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CLINTON'S "VOLUNTARY" GLOBAL WARMING PLAN: EXPENSIVE, INEFFECTIVE, AND UNNECESSARY

INTRODUCTION

The Administration last spring released additional information on President Clinton's "voluntary" 44-point plan to reduce greenhouse gas emissions in the United States to 1990 levels by the year 2000.[1] This plan is designed to address the potential threat of global warming, or the enhanced greenhouse effect, which is the unproved theory that man-made emissions will raise the temperature of the Earth's atmosphere. The President's plan, as outlined, would be a mistake for the United States and should be reviewed carefully by Congress, the media, and the public.

The Administration's calculation of costs and benefits is flawed for at least five reasons:

- ✔ **The plan would impose more than $60 billion of unnecessary costs on the economy over six years.**
- ✔ **It likely would not achieve its objective.**
- ✔ **It would not, in fact, be voluntary as the Administration claims.**
- ✔ **Most qualified scientists believe catastrophic global warming is improbable.**
- ✔ **There are better ways to address any threat which may exist.**

1 When the plan was unveiled in October 1993, the media and Administration officials referred to it as containing 50 points or initiatives, instead of the correct figure of 44. Even the President used the 50-point figure. The confusion stems from statements, made repeatedly in the official plan and elsewhere, that there are "almost" or "about" 50 initiatives.

Note: Nothing written here is to be construed as necessarily reflecting the views of The Heritage Foundation or as an attempt to aid or hinder the passage of any bill before Congress.

In recent years, numerous research studies have contributed to the body of knowledge of the effects of greenhouse gases on the planet's atmosphere. These efforts continue today, with well over $1 billion spent annually on climate research. As knowledge grows more sophisticated, however, dire predictions are being scaled back. In fact, many of the theories upon which the belief in global warming was based have been shown simply to be wrong. For instance, contrary to popular opinion, satellite data show the average temperature has not risen in the last 15 years. Instead of rushing to expensive, ineffective, and perhaps wasteful action, policy makers should ask one fundamental question: should the priority be to take action based on ignorance or to lessen this ignorance through continued scientific research? Unfortunately, the Clinton Administration has embraced the former option.

WHAT IS GLOBAL WARMING?

The theory of global warming holds that man-made gases will warm up the Earth's atmosphere, thereby endangering life on the planet. While most Americans have heard of this theory, few understand it, and there is widespread confusion between global warming and another term, the "greenhouse effect." The greenhouse effect refers to the Earth's release of certain gases, called greenhouse gases, which enable the atmosphere to retain some of the heat received from the sun instead of reflecting all of it back out into space. These gases—which include carbon dioxide, methane, nitrogen oxide, and water vapor—thus have the same effect as glass in a greenhouse, keeping the Earth at a higher average temperature, and a more even temperature, than would be the case without them.

The greenhouse effect maintains a temperature which allows plant and animal life to exist. Contrary to popular belief, all scientists agree that the greenhouse effect is desirable; without it, life as we know it would cease because global temperatures would plummet to an average of -18°C, or 0°F. Explains Patrick Michaels, State Climatologist for the Commonwealth of Virginia, the statement that all scientists agree that the greenhouse effect is real "is about as profound as a statement that all scientists agree that the Earth is round."[2]

The theory of global warming (technically known as the "enhanced greenhouse effect"), on the other hand, rests on the claim that certain gases released by human activity warm the planet significantly beyond normal greenhouse levels. These gases include carbon dioxide and other greenhouse gases that are released naturally into the atmosphere,[3] along with chlorofluorocarbons (CFCs), man-made gases, associated chiefly with refrigeration, that do not occur in nature. The need for the National Action Plan was premised on the belief that gases produced by human activity over time will increase the greenhouse effect, leading to undesirable changes in weather patterns, crop

2 Patrick Michaels, "Apocalypse Not Now: Science, Politics, and Global Warming (Part 1)," National Chamber Foundation, U.S. Chamber of Commerce, March 1992.

3 Water vapor, the primary greenhouse gas, is not increased by human activity. Water vapor and clouds account for 98 percent of the greenhouse effect.

failures, flooding, and other damaging effects that it would take decades to reverse. Thus, the Administration argues, action must be taken now.

THE CLINTON PLAN

The Climate Change Action Plan to reduce greenhouse gases was announced by President Bill Clinton in October 1993, and an explanatory supplement was released in late March 1994.[4] The plan is to form the cornerstone of the U.S. commitment to the international Framework Convention on Climate Change. This international agreement, which requires that a National Action Plan be developed and submitted, was signed by President George Bush in June 1992 and became effective this year. It requires that countries reduce greenhouse gas emissions eventually to 1990 levels and that some progress be made by the year 2000. But President Clinton has pledged his commitment that the United States will attain the full 1990 levels by the year 2000.

The plan is a potpourri of initiatives designed primarily to encourage companies and households—by persuasion, by education, and in some instances by compulsion—to reduce greenhouse gas emissions, such as carbon dioxide and methane, produced in the manufacture or use of a product. This would be accomplished by such means as reducing energy consumption (which produces greenhouse gases) and limiting methane releases from garbage dumps or landfills. In all, the plan has 44 different initiatives ranging from mandates that household appliances and buildings be made more energy-efficient to increased government funding of the Green Lights Program, an educational program created during the Bush Administration to show companies how they can reduce energy consumption while saving money. Other initiatives, such as the Source Reduction, Pollution Reduction, and Recycling Initiative, focus on spending federal monies to persuade companies to reduce their emissions voluntarily without legislative mandates. Yet another initiative is designed to reduce cow flatulence through improved techniques of beef production. The Clinton Administration's plan relies in part on existing legislative authority to implement the initiatives through regulatory action, but it would also require significant additional federal spending.

HOW THE COSTS ARE UNDERESTIMATED

The Clinton Administration estimates that it will cost $63.4 billion to implement this plan over the next seven years. Of this amount, the private sector's share is $61.5 billion, the government's only $1.9 billion.[