President believes that we will never know what we can accomplish unless we try.

“If we would change our habits tomorrow, just some of our habits, we could with no extra charge, no cost at all on society, get rid of 20 percent of the GHG with presently available technology”[8/4/97 press conference]. It is impossible to know to what extent Americans will heed the call. We consumers are fond of our incandescent light bulbs, our high-flow showers and our sport utility vehicles. Industry is fond of its old ways of doing things as well. But the adoption of carbon-saving technology has to be a large part of the solution, and there is no knowing how far it can take us.

Even more unknown than future technological progress is the extent to which the cost of addressing climate change can be substantially reduced by so-called “where flexibility.” There are many other countries that could reduce emissions relative to their “business-as-usual” paths at lower costs than can industrialized countries such as the U.S.. We are insisting at Kyoto on a number of treaty provisions that would take advantage of this to reduce the costs to the American economy. These provisions include international trading, joint implementation, and -- most significantly -- participation by developing countries. Many countries disagree with one or more of these proposals. Furthermore, even if we somehow were able to win agreement with all our flexibility proposals, it is difficult to know whether they could be implemented efficiently and enforced fully. But if these uncertainties were resolved in a positive manner, there would be scope for bringing down the costs very substantially.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jeremy B. Rudd (CN=Jeremy B. Rudd/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:16-OCT-1997 22:21:25.00

SUBJECT:

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

CC: Steven N. Braun (CN=Steven N. Braun/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

CC: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

Dr. Yellen:

I spoke with Robert Winship at the State Department today (he is the State Dept. liason for OECD affairs). Under the continuing resolution that covers funding for international conferences, there is only enough money to send one CEA representative to the EPC meeting. This spot, of course, is yours. So if I am to go, it looks as though CEA will have to pay for it.

The question, therefore, is whether CEA can afford both the STEP and EPC meetings out of its own travel budget. If not, then we will have to choose between them. Naturally, I have no desire to go to EPC except inasmuch as you require my assistance during the course of the meeting.

I will hear from State tomorrow (Friday) as to whether Treasury can yield its funding for EPC to us. I tend to doubt that they'd want to, but since they are only sending a DAS-level representative (or lower), it might be possible to work something out.

- Jeremy

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jon D. Haveman (CN=Jon D. Haveman/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:16-OCT-1997 14:17:13.00

SUBJECT: Carter Center Speech

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

Janet,

Enclosed is a copy of your speech for Monday that includes my edits. Please let me know if there is anything else I can do to help. I will be in most of the weekend.

Jon===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D87]MAIL469325886.216 to ASCII,
The following is a HEX DUMP:

The Continuing Importance of Trade Liberalization

Janet L. Yellen, Chair
Council of Economic Advisers
15 September 1997
National Association of Business Economists
New Orleans, Louisiana

The basic goals of the Clinton Administration's economic policies are simple and uncontroversial. First, to secure rising living standards now and in the future. And second, to ensure that the benefits of a rising standard of living are extended to all Americans. To attain these ends, the Administration's economic agenda has been based on three key policy initiatives: deficit reduction, investing in people through education and training, and opening markets worldwide to U.S. goods and services.

It is this third initiative--promoting free and fair trade--that I will focus on today. From his first days in office, President Clinton has advocated an outward-looking, "internationalist" trade policy. During the first four years of the Clinton Administration, over 200 trade agreements were ratified and implemented, some relatively large in scope--such as NAFTA and the Uruguay Round of GATT--others relatively small, but all vital to our nation's competitive future. President Clinton intends to extend and build upon this record during the Administration's next four years.

The single most important next step in the Administration's effort to open markets abroad and expand trade is for Congress to renew the President's authority to negotiate trade agreements on a "fast track" basis. This so-called "fast-track authority" allows the President to negotiate

trade agreements with other countries, and then requires Congress to take an up or down vote on the *entire* agreement. In other words, Congress cannot in effect reopen negotiations by adding or deleting individual provisions of a trade agreement by amendment during Congressional debate. Instead, Congress must vote on the agreement as a whole. Of course, the final decision as to whether the trade agreement--in its entirety--is approved or disapproved is still in the hand's of Congress. Fast-track authority simply allows the President to seek approval or disapproval for the agreement as a whole.

Every President since 1974 has gotten fast-track authority from Congress. Why is it so important? The answer is that fast track lends credibility to trade negotiations. Under fast track, the parties to a trade agreement know that any provisions that are agreed upon cannot later be renegotiated individually, nor can such renegotiation be threatened.

History tells us that fast-track negotiating authority is critical: in the early 1970s, Congress failed to ratify the Kennedy Round GATT agreement in its entirety, and, as a result the Europeans refused to negotiate further trade agreements with the United States. For this reason, in 1974, Congress developed and passed legislation providing the President with fast track negotiating authority, and giving the President the credibility he needs to negotiate international trade agreements.

So, why do we need fast track authority today? How do trade negotiations serve to further the President's primary goals of rising living standards today and in the future? Let's go

back to a fundamental and important question: why is free trade so important? In short, what are the benefits of free trade for the U.S. economy? I will use the next few minutes to address this issue --which, in fact, speaks to my own comparative advantage as an economist and will close with a brief discussion of the administrations agenda for the use of fast-track authority.

Economists generally recognize two broad classes of benefits, the first being static, the second dynamic. I would like to discuss each in turn. Ever since the work of Adam Smith and David Ricardo, economists have recognized that trade helps an economy by allowing it to specialize in what it does best. Adam Smith argued that specialization--the division of labor--enhances productivity, David Ricardo extended this concept to trade between countries. The notion is that trade allows a country to specialize in what it does best, maximizing the value of its output. By restricting trade, resources are wasted in the production of goods that could be imported more cheaply than they can be produced domestically.

What if one country is better than anyone else at producing *every* good? Such an argument is often invoked in order to “prove” that the U.S. cannot benefit from trade with a country such as Mexico. But it turns out that the argument in favor of free trade still carries the day, the only implication is that this country will have a higher standard of living than all other countries. All that is required is for a country to be *relatively* less skilled than another in the production of some good in order for it to benefit from trade. This is, of course, the doctrine of comparative advantage--the fundamental (if perhaps counterintuitive) principle that underlies the theory of international trade.

This, in a nutshell, is the “classical” view of the benefits of free trade. It is important to note that the benefits from trade under the classical doctrine are primarily static in nature--that is, they affect the *level* of output. Moving from a situation in which there is less trade (or no trade) to one in which trade is freer raises output, but this is more along the lines of a one-time increase (even though it might take a number of years for the benefits from trade to be fully felt). This is not to dismiss the significance of these static benefits: for example, some economic historians have argued that most of the economic growth that occurred in the classical world was rooted in the expansion of markets that took place as a result of increased sea trade around the Mediterranean.

In modern times, however, the static benefits of freer trade for the world have been estimated to be less than 5% of world income. These static benefits are so low because the barriers to trade have already fallen tremendously over the last 60 years. Indeed, estimates of the static benefits arising from many of our past agreements do not produce staggering numbers. Some estimate that the benefits of the Uruguay Round agreement will amount to less than a 1% increase in US GNP per year. Similar estimates for the NAFTA suggest that the U.S. economy will realize static gains in the amount of about \$1.9B per year. As a general rule of thumb, it has been suggested that every dollar's worth of increased trade yields about 7.5 cents worth of income gains due to specialization. If these numbers are so small, what then is the big deal about trade agreements?

The big deal can be found by considering the dynamic benefits of international trade.

This view, which is relatively new, incorporates some of the new trade theories into the old literature on growth. The stream of thought that has emerged argues that increased trade actually raises an economy's *rate of growth*, rather than just once and for all increasing the level.

If this is in fact the case, it makes the case for trade liberalization an even more compelling one.

Raising the growth rate of the nation's economy, even by a few tenths of a percentage point per year, has vastly more significance for long-run living standards than even a relatively large one-off increase in the level of output; the reason, of course, is that a small increase in the economy's rate of growth cumulates over time to yield large gains.

What is the rationale behind the new trade theory--in other words, what is the source of the "dynamic" benefits from trade? The source of this growth is similar to the static benefits in that it puts a given amount of resources to work more efficiently. One economist has summarized the argument with the following catena:

- International trade leads to greater competition;
- Competition induces greater innovation; and,
- Innovation (*i.e.*, technological change) drives economic growth.

(It's a simple notion once you think about it--though it will probably win the economists who thought it out a Nobel prize some day.)

The new view of international trade represents a valuable contribution to academic economics. But theory alone cannot provide an airtight argument in favor of trade liberalization, we must turn to empirical work to confirm the existence of these benefits. Attempts to

incorporate only the most basic of these dynamics indicate that the impact on the U.S. of the Uruguay Round agreement is double that suggested by an analysis of the static gains alone. The same researchers who estimated the static gains from NAFTA equal to about \$1.9B above, estimate the dynamic gains to be on the order of \$12.5B per year. For perspective, we can inquire as to how much the U.S. capital stock would have to increase -- a well-established method of growing the economy -- in order to bring about this kind of an increase in annual income? It turns out that these dynamic gains are roughly equivalent to an increase of \$65B in the U.S. capital stock, a significant sum.

These dynamic gains come from a number of sources. The sources underlying the number above include increases in market size in addition to enhanced competition. Other sources come from technological improvements, perhaps through increased contact with foreigners and their alternative production styles or direct investment by foreign firms with proprietary knowledge, or simply by the exposure to imported goods that embody technologies developed abroad. Each of these elements of international trade and interactions have the effect of promoting growth in the domestic economy. When combined with the static effects, there is no question that the efforts to open markets, when successful, can yield significant dividends. There is some disagreement as to the overall magnitude of the impact, but one particularly thorough study suggests that the increase in U.S. trade as a fraction of output, both imports and exports, over the past 25 years has resulted in about a 4% increase in real U.S. GNP. This is based on estimates that each additional dollar of international trade results in an increase in output of 34 cents. If it is true that the static gains result in about a 7 cent increase in output, this

implies that the dynamic gains may be up to 4 times larger than the static gains.

In an ideal world--the world in which economists live--free trade unambiguously benefits the economy *taken as a whole*. This is true in the real world as well, although the ideal case masks the fact that some will gain from freer trade, but others may lose--even though on net the winners could compensate the losers and still have something left over. In practice, increased globalization will induce reallocations of labor and capital across sectors as the focus of American industry moves to the production of those goods and services which we are relatively good at producing. Because our economy is not frictionless, these adjustments sometimes involve lengthy periods of dislocation until the reallocation of labor and capital across industries is complete.

Policy makers advocating freer trade must be aware of this fact, and the Clinton Administration has realized from the beginning that it is the government's duty to minimize the impact of this dislocation by speeding up the adjustment process however it can. For example, one of the key provisions of NAFTA involved monitoring those industries that were in danger of being adversely affected by the free trade agreement, and the Administration committed itself early on to providing for dislocated workers through retraining programs. And, more generally, the Administration's commitment to investing in people through education and training serves as a strong complement to its policy of trade liberalization: since freer trade tends to benefit skilled workers most, the United States enjoys greater benefits from trade to the extent that more of its workers are highly skilled. In the end, though, those who would point to the short-term adverse effects of trade liberalization should not lose sight of an important point: Trade liberalization

might adversely affect a small fraction of American workers in their role as producers, but it benefits all workers in their role as consumers.

Bottom line is: the benefits of increased openness and increased international trade are wide ranging -- more efficient utilization of resources, faster productivity growth, higher quality goods, and lower prices, all of which raise living standards.

At this point, I would like to note that I have said nothing of the benefits of trade that arise simply from the fact that it links the economic interests of nations more closely. John Maynard Keynes once argued that the greatest tragedy visited upon Europe by the First World War was the disruption of the system of international trade that was a hallmark of the European economy before 1914. The eventual breakdown in the world trading system and resulting deterioration of Europe's economy was a proximate cause of the Second World War, and kept living standards in Europe and the U.S. much lower for much longer than was necessary by prolonging the Great Depression. This notion has implications for the Americas even today. Trade agreements signed with Latin American countries can help to promote newly democratic nations; access to our markets will help to promote the growth and stability that are so important for maintaining democracy in these countries.

It is clear that international trade, and international interactions bring economic benefits to the participating countries. The question remains as to what exactly the administration intends to do with fast-track authority if it is indeed granted.

The first use for fast-track negotiating authority would be to complete the agenda that was established in the Uruguay Round of GATT negotiations. At the end of the Uruguay Round negotiations, the United States, along with other countries, pushed for a timetable at which negotiations in different areas would resume. This year, we begin again the negotiations on government procurement; next year, we will begin intellectual property rights discussions; then we will begin talks on agriculture; then on services. Government procurement is a trillion-dollar market for the United States in Asia alone over the next decade; agriculture, a \$600-billion market globally; services, \$1.2 trillion market. The United States wants better access to those markets. And, we must have fast track authority before beginning discussions in these areas, otherwise countries will not put meaningful offers for market access on the table.

The second major use for fast-track authority is to extend the information technology agreement or ITA. The recently concluded ITA will in the U.S. and 43 other countries eliminating tariff barriers on a range of information technology products: semiconductors, computers, telecommunications equipment, faxes, phones, integrated circuits -- a huge array of products in which U.S. firms tend to be highly competitive and foreign barriers are significant. We are considering an expansion of the ITA to a broader set of goods and are exploring the possibility of similar kinds of agreements in a number of other individual sectors where the United States is very competitive but global barriers tend to be high -- areas such as environmental equipment and services, medical equipment and technology, and transportation equipment. In all of these areas, it would be necessary to have fast track authority to negotiate a reduction of trade barriers.

Finally, the third area that fast-track will be used is for more comprehensive market access agreements with individual countries. Thus far, Chile has been identified as the first and most likely country for this kind of arrangement. Today, every major economy in this hemisphere--save the United States--has a preferential trade agreement with Chile. In practice, this means that U.S. firms face tariffs in Chile that make their goods 11 percent more expensive than those of competing firms from other countries. This is a serious competitive disadvantage. In addition, the EU and China have both expressed an interest in strengthening their international ties with Latin American countries.

It is clear: now, more than ever, that continued engagement with the global economy will require an active effort on the part of the United States. And, an extension of fast track authority must be an integral component of this effort.

A final consideration in assessing the importance of obtaining fast track authority, is that it will facilitate the president's repeated desire to promote worker rights and responsible environmental policies. Both the House Ways and Means and Senate Finance Committee bills preserve the presidents ability to address labor and environmental issues in the context of trade agreements. Neither version *requires* agreements on labor and the environment, however, both versions of the bill stipulate that parties to agreements must resist the urge to downgrade labor and environmental standards for the purpose of attracting investment or inhibiting U.S. exports and to make use of the ILO in such a way as to promote worker rights.

As written, “fast-track” authority will at worst maintain the status quo, and at best, facilitate the improvement in labor and environmental standards among our trading partners. If we have fast track, Chile will conclude labor and environment side agreements with us, they have already expressed a willingness to do so. If we don’t have “fast-track”, they won’t, and we will not have other similar opportunities to encourage improvements elsewhere. If fast-track were to mandate agreements on labor and the environment, this would possibly preclude agreements with countries that would benefit the most from them. Such agreements, even without specific stipulations regarding labor and the environment could, through the promotion of economic growth, help to foster improved conditions abroad.

Fast-track, as currently written, provides the president with the flexibility to pursue the promotion of labor and environmental standards where possible and still promote market access and growth where it is not.

The United States is now more closely tied to the rest of the world by trade than at any other time in its history. How the U.S. economy performs relative to the economies of other nations will depend critically on how we promote our commercial interests abroad. Aggressive pursuit of trade liberalization, for which fast track authority is a prerequisite, is the best way to ensure that the U.S. maintains its position as the strongest and most innovative economy in the world.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:16-OCT-1997 17:57:30.00

SUBJECT: Re: NBER meeting on inflation and unemployment

TO: Steven N. Braun (CN=Steven N. Braun/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

Steve, I would be delighted to have you go. I have also been invited but can't go because I have to leave for the EPC meeting that night.

Certainly, the CEA can pay your airfare, (Michelle is boss and has to approve but I anticipate no problem) but I think the NBER may also be willing to pick up your travel expenses and, unlike your former employer, CEA allows that to occur with White House approval. Can you talk to Alice to sort out the details?

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:16-OCT-1997 09:50:11.00

SUBJECT: Re: safety valve options

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

----- Forwarded by Jeffrey A. Frankel/CEA/EOP on 10/16/97
09:49 AM -----

Jeffrey A. Frankel
10/16/97 09:18:17 AM
Record Type: Record

To: JONATHAN.GRUBER @ MS01.DO.treas.sprint.com @ INET @ LNGTWY
cc: ORSZAG_P @ A1 @ CD @ LNGTWY
Subject: Re: safety valve options

I attach a slightly revised version of Jon's memo. Most substantive change is in 2nd bullet. (Can we please standardize on P for permit price, and X for other things? Especially within one memo.) By the way, the others won't find the "but for" very convincing; they will think "The worst thing we have to worry about is a case in which growth would otherwise be 3.3%?!" But I have no changes to suggest there.

I also re-attach my outline of options. (This is the same that I sent to Peter and the others late yesterday. But Jon was working from the earlier draft of it.)

Regarding both memos: Let me repeat once again that Janet strongly favors unemployment over 2% growth, which she definitely does not like, even though the six of us clearly felt the other way in our meeting. For the moment I have handled this in my outline by saying "ranking is preliminary. Principals may not agree". In Jon's memo, we have to change somehow the sentence "your ec. advisors feel that a preferable option would be to focus on the growth rate of the economy, rather than a cyclical indicator such as the unemployment rate," unless Janet changes her mind.

===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D63]MAIL40586388G.216 to ASCII,
The following is a HEX DUMP:

ADVANTAGES / DISADVANTAGES OF VARIOUS POSSIBLE ECONOMIC TRIGGERS

Desirable characteristics of a trigger:

- related to cost of limiting emissions
- built-in stabilizer for macro-economy
- simplicity/conducive to public salesmanship

Yet to be discussed:

- (i) Would this go in the treaty?
- (ii) What is it that would be "triggered on"? If the response is to be the sale of additional emission permits, what would be the quantity and price?

First-best trigger:

- **Price of Carbon Permit**

Advantages:

- (1) Specifically addresses the possibility that emissions reductions would result in high costs, and thus insures against uncertainty in an economically desirable way;
- (2) Once the price level of the trigger is set, then the answer to item (ii) above is clear.

Disadvantage:

The price of carbon emission permits may not be a widely understood concept.

(The possibilities that follow are economic triggers *other* than the price of carbon.

Ranking is preliminary; principals may not agree.)

Second-best trigger:

- **Permit price*Quantity-of-permits/GDP**

Advantage: The formula contains the carbon price, and thereby responds to the onerousness of emission limitations per se.

Disadvantage: it is more complicated than some of the other possibilities, and does not allow the President to say "I promise that if X [an easily-understood bad thing] happens, the constraint will be loosened."

Third-best trigger

- **growth below 2%**

Advantages: (1) Acts as an automatic stabilizer (as do the others).
(2) Encompasses both the possibility of slowdown in long-term growth and the possibility of cyclical downturns. Both are relevant: (i) slow growth of either sort could be the result of onerous emissions restrictions, (ii) slow growth of either sort, even if the result of standard macroeconomic factors, might still lead one to choose less aggressive emissions reductions (assuming environmental benefits are a “normal” good).

Disadvantages: (1) a measure of GDP will not fully reflect the economic costs of the policy because declines in consumption will be masked by some increases in investment, (2) the trigger does not address situations where climate policy negatively impacts high economic growth years (e.g., imagine that under climate policy, GDP grows at 2.2%, but under the counterfactual, GDP would have grown at 3%), (3) the shadow price of the quantitative emissions constraint is lower if growth falls, not higher.

Fourth-best triggers:

- **recession**

Advantage: Very easily explained and understood.

Disadvantages: (1) Doesn't get at slow long-term growth. (2) Unlikely to be triggered often.
(3) In the year following a recession, output gap is usually still high.

- **output gap above 1%**

Advantage: May address short-term cyclical conditions better than a recession trigger.

Disadvantages: (1) Doesn't get at long-term growth. (2) Not explainable to public.
(3) Partly subjective even within economists' paradigm.

- **unemployment above 7%**

Advantage: easily explained and understood

Disadvantages: (1) Unrelated to long-term growth. (2) An imperfect measure even of short-term cyclical conditions: the natural rate of unemployment moves around.
(3) Probably bears the least connection to emissions of any of the measures.

- **a committee (Sec.Treas, Chair Fed. Res., etc.) judges "economic distress"**

Disadvantage: very subjective/political/ad hoc.

- **some attempt to judge whether economic slowdown is attributable to climate change policy**

Disadvantage: even more subjective/political/ad hoc.

Different Approaches to a Safety Valve

There are essentially two different approaches to setting the safety valve:

- A permit price ceiling - if the price of permits rose about P, the government would sell as many permits as demanded at that price P
- An “insurance policy” based on economic conditions - if there is a recession, or if growth is slow, the government would somehow relax the emissions quantity constraint. E.g., by selling additional permits at some price or even by suspending participation altogether.

Your economic advisors strongly prefer the first approach, for three reasons:

- This price ceiling approach is the most appropriate given the enormous uncertainty about the ability of emerging technologies, international trading, and JI to lower the cost of meeting our emissions targets. This uncertainty is not insured by policies that focus on economic conditions, but it is by policies that focus on permit price, since if the optimistic forecasts of the gains from these factors prove to be wrong the permit price will rise.
- A safety valve based on economic conditions does not take into account the “but for” case - e.g. “but for our policy, growth would have been even faster”. Suppose that there is an enormous negative effect of this policy which lowers GDP growth by 1 percentage point in each year. If the economy is otherwise booming, so that growth in the absence of this policy would have been 3.5%, then the result of the policy will still be a reasonable 2.5% growth rate. In this case, focusing on the growth rate (or some other cyclical indicator) will miss the enormous negative implications for the economy of our climate change policy.

This problem cannot be remedied through analysis to try to separate the “but for” path of growth. Given the enormous uncertainties, even ex post, about the effect of environmental regulation on the economy, it is impossible to separate out the role of policy to obtain the counterfactual economic performance.

- The price ceiling approach automatically dictates the response of the government to the safety valve being triggered: it releases more permits until their value drops to the trigger level. But an economic conditions-based trigger provides no guidance for either how many more permits should be issued, or at what price they should be issued.

On the other hand, an obvious attraction of basing the safety valve on economic conditions is that it can be more readily defended and explained. One compromise alternative that may also be defensible on economic conditions grounds is a “hybrid” trigger, which divides the total value of permits by the size of the economy. This trigger would be set off either if the price of permits rises too much, or if economic growth slows too much. This would raise all of the objections levied above, but at a much more muted level, since the price of permits is part of the safety

valve.

If the decision is to choose a safety valve related to economic conditions, your economic advisors feel that a preferable option would be to focus on the growth rate of the economy, rather than a cyclical indicator such as the unemployment rate. Cyclical issues are more readily addressed through banking and borrowing provisions, and multi-year averaging periods. The role of a safety valve should be to address long term shifts in the extent to which our target and timetable imposes costs on the U.S. economy, related to factors such as a productivity slowdown. This is best addressed by a safety valve of the form “the government will release X more permits into the U.S. economy if growth falls below 2% per year”. Focusing on an annual measure of growth both allows for some measure of cyclical protection and protection against changes in our long run growth performance.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Daniel K. Chang (CN=Daniel K. Chang/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:17-OCT-1997 16:51:27.00

SUBJECT: draft talking pts. for JY to defend GCC pgm.

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:

----- Forwarded by Daniel K. Chang/CEA/EOP on 10/17/97
04:41 PM -----

Jeffrey A. Frankel
10/16/97 03:02:29 PM
Record Type: Record

To: Janet L. Yellen/CEA/EOP
cc: Adele C. Morris/CEA/EOP, Joseph E. Aldy/CEA/EOP, Randall W.
Lutter/CEA/EOP, Michele Jolin/CEA/EOP
Subject: draft talking pts. for JY to defend GCC pgm.

Here are my draft talking points. We have yet to do it in Q&A form.
Comments welcome from all. We want to have it done for Wednesday, when
POTUS is expected to announce GCC plan.

Joe (or anyone): are you thinking about possible responses to the
questions Dirk got from Murkowski?

Zach (or Dan): can you please chase down the information on the
Roosevelt story? Start with Dorris Goodwin Kearns' book "A __ Time"
JF

Janet,
I'll photocopy the Roosevelt data and give it to Alice.
-Dan

===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D12]MAIL45871698L.216 to ASCII,
The following is a HEX DUMP:

JF 10/16/97

DRAFT TALKING POINTS, TO DEFEND AN AGGRESSIVE GCC PROGRAM

We will protect the environment, and at the same time protect the economy.
Vigorous economic growth and environmental protection must go hand in hand.

The President has spent five years growing the economy, and laying the foundations to sustain that growth into the future. He is not going to endanger that record now. "I have worked far too hard to revitalize the American economy to jeopardize our progress now." [Oct. 1, 1997, WH meeting with weather forecasters.]

The U.S. will not go along with an agreement that threatens sustained economic growth.

While the President is deeply committed to reducing carbon emission, no one could reasonably expect that he -- or future administrations or Congresses -- would allow the costs of this effort to become extreme. That's why we have built in regular economic reviews, to monitor our progress and re-assess how the economy is responding.

Economic models are always subject to a great deal of uncertainty, and forecasts are all the more so. In this case we are talking about unexplored territory.

Fifteen years ago, we never thought we would see an unemployment rate under 5 percent, a core inflation rate of under 2.5 percent, and a Federal budget deficit well under \$50 billion. But that's what has happened. So a degree of modesty with regard to our forecasting abilities is appropriate.

The economics of technological progress, for example, is a big unknown. The processes of invention, innovation, diffusion, and learning, fall under the sway of other Muses at least as much as under the dictates of the goddess of Economics.

The President has faith in the American people, in their ingenuity and determination to overcome obstacles.

In 1941, President Roosevelt called the leaders of industry to the White House, and asked how much, with an all-out effort, they could increase their production of war-related materials and equipment. He then announced to the American people goals that were more ambitious by an order of ___ %. In the end, those goals were attained. The key was national mobilization in the face of a shared global threat. Climate change is a shared global threat. We might not be able to replicate the achievement of 1941. The American people are not all familiar with the new threat.

But the President believes that we will never know what we can accomplish unless we try.

“If we would change our habits tomorrow, just some of our habits, we could with no extra charge, no cost at all on society, get rid of 20 percent of the GHG with presently available technology”[8/4/97 press conference]. It is impossible to know to what extent Americans will heed the call. We consumers are fond of our incandescent light bulbs, our high-flow showers and our sport utility vehicles. Industry is fond of its old ways of doing things as well. But the adoption of carbon-saving technology has to be a large part of the solution, and there is no knowing how far it can take us.

Even more unknown than future technological progress is the extent to which the cost of addressing climate change can be substantially reduced by so-called “flexibility.” There are many other countries that could reduce emissions relative to their “business-as-usual” paths at lower costs than can industrialized countries such as the U.S.. We are insisting at Kyoto on a number of treaty provisions that would take advantage of this to reduce the costs to the American economy. These provisions include international trading, joint implementation, and -- most significantly -- participation by developing countries. Many countries disagree with one or more of these proposals. Furthermore, even if we somehow were able to win agreement with all our flexibility proposals, it is difficult to know whether they could be implemented efficiently and enforced fully. But if these uncertainties were resolved in a positive manner, there would be scope for bringing down the costs very substantially.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Richard L. Hayes (CN=Richard L. Hayes/OU=WHO/O=EOP [WHO])

CREATION DATE/TIME:17-OCT-1997 14:59:12.00

SUBJECT: Affirmative Action Benchmarking Meeting

TO: Mark Gross (Mark Gross @ 5148490 [UNKNOWN])
READ:UNKNOWN

TO: Rebecca M. Blank (CN=Rebecca M. Blank/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Lee Price (Lee Price @ 4820432 @ fax [UNKNOWN])
READ:UNKNOWN

TO: Francis Allegra (Francis Allegra @ 3073904 @ fax [UNKNOWN])
READ:UNKNOWN

TO: Sanders D. Korenman (CN=Sanders D. Korenman/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Joseph J. Minarik (CN=Joseph J. Minarik/OU=OMB/O=EOP @ EOP [OMB])
READ:UNKNOWN

CC: Richard L. Hayes (CN=Richard L. Hayes/OU=WHO/O=EOP @ EOP [WHO])
READ:UNKNOWN

TEXT:

I would like to schedule a "small" meeting early next week to discuss our strategy for coming to closure on the final affirmative action procurement benchmarks. It is important that everyone come to the meeting prepared to make as many decisions as possible. Commerce has conducted a great deal of useful and informative research on how best to address this issue, but with timing running out, we need to come to closure on what to include in this round of estimates, decide upon the "best" methodological approach for doing so, and a timetable for doing so. This will mean that some things will have to be deferred until the future, but I don't see that we have much choice. If you will let me know what works for you, I will find a convenient time when we all can meet. I have taken a first stab at an agenda for the meeting (in the short term, the most important issues are 1-5), but please let me know if I have omitted something. Again, I appreciate your help on this important issue

Draft Agenda for Affirmative Action Benchmarking Meeting

1. Decide basic approach for including SICs
 - * Meets A & B test for eligibility

- * Meet A or B test for eligibility

Note: "A" refers to variant 1 (SMOBE data) and "B" refers to variant 3 (bidder data regressions). A variation on this choice set is to use variant 2 or at least introduce its results into variant 1 in some way.

2. Finalize variant 1 (SMOBE data):

- * Limit breadth of eligible SICs to those with a "statistically significant" disparity difference

- * Decide on ability weighting scheme to be used.

Note: Commerce is working a regression model to get at (log form) using the characteristics of non-SDB owners, to account for size, age, etc. What is the impact? Even if it does not change results substantially, economist likely to more readily accept approach.

- * Decide on whether to drop the "but-for" factor. We could do so and indicate in our background paper that we will do later. What is the impact?

- * Decide how to adjust the SMOBE Data file from 1992. Need to find some "crude" way to reweight file to 1994-96 (our utilization data is for this period). Check with IRS, CBO, Census (new SMOBE Sampling frame).

- * Finalize other adjustments: C corporations, subcontract dollars, contracts less than \$25,000, SDB contracts less than \$500,000 (\$1,000, 000 for construction). What is impact?

3. Finalize variant 3 (bidder regressions):

- * Decide on final model to use. Rationale?

- * Decide on whether to drop the four digit SICs. We could limit the estimates to 2-digit SICs for everything, except construction, which would be further stratified by Census regions.

4. Estimate price evaluation adjustments for eligible SICs

- * Decide on the methodology for doing?
- * Estimate the recommended credits by SIC for FY +98

Note: How do we handle subcontracting and set the evaluation credit? One solution is to use the same SICs that have been selected for prime contracts?

5. Prepare methods paper & Q&As

- * Need to decide on level of detail to present -- need to lay out methodology, data and steps.

- * Need to identify future improvements to be made in the estimates and future data collection (SMOBE, FPDS, survey, etc.). Make our case; be mindful of relevant court rulings.

- * Decide how much background to present: legal issues, past research/legal findings: anticipate challenges and address up front.

6. Develop impact estimates

- * Estimate total size of program (total federal procurement affected).

- * Estimate likely impact of program (effect of price evaluation adjustment)

- * Identify what changes have to occur to make program effective:

(removing impediments: providing technical assistance, bonding, educating about bidding practices, etc.

7. Vetting

- * White House
- * Advisory group of civil rights economists
- * Key civil rights, minority business, and women groups
- * CBC, other Congressional caucuses and committees

8. Rule changes:

- * Commerce currently responsible for ruling on agency/firm appeals.

Who/which office will do?

- * Staff/funding for on-going work, estimation, etc.

9. 8(a)

- * What do we do with?

Note: In terms of the current schedule, Commerce feels that if we can meet early next week, that they will be able to complete any remaining estimation work required, produce the benchmark estimates, and prepare a first draft of the paper and Q&As by the end of the month. However, they will need 2 weeks to have someone else check all their numbers before they are released. Please let me know what you think.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:17-OCT-1997 16:32:58.00

SUBJECT: Atlanta

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

Many thanks for taking on the trip to Atlanta. I enclose a copy of the speech that Jeremy wrote for me some time ago on fast track and also a revised version that Jon wrote for Atlanata. I have not yet revised his work at all. I asked him to make it a bit less theoretical.)

===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D83]MAIL47140698W.216 to ASCII,
The following is a HEX DUMP:

The Continuing Importance of Trade Liberalization

Janet L. Yellen, Chair
Council of Economic Advisers
15 September 1997
National Association of Business Economists
New Orleans, Louisiana

The basic goals of the Clinton Administration's economic policies are simple and uncontroversial. First, to secure rising living standards now and in the future. And second, to ensure that the benefits of a rising standard of living are extended to all Americans. To attain these ends, the Administration's economic agenda has been based on three key policy initiatives: deficit reduction, investing in people through education and training, and opening markets worldwide to U.S. goods and services.

It is this third initiative--promoting free and fair trade--that I will focus on today. From his first days in office, President Clinton has advocated an outward-looking, "internationalist" trade policy. During the first four years of the Clinton Administration, over 200 trade agreements were ratified and implemented, some relatively large in scope--such as NAFTA and the Uruguay Round of GATT--others relatively small, but all vital to our nation's competitive future. President Clinton intends to extend and build upon this record during the Administration's next four years.

The single most important next step in the Administration's effort to open markets abroad and expand trade is for Congress to renew the President's authority to negotiate trade agreements on a "fast track" basis. This so-called "fast-track authority" allows the President to negotiate

trade agreements with other countries, and then requires Congress to take an up or down vote on the *entire* agreement. In other words, Congress cannot in effect reopen negotiations by adding or deleting individual provisions of a trade agreement by amendment during Congressional debate. Instead, Congress must vote on the agreement as a whole. Of course, the final decision as to whether the trade agreement--in its entirety--is approved or disapproved is still in the hand's of Congress. Fast-track authority simply allows the President to seek approval or disapproval for the agreement as a whole.

Every President since 1974 has gotten fast-track authority from Congress. Why is it so important? The answer is that fast track lends credibility to trade negotiations. Under fast track, the parties to a trade agreement know that any provisions that are agreed upon cannot later be renegotiated individually, nor can such renegotiation be threatened.

History tells us that fast-track negotiating authority is critical: in the early 1970s, Congress failed to ratify the Kennedy Round GATT agreement in its entirety, and, as a result the Europeans refused to negotiate further trade agreements with the United States. For this reason, in 1974, Congress developed and passed legislation providing the President with fast track negotiating authority, and giving the President the credibility he needs to negotiate international trade agreements.

So, why do we need fast track authority today? How do trade negotiations serve to further the President's primary goals of rising living standards today and in the future? Let's go

back to a fundamental and important question: why is free trade so important? In short, what are the benefits of free trade for the U.S. economy? I will use the next few minutes to address this issue --which, in fact, speaks to my own comparative advantage as an economist and will close with a brief discussion of the administrations agenda for the use of fast-track authority.

Economists generally recognize two broad classes of benefits, the first being static, the second dynamic. I would like to discuss each in turn. Ever since the work of Adam Smith and David Ricardo, economists have recognized that trade helps an economy by allowing it to specialize in what it does best. Adam Smith argued that specialization--the division of labor--enhances productivity, David Ricardo extended this concept to trade between countries. The notion is that trade allows a country to specialize in what it does best, maximizing the value of its output. By restricting trade, resources are wasted in the production of goods that could be imported more cheaply than they can be produced domestically.

What if one country is better than anyone else at producing *every* good? Such an argument is often invoked in order to “prove” that the U.S. cannot benefit from trade with a country such as Mexico. But it turns out that the argument in favor of free trade still carries the day, the only implication is that this country will have a higher standard of living than all other countries. All that is required is for a country to be *relatively* less skilled than another in the production of some good in order for it to benefit from trade. This is, of course, the doctrine of comparative advantage--the fundamental (if perhaps counterintuitive) principle that underlies the theory of international trade.

This, in a nutshell, is the “classical” view of the benefits of free trade. It is important to note that the benefits from trade under the classical doctrine are primarily static in nature--that is, they affect the *level* of output. Moving from a situation in which there is less trade (or no trade) to one in which trade is freer raises output, but this is more along the lines of a one-time increase (even though it might take a number of years for the benefits from trade to be fully felt). This is not to dismiss the significance of these static benefits: for example, some economic historians have argued that most of the economic growth that occurred in the classical world was rooted in the expansion of markets that took place as a result of increased sea trade around the Mediterranean.

In modern times, however, the static benefits of freer trade for the world have been estimated to be less than 5% of world income. These static benefits are so low because the barriers to trade have already fallen tremendously over the last 60 years. Indeed, estimates of the static benefits arising from many of our past agreements do not produce staggering numbers. Some estimate that the benefits of the Uruguay Round agreement will amount to less than a 1% increase in US GNP per year. Similar estimates for the NAFTA suggest that the U.S. economy will realize static gains in the amount of about \$1.9B per year. As a general rule of thumb, it has been suggested that every dollar's worth of increased trade yields about 7.5 cents worth of income gains due to specialization. If these numbers are so small, what then is the big deal about trade agreements?

The big deal can be found by considering the dynamic benefits of international trade.

This view, which is relatively new, incorporates some of the new trade theories into the old literature on growth. The stream of thought that has emerged argues that increased trade actually raises an economy's *rate of growth*, rather than just once and for all increasing the level.

If this is in fact the case, it makes the case for trade liberalization an even more compelling one.

Raising the growth rate of the nation's economy, even by a few tenths of a percentage point per year, has vastly more significance for long-run living standards than even a relatively large one-off increase in the level of output; the reason, of course, is that a small increase in the economy's rate of growth cumulates over time to yield large gains.

What is the rationale behind the new trade theory--in other words, what is the source of the "dynamic" benefits from trade? The source of this growth is similar to the static benefits in that it puts a given amount of resources to work more efficiently. One economist has summarized the argument with the following catena:

- International trade leads to greater competition;
- Competition induces greater innovation; and,
- Innovation (*i.e.*, technological change) drives economic growth.

(It's a simple notion once you think about it--though it will probably win the economists who thought it out a Nobel prize some day.)

The new view of international trade represents a valuable contribution to academic economics. But theory alone cannot provide an airtight argument in favor of trade liberalization, we must turn to empirical work to confirm the existence of these benefits. Attempts to

incorporate only the most basic of these dynamics indicate that the impact on the U.S. of the Uruguay Round agreement is double that suggested by an analysis of the static gains alone. The same researchers who estimated the static gains from NAFTA equal to about \$1.9B above, estimate the dynamic gains to be on the order of \$12.5B per year. For perspective, we can inquire as to how much the U.S. capital stock would have to increase -- a well-established method of growing the economy -- in order to bring about this kind of an increase in annual income? It turns out that these dynamic gains are roughly equivalent to an increase of \$65B in the U.S. capital stock, a significant sum.

These dynamic gains come from a number of sources. The sources underlying the number above include increases in market size in addition to enhanced competition. Other sources come from technological improvements, perhaps through increased contact with foreigners and their alternative production styles or direct investment by foreign firms with proprietary knowledge, or simply by the exposure to imported goods that embody technologies developed abroad. Each of these elements of international trade and interactions have the effect of promoting growth in the domestic economy. When combined with the static effects, there is no question that the efforts to open markets, when successful, can yield significant dividends. There is some disagreement as to the overall magnitude of the impact, but one particularly thorough study suggests that the increase in U.S. trade as a fraction of output, both imports and exports, over the past 25 years has resulted in about a 4% increase in real U.S. GNP. This is based on estimates that each additional dollar of international trade results in an increase in output of 34 cents. If it is true that the static gains result in about a 7 cent increase in output, this

implies that the dynamic gains may be up to 4 times larger than the static gains.

In an ideal world--the world in which economists live--free trade unambiguously benefits the economy *taken as a whole*. This is true in the real world as well, although the ideal case masks the fact that some will gain from freer trade, but others may lose--even though on net the winners could compensate the losers and still have something left over. In practice, increased globalization will induce reallocations of labor and capital across sectors as the focus of American industry moves to the production of those goods and services which we are relatively good at producing. Because our economy is not frictionless, these adjustments sometimes involve lengthy periods of dislocation until the reallocation of labor and capital across industries is complete.

Policy makers advocating freer trade must be aware of this fact, and the Clinton Administration has realized from the beginning that it is the government's duty to minimize the impact of this dislocation by speeding up the adjustment process however it can. For example, one of the key provisions of NAFTA involved monitoring those industries that were in danger of being adversely affected by the free trade agreement, and the Administration committed itself early on to providing for dislocated workers through retraining programs. And, more generally, the Administration's commitment to investing in people through education and training serves as a strong complement to its policy of trade liberalization: since freer trade tends to benefit skilled workers most, the United States enjoys greater benefits from trade to the extent that more of its workers are highly skilled. In the end, though, those who would point to the short-term adverse effects of trade liberalization should not lose sight of an important point: Trade liberalization

might adversely affect a small fraction of American workers in their role as producers, but it benefits all workers in their role as consumers.

Bottom line is: the benefits of increased openness and increased international trade are wide ranging -- more efficient utilization of resources, faster productivity growth, higher quality goods, and lower prices, all of which raise living standards.

At this point, I would like to note that I have said nothing of the benefits of trade that arise simply from the fact that it links the economic interests of nations more closely. John Maynard Keynes once argued that the greatest tragedy visited upon Europe by the First World War was the disruption of the system of international trade that was a hallmark of the European economy before 1914. The eventual breakdown in the world trading system and resulting deterioration of Europe's economy was a proximate cause of the Second World War, and kept living standards in Europe and the U.S. much lower for much longer than was necessary by prolonging the Great Depression. This notion has implications for the Americas even today. Trade agreements signed with Latin American countries can help to promote newly democratic nations; access to our markets will help to promote the growth and stability that are so important for maintaining democracy in these countries.

It is clear that international trade, and international interactions bring economic benefits to the participating countries. The question remains as to what exactly the administration intends to do with fast-track authority if it is indeed granted.

The first use for fast-track negotiating authority would be to complete the agenda that was established in the Uruguay Round of GATT negotiations. At the end of the Uruguay Round negotiations, the United States, along with other countries, pushed for a timetable at which negotiations in different areas would resume. This year, we begin again the negotiations on government procurement; next year, we will begin intellectual property rights discussions; then we will begin talks on agriculture; then on services. Government procurement is a trillion-dollar market for the United States in Asia alone over the next decade; agriculture, a \$600-billion market globally; services, \$1.2 trillion market. The United States wants better access to those markets. And, we must have fast track authority before beginning discussions in these areas, otherwise countries will not put meaningful offers for market access on the table.

The second major use for fast-track authority is to extend the information technology agreement or ITA. The recently concluded ITA will in the U.S. and 43 other countries eliminating tariff barriers on a range of information technology products: semiconductors, computers, telecommunications equipment, faxes, phones, integrated circuits -- a huge array of products in which U.S. firms tend to be highly competitive and foreign barriers are significant. We are considering an expansion of the ITA to a broader set of goods and are exploring the possibility of similar kinds of agreements in a number of other individual sectors where the United States is very competitive but global barriers tend to be high -- areas such as environmental equipment and services, medical equipment and technology, and transportation equipment. In all of these areas, it would be necessary to have fast track authority to negotiate a reduction of trade barriers.

Finally, the third area that fast-track will be used is for more comprehensive market access agreements with individual countries. Thus far, Chile has been identified as the first and most likely country for this kind of arrangement. Today, every major economy in this hemisphere--save the United States--has a preferential trade agreement with Chile. In practice, this means that U.S. firms face tariffs in Chile that make their goods 11 percent more expensive than those of competing firms from other countries. This is a serious competitive disadvantage. In addition, the EU and China have both expressed an interest in strengthening their international ties with Latin American countries.

It is clear: now, more than ever, that continued engagement with the global economy will require an active effort on the part of the United States. And, an extension of fast track authority must be an integral component of this effort.

A final consideration in assessing the importance of obtaining fast track authority, is that it will facilitate the president's repeated desire to promote worker rights and responsible environmental policies. Both the House Ways and Means and Senate Finance Committee bills preserve the presidents ability to address labor and environmental issues in the context of trade agreements. Neither version *requires* agreements on labor and the environment, however, both versions of the bill stipulate that parties to agreements must resist the urge to downgrade labor and environmental standards for the purpose of attracting investment or inhibiting U.S. exports and to make use of the ILO in such a way as to promote worker rights.

As written, “fast-track” authority will at worst maintain the status quo, and at best, facilitate the improvement in labor and environmental standards among our trading partners. If we have fast track, Chile will conclude labor and environment side agreements with us, they have already expressed a willingness to do so. If we don’t have “fast-track”, they won’t, and we will not have other similar opportunities to encourage improvements elsewhere. If fast-track were to mandate agreements on labor and the environment, this would possibly preclude agreements with countries that would benefit the most from them. Such agreements, even without specific stipulations regarding labor and the environment could, through the promotion of economic growth, help to foster improved conditions abroad.

Fast-track, as currently written, provides the president with the flexibility to pursue the promotion of labor and environmental standards where possible and still promote market access and growth where it is not.

The United States is now more closely tied to the rest of the world by trade than at any other time in its history. How the U.S. economy performs relative to the economies of other nations will depend critically on how we promote our commercial interests abroad. Aggressive pursuit of trade liberalization, for which fast track authority is a prerequisite, is the best way to ensure that the U.S. maintains its position as the strongest and most innovative economy in the world.

The Continuing Importance of Trade Liberalization

Janet L. Yellen, Chair
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The basic goals of the Clinton Administration's economic policies are simple and uncontroversial. First, to secure rising living standards now and in the future. And second, to ensure that the benefits of a rising standard of living are extended to all Americans. To attain these ends, the Administration's economic agenda has been based on three key policy initiatives: deficit reduction, investing in people through education and training, and opening markets worldwide to U.S. goods and services.

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History tells us that fast-track negotiating authority is critical: in the early 1970s, Congress failed to ratify the Kennedy Round GATT agreement in its entirety, and, as a result the Europeans refused to negotiate further trade agreements with the United States. For this reason, in 1974, Congress developed and passed legislation providing the President with fast track negotiating authority, and giving the President the credibility he needs to negotiate international trade agreements.

So, why do we need fast track authority today? And, what would the Administration use it for? The Clinton Administration would focus on three key areas for its use.

The first use for fast-track negotiating authority would be to complete the agenda that was established in the Uruguay Round of GATT negotiations. At the end of the Uruguay Round negotiations, the United States, along with other countries, pushed for a timetable at which negotiations in different areas would resume. We did that, as did Europe and other countries, because we wanted more out of the Uruguay Round than we got. This year, we begin again the negotiations on government procurement; next year, we will begin intellectual property rights discussions; then we will begin talks on agriculture; then on services. Government procurement is a trillion-dollar market for the United States in Asia alone over the next decade; agriculture, a \$600-billion market globally; services, \$1.2 trillion market. The United States wants better access to those markets. And, we must have fast track authority before beginning discussions in these areas, otherwise countries will not put meaningful offers for market access on the table.

The second major use for fast-track authority is to extend the information technology agreement or ITA. The recently concluded ITA will reduce to zero tariffs on a range of information technology products: semiconductors, computers, telecommunications equipment, faxes, phones, integrated circuits -- a huge array of products in which U.S. firms tend to be highly competitive. The U.S. tariff barriers in those areas are either very low or zero. Asia's tariffs in these areas averaged 30 percent. With the ITA, the United States agreed -- with 43 other countries -- that tariffs on information technology products should be brought to zero across the board in all countries, by roughly the year 2000. We already have agreement among our trading partners for an ITA-2 -- which would expand the scope of the products encompassed by this extremely ambitious initiative. And, fast-track authority would be needed

to expand that arrangement.

We are also considering seeking similar kinds of agreements in a number of other individual sectors where the United States is very competitive but global barriers tend to be high -- areas such as environmental equipment and services, medical equipment and technology, and transportation equipment. In all of these areas, it would be necessary to have fast track authority to negotiate a reduction of trade barriers.

Finally, the third area that fast-track will be used is for more comprehensive market access agreements with individual countries. Thus far, Chile has been identified as the first and most likely country for this kind of arrangement. Today, every major economy in this hemisphere--save the United States--has a preferential trade agreement with Chile. In practice, this means that U.S. firms face tariffs in Chile that make their goods 11 percent more expensive than those of competing firms from other countries. This is a serious competitive disadvantage.

The pace with which preferential trade agreements are being negotiated between and among countries around the world is fast. The United States could easily be left behind through inaction. Since 1992, other countries have negotiated 20 preferential trade agreements in Latin America and Asia that exclude the United States. The European Union has begun a process that will culminate in a free trade agreement with Brazil, Argentina, and other MERCOSUR nations; President Chirac of France has even gone so far as to declare that the economic interests of Latin America "lie not with the United States, but with Europe." And within South America itself, the

four MERCOSUR countries are attempting to extend their preferential trade arrangements to encompass the entire continent. Moreover, other countries are aggressively pursuing expanded foreign trade. For example, China has targetted a number of Latin American countries--including Chile, Mexico, and Brazil--for increased bilateral trade.

It is clear: now, more than ever, continued engagement with the global economy will require an active effort on the part of the United States. And, an extension of fast track authority must be an integral component of this effort. But, let's go back to a fundamental and important question: why is free trade so important? Why should we be concentrating so much effort in pushing for more open foreign markets, and how does freer trade contribute to the Administration's goal of securing higher living standards for all Americans? In short, what are the benefits of free trade for the U.S. economy? I will use the remainder of my time to address this question--which, in fact, speaks to my own comparative advantage as an economist.

I would begin by first saying that one of the benefits of free trade is not, as is sometimes supposed, an improved overall current account or trade balance. The Administration's policies do indeed affect the current account, but it is its budget, saving, and investment policies, not its trade liberalization policies, that do so. The current account is a macroeconomic phenomenon that reflects the gap between what we as a nation invest and what we save. The large budget deficits of the 1980s and early 1990s reduced the amount of saving that was available to cover the nation's investment in plant and equipment (investment was choked off too, but not by as much), and this shortfall had to be filled by importing goods from abroad. In an important

sense, the nation was overconsuming in the 1980s, financing its consumption binge by borrowing output from foreigners. The result was a large and persistent trade deficit.

Today, we still face a trade deficit, but for a very different reason. Reducing the government's budget deficit has left more room for investment in plant and equipment by the private sector. And invest it has: since 1993, real business fixed investment has grown nearly nine percent per year on average, a much faster rate than that of the preceding ten years. This rate of investment is above the rate at which Americans save--even with the federal government dissaving less by virtue of its smaller budget deficit. So, once again the shortfall is made up for by borrowing output from abroad, with the result being a current account deficit. But there is a big difference between borrowing in order to invest--as the economy is doing now--and borrowing in order to consume, as we did in the 1980s. In fact, running a trade deficit in order to expand the nation's productive capacity is not new to American history--in the 1800s, we did much the same thing in order to build up the nation's infrastructure, most notably during the railroad construction boom a century ago.

So, it is not the gap between imports and exports that is relevant as far as trade policy is concerned. But the level of trade--the "openness" of the U.S. economy--does matter. In recent years, the United States has seen rapid growth in its degree of exposure to the world economy: real U.S. imports of goods and services grew at an average rate of 11 percent over the past four years, while real exports grew at an average rate of 10 percent per year. In the current recovery, export growth has been responsible for roughly a third of overall GDP growth. The United

States now exports an amount equal to 13 percent of its GDP every year and imports an amount equal to 15 percent of GDP; to put these figures in perspective, the corresponding figures for the 1960s were four and five percent, respectively. The American economy is now more open than at any time in its history.

What are the benefits of an open economy? Economists generally recognize two broad classes of benefits, the first being static, the second dynamic. I would like to discuss each in turn.

Ever since the work of Adam Smith and David Ricardo, economists have recognized that trade helps an economy by allowing it to specialize in what it does best. Adam Smith argued that specialization--the division of labor--enhances productivity, but noted that the degree to which an individual or a nation could specialize depended critically on the extent of its market. We all know the story of Robinson Crusoe, who, alone and isolated, had to do everything for himself: farm, weave cloth, build shelter, and so on. But if a group of Robinson Crusoes can trade amongst themselves, each can specialize in the production of what he or she is best at doing--thus producing more than would be possible were their attentions divided among goods which they are less skilled at making--and then can trade with his or her neighbors for the goods which they in turn are good at producing.

It might even be the case that one individual (or country, to drop the Robinson Crusoe

analogy) is better than anyone else at producing *every* good. Such an argument is often invoked in order to “prove” that the U.S. cannot benefit from trade with a country such as Mexico. But it turns out that the argument in favor of free trade still carries the day. All that is required is for a country to be *relatively* less skilled than another in the production of some good in order for it to benefit from trade. This is, of course, the doctrine of comparative advantage--the fundamental (if perhaps counterintuitive) principle that underlies the theory of international trade.

This, in a nutshell, is the “classical” view of the benefits of free trade. It is important to note that the benefits from trade under the classical doctrine are primarily static in nature--that is, they affect the *level* of output. Moving from a situation in which there is less trade (or no trade) to one in which trade is freer raises output, but this is more along the lines of a one-time increase (even though it might take a number of years for the benefits from trade to be fully felt). This is not to dismiss the significance of these static benefits: for example, some economic historians have argued that most of the economic growth that occurred in the classical world was rooted in the expansion of markets that took place as a result of increased sea trade around the Mediterranean.

Recently, a new view of international trade has emerged which argues that increased trade actually raises an economy’s *rate of growth*. If this is in fact the case, it makes the case for trade liberalization an even more compelling one. Raising the growth rate of the nation’s economy, even by a few tenths of a percentage point per year, has vastly more significance for long-run living standards than even a relatively large one-off increase in the level of output; the reason, of

course, is that a small increase in the economy's rate of growth cumulates over time to yield large gains.

What is the rationale behind the new trade theory--in other words, what is the source of the "dynamic" benefits from trade? Well, we know that economic growth has two sources: either we can increase the amount of inputs (capital, labor, and raw materials) that we feed into the productive process, or we can make those inputs more productive, through innovations in technology, better education and training, and so on. (In fact, this latter factor is necessary if the economy is to grow in per-capita terms in the long run, as sooner or later simply accumulating more inputs will run up against the law of diminishing returns.) The static benefits of trade represent a one-off increase in this latter factor: specialization lets us allocate labor and capital to the production of goods that we are relatively good at producing, making a given amount of labor and capital more productive in a manner that is not unlike an improvement in managerial technique.

The new view of international trade also focusses on this second factor, but argues that international trade can actually increase the rate of innovation and technological change. One economist has summarized the argument with the following catena:

- International trade leads to greater competition;
- Competition induces greater innovation; and,
- Innovation (*i.e.*, technological change) drives economic growth.

(It's a simple notion once you think about it--though it will probably win the economists who thought it out a Nobel prize some day.)

In a sense, the emphasis of the new trade theory on the dynamic benefits of international trade comes full circle to Adam Smith. Although Smith's contribution to trade theory is generally seen as providing an argument in favor of free trade that highlighted the role of specialization in raising productivity, he also pointed out that specialization, by acquainting workers with a specific productive process, could give them insight into how such processes might be improved--thus fostering innovation. New trade theory also incorporates elements of Joseph Schumpeter's theory of "creative destruction," in which the competition that is a fundamental feature of a capitalist economy serves as a motive force for the economy's progress.

The new view of international trade represents a valuable contribution to academic economics. But theory alone cannot provide an airtight argument in favor of trade liberalization. There is, however, a large body of empirical literature which attempts to determine what drives economic growth across countries. Unsurprisingly, investment in physical capital--plant and equipment--and investment in human capital--education, for instance--are two factors which have a profound influence on economic growth. But these same studies have also found that an economy's degree of openness--as proxied, say, by the amount that it imports and exports relative to its overall output--has an effect on its rate of growth.

In an ideal world--the world in which economists live--free trade unambiguously benefits the economy *taken as a whole*. This is true in the real world as well, although the ideal case

masks the fact that some will gain from freer trade, but others may lose--even though on net the winners could compensate the losers and still have something left over. In practice, increased globalization will induce reallocations of labor and capital across sectors as the focus of American industry moves to the production of those goods and services which we are relatively good at producing. Because our economy is not frictionless, these adjustments sometimes involve lengthy periods of dislocation until the reallocation of labor and capital across industries is complete.

Policy makers advocating freer trade must be aware of this fact, and the Clinton Administration has realized from the beginning that it is the government's duty to minimize the impact of this dislocation by speeding up the adjustment process however it can. For example, one of the key provisions of NAFTA involved monitoring those industries that were in danger of being adversely affected by the free trade agreement, and the Administration committed itself early on to providing for dislocated workers through retraining programs. And, more generally, the Administration's commitment to investing in people through education and training serves as a strong complement to its policy of trade liberalization: since freer trade tends to benefit skilled workers most, the United States enjoys greater benefits from trade to the extent that more of its workers are highly skilled. In the end, though, those who would point to the short-term adverse effects of trade liberalization should not lose sight of an important point: Trade liberalization might adversely affect a small fraction of American workers in their role as producers, but it benefits all workers in their role as consumers.

Bottom line is: the benefits of increased openness and increased international trade are wide ranging -- more efficient utilization of resources, faster productivity growth, higher quality goods, and lower prices, all of which raise living standards.

Finally, in closing, I would note that I have said nothing of the benefits of trade that arise simply from the fact that it links the economic interests of nations more closely. John Maynard Keynes once argued that the greatest tragedy visited upon Europe by the First World War was the disruption of the system of international trade that was a hallmark of the European economy before 1914. The eventual breakdown in the world trading system and resulting deterioration of Europe's economy was a proximate cause of the Second World War, and kept living standards in Europe and the U.S. much lower for much longer than was necessary by prolonging the Great Depression. It is only in recent years that the scope of international trade has returned to the level seen before the Great War.

The United States is now more closely tied to the rest of the world by trade than at any other time in its history. How the U.S. economy performs relative to the economies of other nations will depend critically on how we promote our commercial interests abroad. Aggressive pursuit of trade liberalization, for which fast track authority is a prerequisite, is the best way to ensure that the U.S. maintains its position as the strongest and most innovative economy in the world.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Peter R. Orszag (CN=Peter R. Orszag/OU=OPD/O=EOP [OPD])

CREATION DATE/TIME:19-OCT-1997 21:49:32.00

SUBJECT:

TO: Joseph J. Minarik (CN=Joseph J. Minarik/OU=OMB/O=EOP @ EOP [OMB])

READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: JONATHAN.GRUBER (JONATHAN.GRUBER @ MS01.DO.treas.sprint.com @ INET @ LNGTWY [UNKNOWN])

READ:UNKNOWN

TEXT:

The attached is a very, very, very rough draft of some Q&A on the economy and climate change.

In the general spirit of the climate change issue, feel free to tear it to shreds. Comments to me please.

Thanks,

Peter===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D52]MAIL41409719X.216 to ASCII,
The following is a HEX DUMP:

DRAFT DRAFT DRAFT
ECONOMIC Q&A
October 19, 1997

OVERVIEW

Q: WHAT IS THE ECONOMIC LOGIC OF THE PRESIDENT'S PLAN?

- A:
- As the President has emphasized, the risks posed by global climate change are real and sensible preventive steps are justified. This assessment accords with the views of the more than 2,500 economists -- including 8 Nobel laureates -- who signed a statement supporting measures to reduce the threat of climate change.
 - As Janet Yellen has stated, the effects of addressing climate change depend on whether we do it smart or we do it dumb. Doing it smart means using market mechanisms, recognizing the uncertainties involved, and avoiding all unnecessary costs.
 - The President's three-stage program is therefore intended to ensure that we explore all possible avenues for low-cost carbon reductions. It includes a graduated, three-stage approach to reducing emissions, creates regular economic reviews, and emphasizes the importance of developing country participation in the global effort to address climate change.

Q: COULD YOU DESCRIBE THE THREE-STAGE PLAN IN MORE DETAIL, AND EXPLAIN HOW IT WORKS?

A: Yes:

- In the first stage, his package includes tax incentives and spending for R&D and energy efficiency, a set of Federal government energy initiatives, and out-reach to industry to explore their ideas.
- In the second stage, which would not take effect until 2005, the program introduces a trial market-based permit trading system for carbon emissions. Such a permit system is similar to, at least in concept, the one that currently applies to sulfur dioxide emissions -- although the scale of the carbon trading system would be significantly larger than the current sulfur dioxide program.
- Then, finally, in the third stage -- which would not take effect until [2008] and would continue through [2014] -- we would reduce emissions to 1990 levels. Before beginning this third stage, Congress and the President would review how the economy had responded to the first two stages. And a critical component of this third stage is the inclusion of developing countries in an international system.

Q: HOW DOES THIS THREE-STAGE PLAN RECOGNIZE THE UNCERTAINTY INVOLVED IN CLIMATE CHANGE?

A: This three-stage program recognizes the uncertainty involved in the effort to address climate change in three ways:

- By adopting a graduated approach to emissions reductions, it allows us to grab the “low-hanging” fruit first.
- By adopting a system of regular economic reviews, to monitor our progress and re-assess how the economy is responding. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
- By insisting that the United States will not adopt binding obligations until developing countries make adequate commitments in terms of their own obligations, and that developing countries must be included in the international permit trading system. This allows the U.S. to take advantage of low-cost reduction possibilities abroad.

Q: HOW DOES THIS PLAN RELATE TO LESSONS LEARNED FROM ECONOMIC MODELS?

A: The economics literature on climate change suggests several lessons, including:

- Efforts to address climate change involve substantial uncertainties, in terms of both the economy and the environment;
- A “cap and trade” system in which emission permits are issued and then traded among firms can substantially reduce the cost of meeting an emissions target by creating incentives for emissions to be reduced by those firms and in those activities where costs are lowest;
- International emission permit trading substantially lowers costs by applying the same cost-minimizing principle globally; and
- Joint implementation, whereby US firms would receive credit for undertaking emission reductions in countries with low abatement costs, would also lower the domestic burden.

The President’s plan reflects these crucial lessons:

- It reflects the underlying uncertainties involved by adopting a graduated approach

to reducing emissions and instituting regular economic reviews.

- It includes a market-based emissions trading system that can substantially reduce costs relative to command-and-control approaches.
- It emphasizes international permit trading, and
- It conditions U.S. binding obligations on the participation of developing countries in the international system.

GDP AND EMPLOYMENT

Q: WHAT IS THE EFFECT ON GDP?

- A:
- The precise effect on GDP is very difficult to assess. To provide some perspective: as you all know, it is difficult to gauge exactly what impact the balanced budget agreement will have on the U.S. economy's growth rate, levels of employment, interest rates and consumption over the next five years. But with global climate change, it is orders of magnitude more difficult to gauge the effects on the economy. Global climate change involves not just the next five years and not just the American economy, but, rather economic and physical processes that operate globally and over decades, if not centuries.
 - To reflect this uncertainty, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
 - President Clinton's top priority, since his first days in office, has been revitalizing the U.S. economy, creating jobs and investing in people and technology to enhance long-term growth. We have made tremendous progress, and the President is not going to jeopardize that progress. Nor would we expect any future President or Congress to do so.
 - As for specific estimates of the impact on GDP -- which again are highly uncertain -- I would emphasize that two key components of the President's plan are that developing countries adopt binding targets and participate in an international permit trading system. With these two components, economic analysis suggests that the effect on GDP is likely to be minimal -- and much less than the typical variation in growth from quarter to quarter or year to year. [With worldwide trading, economic models suggest that the effect on GDP in 2010 is

likely to amount to less than 0.1 percent of GDP.]

FOLLOW: BUT DON'T SOME MODELS SHOW DECLINES IN GDP OF 1 TO 2 PERCENT? IS THAT "MINIMAL"?

A: Some models do indeed show declines of those amounts, but only by ignoring several key issues:

- First, there is much uncertainty over cost projections that are 13 or more years into the future -- 13 years ago, we could never have predicted that we would now have an unemployment rate below 5 percent, core inflation below 2.5 percent, and a budget deficit substantially under \$50 billion.
- Second, to reflect the uncertainty involved in addressing climate change, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
- Finally, those estimates are based on model runs that assume that developing countries do *not* adopt binding targets and that there is no international permit trading -- even though both are key component of the President's plan. When those components are included in the analysis, the effects on GDP are predicted to be substantially lower.

[With worldwide trading, economic models suggest that the effect on GDP in 2010 is likely to amount to about 0.1 percent of GDP.]

Q: WHAT IS THE EFFECT ON OVERALL EMPLOYMENT?

A: Same as answer to GDP question above, but substituting "employment" for "GDP."
[With worldwide international trading, the effect on employment is likely to be about 75,000 jobs -- about one-third the average *monthly* job creation since President Clinton took office.]

Q: DIDN'T AN EPI REPORT SHOW THAT OVERALL EMPLOYMENT WOULD FALL BY MORE THAN 1.5 MILLION UNDER THE PRESIDENT'S PLAN?

A: No. The EPI report assumed no international trading and no developing country participation -- key components of the President's plan. Other results suggest that such omissions produce grossly misleading results. So I expect that the EPI report is a grossly misleading analysis of the President's plan, which emphasizes the importance of

developing country participation and international trading. His plan also includes regular economic reviews, to ensure that the economic costs are not excessive.

After all, President Clinton's top priority, since his first days in office, has been revitalizing the economy, creating jobs and investing in people and technology to enhance long-term growth. And we have made tremendous progress: growth is strong, unemployment is down to 4.9 percent, and over 13 million jobs have been created since January 1993. He is not going to jeopardize that progress.

Q: WHAT ABOUT EMPLOYMENT IN SPECIFIC SECTORS?

A: President Clinton's top priority, since his first days in office, has been revitalizing the economy, creating jobs and investing in people and technology to enhance long-term growth. And we have made tremendous progress: growth is strong, unemployment is down to 4.9 percent, and over 13 million jobs have been created since January 1993. He is not going to jeopardize that progress.

As the President has emphasized, the risks posed by global climate change are real and sensible preventive steps are justified. It is likely that in the effort to address this substantial challenge, some sectors will gain and some will lose. The regular economic reviews that are a critical part of the President's plan, and his commitment to developing a system of transition assistance for any affected workers, are intended to minimize any costs.

PERMIT PRICES AND ENERGY PRICE INCREASES

Q: DON'T MOST MODELS SUGGEST THAT CARBON PRICES WILL HAVE TO RISE BY \$100 TO \$200 PER TON TO REDUCE EMISSIONS TO 1990 LEVELS BY 2010?

A: Many models have concluded that permit prices would need to be in that range to reduce emissions to 1990 levels by 2010 with no international trading. But such trading, including with developing countries, is a key component of the President's plan. The economics literature suggests that worldwide trading substantially reduces the costs involved.

I should also note that there is much uncertainty over cost projections that are 13 or more years into the future -- 13 years ago, we could never have predicted that we would now have an unemployment rate below 5 percent, core inflation below 2.5 percent, and a budget deficit substantially under \$50 billion.

To reflect the uncertainty involved in addressing climate change, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would

we enter the internationally binding period.

FOLLOW: HOW MUCH OF A DIFFERENCE DOES WORLDWIDE TRADING REALLY MAKE?

A: I hesitate to give a precise answer because of the substantial uncertainties involved in the analytical effort. But many reports suggest that worldwide trading could *substantially* reduce the cost.

For example, one report written by several leading climate change economists and published by the Pacific Northwest National Laboratory this month suggests that worldwide permit trading would allow us to reach 1990 levels by 2010 for a permit price of approximately \$25 per ton in 2010 -- or an increase of about 6 cents per gallon of gasoline after 13 years. [JA Edmonds, SH Kim, CN MacCracken, RD Sands, MA Wise, "Return to 1990: The Cost of Mitigating United States Carbon Emissions in the Post-2000 Period," Battelle, October 1997.]

Q: DIDN'T THE 5-LABS STUDY CONCLUDE THAT CARBON PRICES WOULD HAVE TO RISE BY \$50 TO REACH 1990 LEVELS BY 2010, AND ISN'T THAT ON THE OPTIMISTIC SIDE?

A: The 5-Labs study examined a scenario in which there was no international trading, and concluded that the permit price would have to be \$50 to reduce emissions to 1990 levels by 2010 with no such trading. But the President's plan emphasizes international trading, including with developing countries, and the economics literature suggests that worldwide trading substantially reduces the costs involved.

[The Department of Energy has released an analysis that combines international permit trading with the results of the 5-Labs study, and concluded that a permit price of \$25 or lower in 2010 would allow the country to meet its target and timetable.]

Q: ISN'T \$25 PER TON OF CARBON STILL A SUBSTANTIAL INCREASE IN ENERGY COSTS?

A: As the President has emphasized, the risks posed by global climate change are real and sensible preventive steps are justified. Some increase in the relative price of energy is necessary to address climate change, and the relative price shifts involved would not take effect until 2005 or later. \$25 per ton translates into about 6 cents per gallon of gasoline -- and that would not take effect until 2005. [\$25 per ton also translates into approximately \$200 per year for the average family.]

Q: DON'T SOME ADS SUGGEST THAT GAS PRICES WOULD HAVE TO RISE BY 50 CENTS?

A: Those ads are misleading. They seem to be based on especially pessimistic views about

what could happen if we attempted to reduce emissions to 1990 levels without international trading. But such trading, including with developing countries, is a key component of the President's plan. Since the economics literature suggests that worldwide trading substantially reduces the costs involved, those ads are misleading.

CREDIBILITY

Q: HOW CAN YOU POSSIBLY REDUCE EMISSIONS TO 1990 LEVELS BY 2010 WITHOUT IMPOSING EXCESSIVE COSTS ON THE ECONOMY?

- A:
- Climate change is a critical challenge facing the country, but there is substantial uncertainty surrounding how costly it will be to address. Given this uncertainty, it would be irresponsible not to explore all possible avenues for low-cost emissions reductions before undertaking any effort that would be excessively costly.
 - The President's graduated, three-stage approach therefore recognizes that there is substantial uncertainty over any project that is 13 or more years into the future -- 13 years ago, we could never have predicted that we would now have an unemployment rate below 5 percent, core inflation below 2.5 percent, and a budget deficit substantially under \$50 billion.
 - To reflect the uncertainty involved in addressing climate change, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
 - I don't know for sure that we can succeed in this effort, but I'll tell you one thing: After the first two stages of the President's program, we will have made a credible first step and we'll know a lot more than we do now about both the science and economics of climate change.

SAFETY VALVE AND "BINDING" TARGET

Q: IS THE TARGET AND TIMETABLE BINDING?

A: Yes, but it would not be reasonable to expect this President, or any future President or Congress, to impose excessive costs on the economy to meet that target.

Q: THEN HOW CAN YOU CLAIM THAT THE TARGET AND TIMETABLE IS BINDING, WHEN MOST ECONOMIC MODELS SUGGEST THAT YOU CAN'T REDUCE EMISSIONS THAT MUCH WITHOUT INCURRING EXCESSIVE

COSTS?

- A:
- First, there is much uncertainty over any cost projections that are 13 or more years into the future -- 13 years ago, we could never have predicted that we would now have an unemployment rate below 5 percent, core inflation below 2.5 percent, and a budget deficit substantially under \$50 billion.
 - Second, the models to which you refer assume no worldwide permit trading. But such trading, including with developing countries, is a key component of the President's plan. The economics literature suggests that worldwide trading substantially reduces the costs involved.
 - Finally, all we are saying is that it is unreasonable to ignore the reality that future Congresses will always have the option to protect the economy or to undertake more environmental action. We should therefore recognize that decisions about whether the United States was willing to bear the costs that could be necessary to meet the target and timetable goal will, in a sense, have to be made at that time.

Q: HOW CAN YOU ENSURE THAT THE COSTS ARE NOT EXCESSIVE?

- To ensure that the costs are not excessive, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, precisely to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
- The President has also emphasized the participation of developing countries, and an international system of trading permits, as key components of his climate change plan. Such factors should substantially reduce the costs involved.

TAX INCREASES

Q: DOESN'T THE PRESIDENT'S PLAN AMOUNT TO THE LARGEST ENERGY TAX INCREASE IN HISTORY -- \$200 BILLION A YEAR OR MORE?

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

Q: BUT ISN'T A PERMIT SYSTEM JUST LIKE A TAX?

A: No. There are several critical differences between a permit system and a tax. For example, a permit system provides insurance that a given quantitative target will be met, whereas a tax does not.

Q: BUT IF YOU AUCTION THE PERMITS, ISN'T THAT A TAX?

A: First, we have not necessarily decided to auction the permits. Second, even if they are auctioned, there are still several critical differences between such a permit system and a tax. For example, the permit system provides insurance that a given quantitative target will be met, whereas a tax does not.

Q: WON'T ENERGY PRICES INCREASE, JUST AS IF YOU IMPOSED A TAX?

A: Climate change is a critical issue, and some increase in the relative price of energy will ultimately be necessary to address it. But it would be irresponsible not to explore all possible alternatives before resorting to moderate relative price change. The President has therefore proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period. The President has also emphasized the participation of developing countries, and an international system of trading permits, as key components of his climate change plan. Such factors should substantially reduce the costs involved.

Q: HOW DOES THIS COMPARE TO THE BTU TAX?

A: This is not a tax. [A \$25 permit price is equivalent to approximately 60 to 70 cents per million BTUs. In 1993, the Administration proposed a tax of 26 cents per million BTUs plus a 34 cents per million BTUs tax on oil.]

DETAILS OF PERMIT SYSTEM, INCLUDING GRANDFATHERING VERSUS AUCTIONING

Q: HAVE YOU DECIDED WHETHER THE PERMITS WOULD BE AUCTIONED OR GRANDFATHERED?

A: No. That is a very important issue that we will explore with Congress and other interested parties when the time comes for developing domestic implementation legislation.

Q: WHERE WOULD THE PERMIT REQUIREMENTS BE IMPOSED?

A: That is a very important issue that we will explore with Congress and other interested parties when the time comes for developing domestic implementation legislation.

COMPETITIVENESS

Q: WON'T THIS PLAN LEAD TO MASSIVE SHIFTS OF U.S. INDUSTRY AND JOBS ABROAD?

- A:
- No. The President has made very clear that we will not assume binding obligations until the developing countries make adequate commitments in terms of their own obligations.
 - I would also note that non-tradeable sectors account for a substantial share of carbon emissions. Transportation and buildings, for example, account for roughly two-thirds of U.S. emissions. For these sectors, the "competitiveness" argument seems largely irrelevant.
 - In most manufacturing sectors, furthermore, energy costs are a small percentage of total costs. According to the 1995 Annual Census of Manufactures, energy costs for manufacturing industries averaged just 2.2 percent of total costs.

DEVELOPING COUNTRIES AND INTERNATIONAL TRADING

Q: WHAT SPECIFIC MODELS SHOW THAT WORLDWIDE INTERNATIONAL TRADING ALLOWS RELATIVELY LOW-COST REDUCTIONS?

- A:
- According to JA Edmonds, SH Kim, CN MacCracken, RD Sands, MA Wise, "Return to 1990: The Cost of Mitigating United States Carbon Emissions in the Post-2000 Period," Battelle, October 1997, the cost of reaching 1990 levels by 2010 with worldwide trading would be a permit price of \$26 per ton in 2010.
 - The models used by the Interagency Analytical Team to produce its draft report suggest that the permit price needed to reduce emissions to 1990 levels by 2010 would be between \$9 and \$20 in 2010.

Q: DOESN'T INTERNATIONAL TRADING MEAN THAT WE ARE ESCAPING OUR OBLIGATION TO REDUCE EMISSIONS?

- A:
- No. A ton of carbon emitted from Argentina is just as damaging to the global climate system as a ton of carbon emitted from the United States. So we are contributing just as much to the effort to address global climate change if we facilitate reductions abroad as if we reduce here. The U.S. position has therefore always emphasized the efficiency of allowing least-cost reductions wherever they occur in the world.

Q: IS INTERNATIONAL TRADING REALLY FEASIBLE, ESPECIALLY WITH DEVELOPING COUNTRIES?

- A:
- Creating a system of international trading will undoubtedly be a challenge for the United States and other parties to any climate change treaty. But the President is firmly committed to the concept, because it is an efficient, market-based approach

to emissions reductions -- it substantially reduces the costs of meeting our target.

- The World Bank has already begun work on how such an international trading system could function.
- And some carbon trades are already occurring under our pilot Joint Implementation program.

PROCESS ON ECONOMIC MODELLING AND ECONOMIC ANALYSIS

Q: WHAT ECONOMIC ANALYSIS AND MODELS DID YOU USE IN EVALUATING DIFFERENT POLICIES?

A: We relied on a wide variety of published analyses and outside experts, as well as the professional judgment of the Administration's top economists. Given the uncertainties involved, it would have been imprudent to rely on one single model or set of models. So we wound up relying on a large number of analyses and views -- including the results from the Energy Modeling Forum at Stanford University, the Intergovernmental Panel on Climate Change, and others.

Q: WHAT IS THE INTERAGENCY ANALYTICAL TEAM? DOES ITS REPORT REFLECT THE ADMINISTRATION'S OFFICIAL ECONOMIC ANALYSIS?

- A:
- When the Administration evaluates possible policies, it normally sets up a variety of staff-level working groups to inform the principals' discussions. The Interagency Analytical Team (IAT) was one such group -- an informal group of modelers from various agencies in the Federal government.
 - Once the relevant principals within the Administration looked over the staff work and the peer review comments on it, it was decided that further activity would be futile because of the difficulty of developing a model or set of models that can give us a definitive answer as to the economic impacts of a given climate change policy. So the IAT report is *not* the Administration's official economic analysis on this issue.
 - The working group's draft report, which was released on July 15, summarizes the preliminary results of the modeling effort. That modeling effort produced some useful lessons, but -- as illustrated by comments from peer reviewers -- it also suffered from shortcomings.
 - As Janet Yellen emphasized in her testimony on July 15, the lessons and the

shortcomings of the exercise point to one clear conclusion: the effort to develop a model or set of models that can give us a definitive answer on the precise economic impact of a given climate change policy is futile. Rather, we are left with a set of parameters and relationships that influence estimates of the impacts. As she indicated, it is more productive to employ a broad set of economic tools to analyze policy options than to seek to develop a single definitive model. So that's what we did.

ECONOMIC TEAM RUMORS

Q: ISN'T IT TRUE THAT THE ECONOMIC TEAM OBJECTED TO THE PRESIDENT'S CHOICE OF EMISSIONS REDUCTIONS?

A: I'm sure that you can understand that the advice given by any Administration officials to the President must remain confidential. But I can assure you that the economic team supports the President's package, especially its emphasis on a market-based approach and on international trading.

Q: BUT DOESN'T YOUR OWN ANALYSIS SHOW THAT REACHING 1990 BY 2010 WOULD INVOLVE SUBSTANTIAL COSTS?

A: It seems inappropriate for me to reveal the analysis and views that I have shared with the President. I can say that I have informed him of the results from conventional economic models available in the public domain, and discussed both the benefits and limitations of such models. Given the importance I attach to frank internal discussions, I would prefer not to elaborate beyond that -- except to note once again, that there is much uncertainty involved in the estimates and that worldwide international trading, a key component of the President's plan, reduces the costs involved significantly.

COMPONENTS OF STAGE 1

Q: WHAT DOES STAGE 1 OF THE PRESIDENT'S PLAN ENTAIL?

A: The first stage, which applies until 2005, includes:

- **\$5 billion for tax cuts and R&D:** A package of carbon-reducing tax incentives and other programs that amounting to \$5 billion over 5 years. Some of the preliminary ideas include expanding the Partnership for a New Generation of Vehicles, further developing the Industries of the Future Program, and considering tax incentives for purchasing energy-efficient products.
- **Federal energy efficiency improvement:** A Federal government energy

efficiency initiative is being developed by the Department of Energy, in conjunction with the Department of Defense and other relevant agencies. It includes expanding the use of Energy Savings Performance Contracts, reinventing federal procurement, taking a "sustainable design" approach to federal facilities, and developing more efficient military propulsion systems. The effort would also include a review of existing Executive Orders on purchases, preparation of a new Executive Order to fill any gaps, a directive to federal agencies to prepare greenhouse gas reductions plans and a requirement that all federal agencies assess the greenhouse gas impacts of major federal actions.

- **Industry out-reach:** We will encourage businesses, on an industry by industry basis, to prepare plans for reductions that they believe they could achieve on their own and how they could best achieve them. Each relevant industry would prepare a plan over the next 6–12 months.
- **Credit for early action:** The President and Vice President strongly support appropriate rewards for those who promptly take early action to reduce emissions. The details of how such an early credit system would operate, however, are complex and can't be fully articulated until the details of an overall permit trading system are worked out. We should state our support for early action and indicate that early actors will be appropriately rewarded.
- **Transition Assistance.** We will work cooperatively with labor and Congress to insure that we give proper assistance to any workers who are dislocated by the changes in energy usage inherent in any climate change plan.

Q: WHAT ARE THE PAY-FORS ON THE \$5 BILLION IN TAX INCENTIVES AND R&D?

A: We will be developing the detail of that package as part of the FY 1999 budget process. The proposals will clearly be fully paid for, but we are still working out the details of what will be included in the package itself. So it doesn't make sense to identify precisely the pay-fors before identifying the items themselves.

COMPONENTS OF STAGE 2

Q: WHAT DOES STAGE 2 OF THE PRESIDENT'S PLAN ENTAIL?

A: In stage 2, which begins in 2005, the emissions trading system would begin as a trial project that would allow us to learn how the system operates before entering the period in which our binding international obligations would hold.

[ADD MORE DETAIL HERE.]

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Peter R. Orszag (CN=Peter R. Orszag/OU=OPD/O=EOP [OPD])

CREATION DATE/TIME:20-OCT-1997 20:31:19.00

SUBJECT: Draft #2 on economics Q&A

TO: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: JONATHAN.GRUBER (JONATHAN.GRUBER @ MS01.DO.treas.sprint.com @ INET @ LNGTWY [UNKNOWN])

READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Todd Stern (CN=Todd Stern/OU=WHO/O=EOP @ EOP [WHO])

READ:UNKNOWN

TO: LAPHAM_N (LAPHAM_N @ A1 @ CD @ LNGTWY [UNKNOWN]) (CEQ)

READ:UNKNOWN

TO: David B Sandalow (CN=David B Sandalow/OU=CEQ/O=EOP @ EOP [CEQ])

READ:UNKNOWN

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Russell W. Horwitz (CN=Russell W. Horwitz/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TO: William J. Antholis (CN=William J. Antholis/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TO: Melissa Green (CN=Melissa Green/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TEXT:

Comments to me. Thanks.

Todd, Nicholas, and Bill: We also need to make sure that the packet is coming along...Let me know how I can help...===== ATTACHMENT 1

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D89]MAIL483347295.216 to ASCII,
The following is a HEX DUMP:

PRELIMINARY AND INCOMPLETE: CLOSE HOLD
ECONOMIC Q&A
October 20, 1997, 8:30 pm

OVERVIEW

Q: WHAT IS THE ECONOMIC LOGIC OF THE PRESIDENT'S PLAN?

- A:
- As the President has emphasized, the risks posed by global climate change are real and sensible preventive steps are justified. The effects of addressing this critical issue depend on whether we do it smart or we do it dumb. Doing it smart means using market mechanisms, recognizing the uncertainties involved, and avoiding all unnecessary costs in reaching our goal.
 - The President's three-stage program is therefore intended to ensure that we explore all possible avenues for low-cost carbon reductions. It includes a graduated, three-stage approach to reducing emissions, creates regular economic reviews, and emphasizes the importance of developing country participation in the global effort to address climate change.

Q: COULD YOU DESCRIBE THE THREE-STAGE PLAN IN MORE DETAIL, AND EXPLAIN HOW IT WORKS?

A: Yes:

- In the first stage, his package includes tax incentives and spending for R&D and energy efficiency, a set of Federal government energy initiatives, and industry-by-industry consultations to explore their best ideas on how to reduce emissions in a cost-effective manner.
- In the second stage, which would not take effect until 2005, the program introduces a trial market-based permit trading system for carbon emissions. Such a permit system is similar to, at least in concept, the one that currently applies to sulfur dioxide emissions -- although the scale of the carbon trading system would be significantly larger than the current sulfur dioxide program.
- Then, finally, in the third stage -- which would not take effect until [2008] and would continue through [2014] -- we would reduce emissions to 1990 levels. Before beginning this third stage, Congress and the President would review how the economy had responded to the first two stages. And a critical component of this third stage is the inclusion of developing countries in an international system.

Q: HOW DOES THIS THREE-STAGE PLAN RECOGNIZE THE UNCERTAINTY

INVOLVED IN CLIMATE CHANGE?

A: This three-stage program recognizes the uncertainty involved in the effort to address climate change in three ways:

- By adopting a graduated approach to emissions reductions, it allows us to grab the “low-hanging” fruit first.
- By adopting a system of regular economic reviews, to monitor our progress and re-assess how the economy is responding. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
- By insisting that the United States will not adopt binding obligations until developing countries make adequate commitments in terms of their own obligations, and that developing countries must be included in the international permit trading system. This allows the U.S. to take advantage of low-cost reduction possibilities abroad. As a letter signed by 2500 economists -- including 8 Nobel prize-winners -- argues, “In order for the world to achieve its climatic objectives at least cost, a cooperative approach among nations is required -- such as an international emissions trading agreement.”

Q: HOW DOES THIS PLAN RELATE TO LESSONS LEARNED FROM ECONOMIC MODELS?

A: The economics literature on climate change suggests several lessons, including:

- Efforts to address climate change involve substantial uncertainties, in terms of both the economy and the environment;
- A “cap and trade” system in which emission permits are issued and then traded among firms can substantially reduce the cost of meeting an emissions target by creating incentives for emissions to be reduced by those firms and in those activities where costs are lowest;
- International emission permit trading substantially lowers costs by applying the same cost-minimizing principle globally; and
- Joint implementation, whereby US firms would receive credit for undertaking emission reductions in countries with low abatement costs, would also lower the domestic burden.

The President's plan reflects these crucial lessons:

- It reflects the underlying uncertainties involved by adopting a graduated approach to reducing emissions and instituting regular economic reviews.
- It includes a market-based emissions trading system that can substantially reduce costs relative to command-and-control approaches.
- It emphasizes international permit trading, and
- It conditions U.S. binding obligations on the participation of developing countries in the international system.

ECONOMIC COSTS OF CLIMATE CHANGE ITSELF

Q: WHAT ARE THE ECONOMIC COSTS OF CLIMATE CHANGE ITSELF? IS THERE AN ECONOMIC BENEFIT TO REDUCING CARBON EMISSIONS?

A: Yes. Several prominent economists, including Bill Cline and Bill Nordhaus, have examined the economic impact of *not* acting at all. They study the costs of climate change in terms of agriculture, sea-level increases, life and morbidity, hurricane damage, and other factors. Their general conclusion is that the cost of allowing climate change to continue unabated could amount to losses of about 1 percent of GDP -- equivalent to about \$8 billion -- in the United States. [Nordhaus, *Managing the Global Commons*, Table 4.1; Cline, *The Economics of Global Warming*, Table 3.4.] Other analysts believe that the effects could be even larger.

[Note: By itself, reducing emissions to 1990 levels would not avert all -- or even most -- of the damages. So the partial benefit to reducing emissions to 1990 levels is *much* smaller than the figures listed above.]

TARGET AND TIMETABLE

Q: HOW DID YOU CHOOSE 1990 BY 2008 TO 2014, RATHER THAN ANY OTHER ALTERNATIVE?

A: The President carefully weighed a wide variety of different targets and timetables. Because of the multitude of economic, environmental, and diplomatic factors involved in each approach, this decision was very difficult. He decided that the best balancing of all these factors, and one that would represent a credible first step in addressing climate change, would be to set a target and timetable of reducing emissions to 1990 levels by 2008 to 2014. That is the proposal we will be bringing to Kyoto. The President feels that his graduated approach strikes the proper balance between those who wish to do more, at the possible risk of imposing significant costs on the economy, and those who

wish to do less, at the possible risk of imposing significant costs on the environment.

Q: HOW EXACTLY IS THE TIMETABLE MEASURED? WHAT DOES 2008 TO 2014 MEAN?

A: The proposal means that the objective is to reduce average greenhouse gas emissions between 2008 and 2014 to their level in 1990. In 1990, *net* U.S. emissions of all greenhouse gases -- CO₂, methane, nitrogen oxide, etc. -- amounted to 1.46 billion metric tons of carbon equivalent. Total CO₂ (carbon dioxide) emissions amounted to 1.34 billion metric tons, and *net* carbon dioxide emissions amounted to 1.23 billion of this total. (Net means gross emissions minus sinks, such as forests.)

[The U.S. position is that the international agreement should be stated in terms of total net emissions.]

Q: WHAT WILL U.S. EMISSIONS BE IN 2008-2014 UNDER BUSINESS-AS-USUAL? HOW ABOUT OTHER COUNTRIES?

A: We don't have a precise answer for 2008-2014, but we do have estimates for 2010 -- which is likely to be close to the average for 2008 to 2014. According to projections from DOE's Energy Information Administration, U.S. CO₂ emissions under business-as-usual are expected to increase from 1.34 billion metric tons in 1990 to 1.72 billion in 2010 -- an increase of 29 percent.

Western Europe CO₂ emissions are projected to rise from 1.02 billion metric tons in 1990 to 1.21 billion in 2010 -- an increase of 19 percent.

[Japanese emissions are expected to rise from 308 million metric tons to 466 million -- an increase of 51 percent. That estimate, however, does not fully reflect the recent slow-down in growth in Japan, and may therefore be substantially overstated.]

World emissions are expected to rise by 46 percent, from 6.0 billion metric tons in 1990 to 8.8 billion metric tons in 2010.

Q: WHY DID YOU CHOOSE A MULTI-YEAR TIMETABLE?

A: As press reports earlier this week indicated, carbon emissions often fluctuate significantly from year to year, based on economic growth, the weather, and other variables. The purpose of the multi-year timetable is to average over several years and thus minimize the impact of year-to-year fluctuations on meeting our international obligation.

Q: DOESN'T RESEARCH (BY MANNE AND RICHEL) SHOW THAT THE PRESIDENT'S TARGET AND TIMETABLE IMPOSES SUBSTANTIALLY HIGHER ECONOMIC COSTS FOR NO ADDITIONAL ENVIRONMENTAL

BENEFIT, RELATIVE TO A MORE GRADUAL ADJUSTMENT PATH?

A: Some economic research does suggest that relative to the plan proposed by the President, a more backloaded approach to emissions reductions could reduce the costs involved, even while resulting in the same ultimate concentration of carbon in the atmosphere. But the emissions paths called for under such a plan rely on very steep -- and perhaps implausible -- declines in the out-years to ensure that the same concentration goal is met. [If we had proposed such a path, we would undoubtedly have been criticized for proposing a plan that was too backloaded.]

The President feels that his graduated, three-stage approach strikes the proper balance between those who wish to do more, at the possible risk of imposing significant costs on the economy, and those who wish to do less, at the possible risk of imposing significant costs on the environment.

GDP AND EMPLOYMENT

Q: WHAT IS THE EFFECT ON GDP?

- A:
- The precise effect on GDP is very difficult to assess. To provide some perspective: as you all know, it is difficult to gauge exactly what impact the balanced budget agreement will have on the U.S. economy's growth rate, levels of employment, interest rates and consumption over the next five years. But with global climate change, it is orders of magnitude more difficult to gauge the effects on the economy. Global climate change involves not just the next five years and not just the American economy, but, rather economic and physical processes that operate globally and over decades.
 - To reflect this uncertainty, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
 - President Clinton's top priority, since his first days in office, has been revitalizing the U.S. economy, creating jobs and investing in people and technology to enhance long-term growth. We have made tremendous progress, and the President is not going to jeopardize that progress. Nor would we expect any future President or Congress to do so.
 - As for specific estimates of the impact on GDP -- which again are highly

uncertain -- I would emphasize that two key components of the President's plan are that developing countries adopt binding targets and participate in an international permit trading system. As 2500 economists -- including 8 Nobel prize-winners -- have argued, "In order for the world to achieve its climatic objectives at least cost, a cooperative approach among nations is required -- such as an international emissions trading agreement."

- With these two components -- developing country participation and international trading -- economic analysis suggests that the effect on GDP is likely to be minimal -- and much less than the typical variation in growth from quarter to quarter or year to year. [With worldwide trading, economic models suggest that the effect on GDP in 2010 is likely to amount to less than 0.1 percent of GDP.]

FOLLOW: BUT DON'T SOME MODELS SHOW DECLINES IN GDP OF 1 TO 2 PERCENT? IS THAT "MINIMAL"?

A: Some models do indeed show declines of those amounts, but they ignore several key issues:

- First, there is much uncertainty over cost projections that are 13 or more years into the future -- 13 years ago, we could never have predicted that we would now have an unemployment rate below 5 percent, core inflation below 2.5 percent, and a budget deficit substantially under \$50 billion.
- Second, to reflect the uncertainty involved in addressing climate change, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
- Third, most models ignore the economic costs associated with climate change itself -- increased flooding, sea-level rise, and other dislocation. So looking just at the impact of reducing emissions on GDP is misleading.
- Finally, those estimates are based on model runs that assume that developing countries do *not* adopt binding targets and that there is no international permit trading -- even though both are key components of the President's plan. When those components are included in the analysis, the effects on GDP are predicted to be substantially lower. [With worldwide trading, economic models suggest that the effect on GDP in 2010 is likely to amount to about 0.1 percent of GDP.]

Q: WHAT IS THE EFFECT ON OVERALL EMPLOYMENT?

A: Same as answer to GDP question above, but substituting “employment” for “GDP.”
[With worldwide trading, the effect on employment is likely to be about 75,000 jobs -- about one-third the average *monthly* job creation since President Clinton took office.]

Q: DIDN'T AN EPI REPORT SHOW THAT OVERALL EMPLOYMENT WOULD FALL BY MORE THAN 1.5 MILLION UNDER THE PRESIDENT'S PLAN?

A: No. The EPI report assumed no international trading and no developing country participation -- key components of the President's plan. Other results suggest that such omissions produce grossly misleading results. The President's plan also includes regular economic reviews, precisely to ensure that the economic costs are not excessive.

After all, President Clinton's top priority, since his first days in office, has been revitalizing the economy, creating jobs and investing in people and technology to enhance long-term growth. And we have made tremendous progress: growth is strong, unemployment is down to 4.9 percent, and over 13 million jobs have been created since January 1993. He is not going to jeopardize that progress.

Q: WHAT ABOUT EMPLOYMENT IN SPECIFIC SECTORS?

A: President Clinton's top priority, since his first days in office, has been revitalizing the economy, creating jobs and investing in people and technology to enhance long-term growth. And we have made tremendous progress: growth is strong, unemployment is down to 4.9 percent, and over 13 million jobs have been created since January 1993. He is not going to jeopardize that progress.

As the President has emphasized, the risks posed by global climate change are real and sensible preventive steps are justified. It is likely that in the effort to address this substantial challenge, some sectors will gain and some will lose. The regular economic reviews that are a critical part of the President's plan, and his commitment to developing a system of transition assistance for any affected workers, are intended to minimize any costs.

FOLLOW: WHICH SPECIFIC SECTORS WILL BE HURT?

[A: We would expect that the impact would be more significant in carbon-intensive and energy-intensive sectors. But we do not have precise modeling results, showing which industries will gain and which will be hurt. I should note, however, that the President has expressed his commitment to working with interested parties to develop a system of transition assistance, to reduce the burden on workers in affected industries.]

PERMIT PRICES AND ENERGY PRICE INCREASES

Q: DON'T MOST MODELS SUGGEST THAT CARBON PRICES WILL HAVE TO RISE BY \$100 TO \$200 PER TON TO REDUCE EMISSIONS TO 1990 LEVELS BY 2010?

A: Many models have concluded that permit prices would need to be in that range to reduce emissions to 1990 levels by 2010 with no international trading. But such trading, including with developing countries, is a key component of the President's plan. The economics literature suggests that if international trading were to develop, the costs involved would be substantially reduced.

I should also note that there is much uncertainty over cost projections that are 13 or more years into the future -- 13 years ago, we could never have predicted that we would now have an unemployment rate below 5 percent, core inflation below 2.5 percent, and a budget deficit substantially under \$50 billion.

To reflect the uncertainty involved in addressing climate change, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.

FOLLOW: HOW MUCH OF A DIFFERENCE DOES INTERNATIONAL TRADING REALLY MAKE?

- A:
- I hesitate to give a precise answer because of the substantial uncertainties involved in the analytical effort, and because of the institutional difficulties in making international trading a reality. But many reports suggest that international trading *could* substantially reduce the cost.
 - The World Bank is already working on designing a system for international trade in permits. Some experiments have already been conducted -- including one in the Nordic countries that suggested that international trading "can be an important means of reducing the costs to achieve a greenhouse gas objective." [Peter Bohm, "A Joint Implementation as Emission Quota Trade: An Experiment Among Four Nordic Countries," Nordic Council of Ministers, February 7, 1997.]
 - Over 2500 economists -- including 8 Nobel prize-winners -- have signed a letter emphasizing that "In order for the world to achieve its climatic objectives at least cost, a cooperative approach among nations is required -- such as an international emissions trading agreement."

- A recent report written by several leading climate change economists and published by the Pacific Northwest National Laboratory this month suggests that worldwide permit trading would allow us to reach 1990 levels by 2010 for a permit price of approximately \$25 per ton in 2010 -- or an increase of about 6 cents per gallon of gasoline after 13 years. [JA Edmonds, SH Kim, CN MacCracken, RD Sands, MA Wise, "Return to 1990: The Cost of Mitigating United States Carbon Emissions in the Post-2000 Period," Battelle, October 1997.]

Q: DIDN'T THE 5-LABS STUDY CONCLUDE THAT CARBON PRICES WOULD HAVE TO RISE BY \$50 TO REACH 1990 LEVELS BY 2010, AND ISN'T THAT ON THE OPTIMISTIC SIDE?

A: The 5-Labs study examined a scenario in which there was no international trading, and concluded that the permit price would have to be \$50 to reduce emissions to 1990 levels by 2010 with no such trading. But the President's plan emphasizes international trading, including with developing countries, and the economics literature suggests that worldwide trading substantially reduces the costs involved.

[The Department of Energy has released an analysis that combines international permit trading with the results of the 5-Labs study, and concluded that a permit price of \$25 or lower in 2010 would allow the country to meet its target and timetable.]

Q: ISN'T \$25 PER TON OF CARBON STILL A SUBSTANTIAL INCREASE IN ENERGY COSTS?

A: As the President has emphasized, the risks posed by global climate change are real and sensible preventive steps are justified. Some increase in the relative price of energy is necessary to address climate change. Under the President's plan, any relative price shifts involved would not take effect until 2005 or later.

[Note: \$25 per ton translates into about 6 cents per gallon of gasoline, and approximately \$200 per year for the average family.]

Q: DON'T SOME ADS SUGGEST THAT GAS PRICES WOULD HAVE TO RISE BY 50 CENTS?

A: Those ads are misleading. They seem to be based on especially pessimistic views about what could happen if we attempted to reduce emissions to 1990 levels without international trading. But such trading, including with developing countries, is a key

component of the President's plan. Since the economics literature suggests that worldwide trading substantially reduces the costs involved, those ads are misleading.

CREDIBILITY

Q: HOW CAN YOU POSSIBLY REDUCE EMISSIONS TO 1990 LEVELS BY [2010] WITHOUT IMPOSING EXCESSIVE COSTS ON THE ECONOMY?

- A:
- Climate change is a critical challenge facing the country, but there is substantial uncertainty surrounding how costly it will be to address. Given this uncertainty, it would be irresponsible not to explore all possible avenues for low-cost emissions reductions before undertaking any effort that would be excessively costly.
 - The President's graduated, three-stage approach therefore recognizes that there is substantial uncertainty over any project that is 13 or more years into the future -- 13 years ago, we could never have predicted that we would now have an unemployment rate below 5 percent, core inflation below 2.5 percent, and a budget deficit substantially under \$50 billion.
 - To reflect the uncertainty involved in addressing climate change, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
 - I don't know for sure that we can succeed in this effort, but I'll tell you one thing: After the first two stages of the President's program, we will have made a credible first step and we'll know a lot more than we do now about both the science and economics of climate change.

SAFETY VALVE, ECONOMIC REVIEWS, AND "BINDING" TARGET

Q: IS THE TARGET AND TIMETABLE BINDING?

A: Yes, but it would not be reasonable to expect this President, or any future President or Congress, to impose excessive costs on the economy to meet that target.

Q: THEN HOW CAN YOU CLAIM THAT THE TARGET AND TIMETABLE IS BINDING, WHEN MOST ECONOMIC MODELS SUGGEST THAT YOU CAN'T REDUCE EMISSIONS THAT MUCH WITHOUT INCURRING EXCESSIVE

COSTS?

- A:
- First, there is much uncertainty over any cost projections that are 13 or more years into the future -- 13 years ago, we could never have predicted that we would now have an unemployment rate below 5 percent, core inflation below 2.5 percent, and a budget deficit substantially under \$50 billion.
 - Second, the models to which you refer assume no worldwide permit trading. But such trading, including with developing countries, is a key component of the President's plan. The economics literature suggests that worldwide trading substantially reduces the costs involved.
 - Finally, all we are saying is that it is unreasonable to ignore the reality that future Congresses will always have the option to protect the economy or to undertake more environmental action. We should therefore recognize that decisions about whether the United States was willing to bear the costs that could be necessary to meet the target and timetable goal will, in a sense, have to be made at that time.

Q: HOW CAN YOU ENSURE THAT THE COSTS ARE NOT EXCESSIVE?

- To ensure that the costs are not excessive, the President has proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, precisely to ensure that the economic costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period.
- The President has also emphasized the participation of developing countries, and an international system of trading permits, as key components of his climate change plan. Such factors should substantially reduce the costs involved.

Q: WILL THESE REVIEWS FORM PART OF THE INTERNATIONAL TREATY?

- A: No, although the treaty already includes broad language that preserves a country's right to take protective action if the costs involved become excessive.

Q: HOW CAN YOU SIGN AN INTERNATIONAL TREATY THAT DOESN'T REFLECT THE PROTECTIONS YOU ARE CLAIMING DOMESTICALLY?

- A: No country would ever be expected to sacrifice its national interests -- including either its national security or its economic well-being -- on the basis of an international treaty. So let me put it this way: We would be just as committed to this treaty, if we get an adequate agreement, as any other we have ever adopted.

Q: DO YOU INTEND TO MEET YOUR BINDING OBLIGATION?

A: We certainly intend to meet any binding obligation under the treaty, should the terms of that treaty be adequately negotiated. The issue is a critical one, and the President feels strongly that we must begin to take corrective action. But there are understandably a host of imponderables involved in this undertaking -- which involves actions over a decade or more. So I am also confident that if the costs of action are excessively high, the Congress and the President will make appropriate adjustments.

Q: DOES YOUR PROPOSAL INCLUDE A "SAFETY VALVE"?

A: That term has unfortunately become a bit maligned. Our proposal includes a variety of mechanisms to ensure that the economic costs involved are not excessive -- including the graduated, three-step approach with regular economic reviews and the commitment to an international trading regime. You can call them what you want.

Q: DIDN'T THE ADMINISTRATION PROPOSE A "SAFETY VALVE" INVOLVING A MAXIMUM PERMIT PRICE?

A: The issue of whether it would make sense to impose a ceiling on the permit price in the internationally binding period (Stage 3) has been raised by researchers at Resources for the Future, and was discussed during the President's climate change conference.

FOLLOW: WHY DIDN'T THE ADMINISTRATION ADOPT SUCH AN APPROACH?

A: We felt it was unnecessary to impose a formal ceiling price during the internationally binding period at this time. We are confident that our graduated approach, with its regular economic reviews and scope for adjustments by future Presidents and Congresses, provides sufficient protection against excessive economic costs.

Q: WHO WILL CONDUCT THE ECONOMIC REVIEWS?

A: The reviews will be conducted by relevant experts and officials. It is possible that we would form a commission to conduct them.

Q: WHAT IMPACT WILL THE REVIEWS HAVE ON POLICY?

A: The reviews will help to ensure that policy-makers, both in the Administration and in Congress, have the best possible information on how the economy is responding to the effort to address climate change, how other countries are performing relative to their own commitments, and how the climate is changing in response to human activities. That information will then undoubtedly be used to make any adjustments that seem appropriate to policy-makers in the future. It doesn't seem wise for me to speculate about what form

such adjustments would take -- whether in terms of more aggressive environmental action, or less aggressive.

STANDARDS

Q: ARE YOU PROPOSING ANY INCREASE IN CAFE STANDARDS TO IMPROVE FUEL EFFICIENCY AND REDUCE EMISSIONS?

A: In the DOT appropriations bill that was just passed and signed into law, Congress precluded any change in CAFE standards for FY 1998. So we do not currently have the authority to change CAFE standards.

Q: ARE YOU PROPOSING ANY OTHER STANDARDS AS PART OF YOUR PACKAGE?

A: [Wait for DOE input. Building codes.]

TAX INCREASES

Q: DOESN'T THE PRESIDENT'S PLAN AMOUNT TO THE LARGEST ENERGY TAX INCREASE IN HISTORY -- \$200 BILLION A YEAR OR MORE?

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

FOLLOW: BUT ISN'T A PERMIT SYSTEM JUST LIKE A TAX?

A: No. There are several critical differences between a permit system and a tax. For example, a permit system provides insurance that a given quantitative target will be met, whereas a tax does not.

FOLLOW: BUT IF YOU AUCTION THE PERMITS, ISN'T THAT A TAX?

A: First, we have not decided to auction the permits. Second, just for the record, there are still several critical differences between such an auctioned permit system and a tax. For example, the permit system provides insurance that a given quantitative target will be met, whereas a tax does not. And any revenue from the auctions could be used to *reduce* other taxes -- so that the entire effort would be revenue-neutral.

Q: WON'T ENERGY PRICES INCREASE, JUST AS IF YOU IMPOSED A TAX?

A: Climate change is a critical issue, and some increase in the relative price of energy will ultimately be necessary to address it. But it would be irresponsible not to explore all

possible alternatives before resorting to moderate relative price change. The President has therefore proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by a trial permit trading system. He has also proposed regular economic reviews, to ensure that the costs are not excessive. Only after we have accumulated ten years of experience with the first two stages of the program would we enter the internationally binding period. The President has also emphasized the participation of developing countries, and an international system of trading permits, as key components of his climate change plan. Such factors should substantially reduce the costs involved.

Q: HOW DOES THIS EFFORT COMPARE TO THE BTU TAX?

A: This effort is not a tax, so it is not directly comparable. And energy price increases would not occur for eight years or more -- in 2005 or later. But in terms of oil prices, the effect of a \$25 carbon permit price is approximately the same. Remember, however, that the increase would not occur until 2005.

[A \$25 permit price is equivalent to approximately 60 to 70 cents per million BTUs. In 1993, the Administration proposed a tax of 26 cents per million BTUs plus a 34 cents per million BTUs tax on oil.]

DETAILS OF PERMIT SYSTEM, INCLUDING GRANDFATHERING VERSUS AUCTIONING

Q: HAVE YOU DECIDED WHETHER THE PERMITS WOULD BE AUCTIONED OR GRANDFATHERED?

A: No. That is a very important issue that we will explore with Congress and other interested parties when the time comes for developing domestic implementation legislation.

Q: WHERE WOULD THE PERMIT REQUIREMENTS BE IMPOSED?

A: That is a very important issue that we will explore with Congress and other interested parties when the time comes for developing domestic implementation legislation.

COMPETITIVENESS

Q: WON'T THIS PLAN LEAD TO MASSIVE SHIFTS OF U.S. INDUSTRY AND JOBS ABROAD?

A: • No. The President has made very clear that we will not assume binding

obligations until the developing countries make adequate commitments in terms of their own obligations.

- I would also note that non-tradeable sectors account for a substantial share of carbon emissions. Transportation and buildings, for example, account for roughly two-thirds of U.S. emissions. For these sectors, the “competitiveness” argument seems largely irrelevant.
- In most manufacturing sectors, furthermore, energy costs are a small percentage of total costs. According to the 1995 Annual Census of Manufactures, energy costs for manufacturing industries averaged just 2.2 percent of total costs.

DEVELOPING COUNTRIES AND INTERNATIONAL TRADING

Q: WHAT SPECIFIC MODELS SHOW THAT WORLDWIDE INTERNATIONAL TRADING ALLOWS RELATIVELY LOW-COST REDUCTIONS?

- A:
- According to JA Edmonds, SH Kim, CN MacCracken, RD Sands, MA Wise, “Return to 1990: The Cost of Mitigating United States Carbon Emissions in the Post-2000 Period,” Battelle, October 1997, the cost of reaching 1990 levels by 2010 with worldwide trading would be a permit price of \$26 per ton in 2010.
 - The models used by the Interagency Analytical Team to produce its draft report suggest that the permit price needed to reduce emissions to 1990 levels by 2010 would be between \$9 and \$20 in 2010.

Q: DOESN'T INTERNATIONAL TRADING MEAN THAT WE ARE ESCAPING OUR OBLIGATION TO REDUCE EMISSIONS?

- A: No. A ton of carbon emitted from Argentina is just as damaging to the global climate system as a ton of carbon emitted from the United States. So we are contributing just as much to the effort to address global climate change if we facilitate reductions abroad as if we reduce here. The U.S. position has therefore always emphasized the efficiency of allowing least-cost reductions wherever they occur in the world.

Q: WON'T INTERNATIONAL TRADING MEAN THAT WE ARE SENDING BILLIONS OF DOLLARS ABROAD, AND EXPANDING OUT TRADE DEFICIT?

- A: First, it is difficult to predict precisely how large the trade in these permits will be. Second, the estimates we do have suggest that such trade could amount to a few billion dollars a year -- a relatively modest amount. Third, our balance of payments statisticians have not determined whether such trade would show up in the trade deficit at all, or

would be more appropriately handled in other parts of the balance of payments (e.g., other elements of the current account, or within the capital account). Finally, our oil imports should decline as a result of efforts to address climate change. Some estimates suggest that our trade deficit could therefore *narrow* as a result of the effort.

Q: IS INTERNATIONAL TRADING REALLY FEASIBLE, ESPECIALLY WITH DEVELOPING COUNTRIES?

- A:
- Creating a system of international trading will undoubtedly be a challenge for the United States and other parties to any climate change treaty. But the President is firmly committed to the concept, because it is an efficient, market-based approach to emissions reductions -- it substantially reduces the costs of meeting our target.
 - The World Bank has already begun work on how such an international trading system could function.
 - And some carbon trades are already occurring under our pilot Joint Implementation program.

Q: HOW CAN WE EXPECT COUNTRIES LIKE INDIA AND CHINA TO PARTICIPATE IN AN INTERNATIONAL TRADING REGIME?

- A: Such countries already participate in international trade in other products. The President has made clear that we will not adopt binding obligations until the developing countries make adequate commitments in terms of their own obligations. And once they have made such commitments, there is no reason to suspect that they would be unwilling to be guided by economic incentives in deciding whether to sell carbon emissions permits on an international market.

PROCESS ON ECONOMIC MODELING AND ECONOMIC ANALYSIS

Q: WHAT ECONOMIC ANALYSIS AND MODELS DID YOU USE IN EVALUATING DIFFERENT POLICIES?

- A: We relied on a wide variety of published analyses and outside experts, as well as the professional judgment of the Administration's top economists. Given the uncertainties involved, it would have been imprudent to rely on one single model or set of models. So we wound up relying on a large number of analyses and views -- including the results from the Energy Modeling Forum at Stanford University, the Intergovernmental Panel on Climate Change, and others.

Q: WHAT IS THE INTERAGENCY ANALYTICAL TEAM? DOES ITS REPORT REFLECT THE ADMINISTRATION'S OFFICIAL ECONOMIC ANALYSIS?

- A:
- When the Administration evaluates possible policies, it normally sets up a variety of staff-level working groups to inform the principals' discussions. The Interagency Analytical Team (IAT) was one such group -- an informal group of modelers from various agencies in the Federal government.
 - Once the relevant principals within the Administration looked over the staff work and the peer review comments on it, it was decided that further activity would be futile because of the difficulty of developing a model or set of models that can give us a definitive answer as to the economic impacts of a given climate change policy. So the IAT report is *not* the Administration's official economic analysis on this issue.
 - The working group's draft report, which was released on July 15, summarizes the preliminary results of the modeling effort. That modeling effort produced some useful lessons, but -- as illustrated by comments from peer reviewers -- it also suffered from shortcomings.
 - As Janet Yellen emphasized in her testimony on July 15, the lessons and the shortcomings of the exercise point to one clear conclusion: the effort to develop a model or set of models that can give us a definitive answer on the precise economic impact of a given climate change policy is futile. Rather, we are left with a set of parameters and relationships that influence estimates of the impacts. As she indicated, it is more productive to employ a broad set of economic tools to analyze policy options than to seek to develop a single definitive model. So that's what we did.

ECONOMIC TEAM RUMORS

Q: ISN'T IT TRUE THAT THE ECONOMIC TEAM OBJECTED TO THE PRESIDENT'S CHOICE OF EMISSIONS REDUCTIONS?

A: I'm sure that you can understand that the advice given by any Administration officials to the President must remain confidential. But I can assure you that the economic team supports the President's package, especially its emphasis on a market-based approach and on international trading.

Q: BUT DOESN'T YOUR OWN ANALYSIS SHOW THAT REACHING 1990 BY 2010 WOULD INVOLVE SUBSTANTIAL COSTS?

A: It seems inappropriate for me to reveal the analysis and views that I have shared with the President. I can say that I have informed him of the results from conventional economic models available in the public domain, and discussed both the benefits and limitations of such models. Given the importance I attach to frank internal discussions, I would prefer not to elaborate beyond that -- except to note once again, that there is much uncertainty involved in the estimates and that worldwide international trading, a key component of the President's plan, reduces the costs involved significantly.

COMPONENTS OF STAGE 1

Q: WHAT DOES STAGE 1 OF THE PRESIDENT'S PLAN ENTAIL?

A: The first stage, which applies until 2005, includes:

- **\$5 billion for tax cuts and R&D:** A package of carbon-reducing tax incentives and other programs amounting to \$5 billion over 5 years. For example, the package may include tax credits for carbon-saving technologies such as renewable energy sources.
- **Federal energy efficiency improvement:** A Federal government energy efficiency initiative is being developed by the Department of Energy, in conjunction with the Department of Defense, OMB, and other relevant agencies. It includes expanding the use of Energy Savings Performance Contracts, reinventing federal procurement, taking a "sustainable design" approach to federal facilities, and developing more efficient military propulsion systems. The effort would also include a review of existing Executive Orders on purchases, and preparation of a new Executive Order to fill any gaps.
- **Industry-by-industry consultation:** We will encourage businesses, on an industry by industry basis, to prepare plans for reductions that they believe they could achieve on their own and how they could best achieve them. Each relevant industry would prepare a plan over the next 6-12 months.
- **Credit for early action:** The President and Vice President strongly support appropriate rewards for those who promptly take early action to reduce emissions. The details of how such an early credit system would operate, however, are complex and can't be fully articulated until the details of an overall permit trading system are worked out. We should state our support for early action and indicate that early actors will be appropriately rewarded.
- **Electricity restructuring:** The President has announced his support for restructuring the electricity industry, which -- if done properly -- could help

to reduce carbon emissions, save consumers billions of dollars, and improve the efficiency of our economy.

- **Transition Assistance.** We will work cooperatively with labor and Congress to insure that we give proper assistance to any workers who are dislocated by the changes in energy usage inherent in any climate change plan.

Q: WHAT ARE THE PAY-FORS ON THE \$5 BILLION IN TAX INCENTIVES AND R&D?

A: We will be developing the detail of that package as part of the FY 1999 budget process. The proposals will clearly be fully paid for, but we are still working out the details of what will be included in the package itself. It doesn't make sense to identify precisely the pay-fors before identifying the items themselves.

Q: WHAT IS THE SHARE OF TAX CUTS IN THE \$5 BILLION?

A: That will be decided as part of the FY 1999 budget process.

Q: HOW MUCH DO WE CURRENTLY SPEND ON ACTIVITIES LIKE THIS?

A: [CHECK WITH CLIMATE CHANGE TASK FORCE.]

COMPONENTS OF STAGE 2

Q: WHAT DOES STAGE 2 OF THE PRESIDENT'S PLAN ENTAIL?

A: In stage 2, which begins in 2005, the emissions trading system would begin as a trial project that would allow us to learn how the system operates before entering the period in which our binding international obligations would hold. [ADD MORE DETAIL HERE.]

ELECTRICITY RESTRUCTURING

Q: WHAT EFFECT DOES ELECTRICITY RESTRUCTURING HAVE ON CARBON EMISSIONS?

A: If done properly, electricity restructuring has the potential to reduce carbon emissions by rewarding pursuit of greater efficiency in the generation and use of electricity. According to conservative estimates, restructuring could save U.S. residential and industrial consumers \$20 billion per year. A well-crafted restructuring package could also produce significant carbon emissions reductions. As we heard at the President's climate change conference, we currently waste two-thirds of the energy used to produce electricity -- and restructuring could help to reduce that waste. Other potential elements of a restructuring package, including a renewables portfolio standard and green labeling, could also reduce carbon emissions.

Q: WHAT IS THE PRESIDENT'S PLAN FOR ELECTRICITY RESTRUCTURING? WHEN WILL THE DETAILS BE AVAILABLE?

A: We will be refining our own thinking on this issue over the coming months, and look forward to working with all interested parties to ensure that we can craft a restructuring package that saves American consumers money and is good for the environment.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:21-OCT-1997 09:49:58.00

SUBJECT: Re: Revised paragraph on energy capitalization for carbon reductions

TO: Beverly K. Hartline (CN=Beverly K. Hartline/OU=OSTP/O=EOP @ EOP [OSTP])
READ:UNKNOWN

TEXT:

It looks fine to me. The only small suggestion I would make is that you change the phrase "a lot of capital" in the first sentence to something like "new investments on a large scale."

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:21-OCT-1997 18:14:16.00

SUBJECT: Bonn

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

CC: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP [CEA])

READ:UNKNOWN

Adele C. Morris (CN=Adele C. Morris/OU=CEA/O=EOP [CEA])

READ:UNKNOWN

Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

READ:UNKNOWN

TEXT:

I talked to Kimble and Pomerance at State to find out what is happening in Bonn next week vs. this week. Next week Melinda is going over to conduct bilateral meetings with the people from each of the most important delegations, looking forward to Kyoto. This sounds far more useful, from our point of view, than anything that is going on this Thursday and Friday.

So where we stand now is that -- if I go at all -- I will be going next week with her, not this week.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:21-OCT-1997 19:36:07.00

SUBJECT: Re: Treasury memo on good things to say about the economics of GCC

TO: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

Please get a copy of the memo from Jon. I assume they will be willing to share it with us. It would be very useful tomorrow.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:21-OCT-1997 18:53:02.00

SUBJECT: Treasury memo on good things to say about the economics of GCC

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

As you may already know, Treasury staff have been working on a memo for Larry that will summarize a set off "good things" to say about our GCC position. For example, I know of two modules that focus on JI opportunities and critiques of external studies (e.g., the EPI study using DRI to assess 1990 in 2010) (I worked some with two of their staff on these issues today). Gruber is coordinating the memo. Some of this may be useful for our Q&As. Do you have, or do you expect to receive a copy of the memo? If not, should I ask Jon (or should one of you ask Jon) for a copy?

Joe

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:21-OCT-1997 16:33:09.00

SUBJECT: Re: climate change draft #1 -- CLOSE HOLD

TO: Lowell A. Weiss (CN=Lowell A. Weiss/OU=WHO/O=EOP @ EOP [WHO])

READ:UNKNOWN

CC: Peter R. Orszag (CN=Peter R. Orszag/OU=OPD/O=EOP @ EOP [OPD])

READ:UNKNOWN

TEXT:

Attached are some factual concerns regarding assertions in the speech.

----- Forwarded by Janet L. Yellen/CEA/EOP on 10/21/97
04:30 PM -----

Joseph E. Aldy

10/21/97 04:01:23 PM

Record Type: Record

To: Janet L. Yellen/CEA/EOP

cc:

Subject: Re: climate change draft #1 -- CLOSE HOLD

----- Forwarded by Joseph E. Aldy/CEA/EOP on 10/21/97
04:02 PM -----

Joseph E. Aldy

10/21/97 03:05:03 PM

Record Type: Record

To: Michele Jolin/CEA/EOP

cc:

Subject: Re: climate change draft #1 -- CLOSE HOLD

Michele,

There are 2 paragraphs of the speech in which we have some serious concerns. On page 4, the paragraph beginning "In 1970", appears to be factually wrong, and is off-point. Today's emissions standards are not \$400/car, as implied by this, but much more. The auto emissions standards were not flexible, market based incentives as implied either. The paragraph should be removed.

In the following paragraph, vinyl chloride was not banned in the 1970s, it

was regulated. The ban of DDT did not involve any ex ante (or for that matter, any ex post) analysis of the economic costs, as implied. The paragraph should play up the phase-out of lead (a real success story) and our early success with sulfur dioxide.

Joe

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jeremy B. Rudd (CN=Jeremy B. Rudd/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:21-OCT-1997 11:39:59.00

SUBJECT:

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

Talking points on the economic outlook, deficit reduction, fast track, &c.

===== ATTACHMENT 1 =====

ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:

Unable to convert ARMS_EXT:[ATTACH.D53]MAIL48284439X.216 to ASCII,
The following is a HEX DUMP:

Talking points on the economic outlook and deficit reduction

1. Retrospective and prospective on the economy

The economic expansion has entered its 79th month. This is the second-longest peacetime expansion in history. Unlike the 1980s, economic growth has been driven by private demand, not public--an important difference.

- Real business investment and exports have soared. Over the past four years, real business investment has grown at an average rate of nine percent per year, while exports have grown at an average rate of 10 percent per year.
- For the first time in 24 years, the unemployment rate has held at or below five percent for six months, with no sign of inflationary pressure.
- Consumer confidence remains near record-high levels.

The benefits of our strong economy are being extended to all Americans. The unemployment rate among African-Americans, which has historically stayed stuck at double-digit levels, has been hovering near its lowest level in over two decades. The poverty rate for African-Americans is at an historical low. And, the upward trend in inequality that has characterized the past twenty years appears to have stalled.

A sustained return to full employment has profound economic and social significance. A tight labor market encourages participation by those who might otherwise be forced to sit on the sidelines, and makes it easier to absorb less-productive workers--such as those who are less-skilled, or younger workers--into the workforce. This gives labor-market entrants much-needed job training, including the skills required in order to hold down a job successfully in the future. In this way, a high-pressure economy can affect long-term (structural) unemployment--hence, running a high-pressure economy may be one of the surest ways to ensure that we do not consign a large fraction of our citizens to long-term joblessness and economic marginalization. (And, a tight labor market can also improve workers' well-being by giving workers the ability to "trade up" their job by moving to a different job for which they are better suited.)

Will the expansion continue? Contrary to popular belief, there is no support for the view that expansions "die of old age." Rather, in the past expansions have ended because of a sustained increase in core inflation--either because of an unforeseen external shock (like an oil shock) or overheating. Although recent strong growth might make us cautious about the prospect for overheating, inflation today is lower than it has been since the 1960s, and shows no signs of picking up.

2. Retrospective and prospective on policy

How has policy contributed to the economy's strength? Make no mistake, much of the economy's recent performance reflects factors that are beyond policymakers' control. For instance, inflation has been moderate in part because import price inflation has been low. And structural changes in the labor market appear to have lowered the rate of unemployment that is consistent with stable inflation.

That said, I nevertheless believe that a significant share of the credit for the economy's recent performance must go to the government's pursuit of a more responsible fiscal policy. By freeing up national savings through a reduction in government borrowing, deficit reduction has created room in the economy for capital investment. Additional capital investment has increased capacity, thus helping to dampen inflationary pressures. And, additional investment creates workplaces that provide workers with the tools they need in order to make them productive and competitive.

The purpose of deficit reduction is to create investment. Hence, the Administration has been careful to ensure that deficit reduction does not cut into government's own investment, particularly its investment in people. The recently concluded budget agreement contains increased spending and tax incentives for education and training. Many of these benefits are extended to workers, in recognition of the fact that learning and training must be lifelong activities in a world in which rapid technological change is a commonplace.

What is the policy outlook?

The recently concluded budget agreement will finish the job that the President set out to do in 1993--namely, to balance the budget. Currently, the deficit is about half a percent of GDP--the lowest it has been since 1974. According to our projections, the budget will move into surplus in 2002; this will be the first balanced budget since 1969, and only the ninth since World War Two.

And where do we go from here?

At present, I see two challenges facing the Administration in the policy arena. The first involves the renewal of the Administration's "fast track" authority for negotiating international trade agreements.

"Fast track" is a provision whereby the Congress is required to vote on trade agreements in their entirety, without amendment. It gives the U.S. needed credibility in trade talks, by signalling to our partners that we have come to the table ready to deal.

Every President since 1974 has received fast track authority from Congress. It was started after Congress failed to ratify the Kennedy Round of trade talks in their entirety, which led Europe to refuse to negotiate any further trade agreements with the U.S.

The pace with which preferential trade agreements are being negotiated is fast--so fast that the U.S. risks being left behind if it does not act. For example, since 1992 other countries

have negotiated 20 preferential trade agreements in Latin America and Asia that exclude the United States.

The Administration would use fast track in connection with three key trade initiatives:

1. We want to complete the agenda that was established in the Uruguay Round of GATT negotiations. This year, we will begin negotiations in the sphere of government procurement, which represents a trillion-dollar market for the U.S. in Asia alone over the next decade. Talks in areas such as intellectual property rights, agriculture, and services are scheduled to follow.

2. We want to extend the information technology agreement (ITA), which lowers tariffs on information technology products to zero, to related classes of goods. The U.S. is particularly competitive in information technology, and its tariffs on these types of goods were already much lower than those of our partners in the agreement.

3. And, we want to negotiate more comprehensive market access agreements with individual countries. Chile is an example--today, every major economy in this hemisphere save the U.S. has a preferential trade agreement with Chile. This puts the U.S. at a serious competitive disadvantage.

The second policy challenge facing the Administration involves *long-term Social Security and Medicare reform*.

- In the case of Social Security, the problem is that the retirement of the "baby-boom" generation will mean that there are more retirees receiving benefits than there are employed workers paying benefits into the system. When this happens (around the year 2012), Social Security will start to place greater demands on the Federal budget.

The problem is not insurmountable, however. Even if the government does absolutely nothing, it will still be able to permanently finance roughly 75 percent of benefits out of current payroll taxes. If the government wanted instead to finance benefits by raising taxes, it would only have to raise the payroll tax by about two percentage points, which represents less than one percent of GDP. By way of comparison, the defense build-down after the Cold War represented a much larger share of the economy.

- In the area of Medicare reform, the budget agreement acts to address the pressing short-term problems facing Medicare, thus ensuring the viability of the system for at least another decade. The agreement also calls for the establishment of a bipartisan commission to assess and recommend the structural changes that will have to be implemented in the future in order to ensure Medicare's continued viability.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Beverly K. Hartline (CN=Beverly K. Hartline/OU=OSTP/O=EOP [OSTP])

CREATION DATE/TIME:21-OCT-1997 07:52:08.00

SUBJECT: Revised paragraph on energy capitalization for carbon reductions

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])

READ:UNKNOWN

TEXT:

Janet,

Thank you for your insights last week. We have revised the paragraph to eliminate reference to large burden to capital markets. Is it now economically credible?

Bev Hartline

Clearly, global implementation of energy supply technologies that lower carbon emissions significantly will require a lot of capital. Furthermore, a substantial amount of capital is currently tied up in power plants, buildings, and transportation systems that are not energy efficient or carbon avoiding, but are providing functional service or producing income. It would be very costly to replace or to write off such assets on an accelerated timescale and simultaneously to provide capital to introduce new renewable, energy-efficient, and low-GHG technologies for stationary as well as transportation power systems. Maximizing the life of the existing nuclear plants is potentially a cost-effective route to provide considerable amounts of carbon-free energy in the near- to mid-term. A phased and orderly plan would accomplish emissions-reduction goals by introducing new low/no-GHG technologies and capacity while replacing the highest carbon emitters first.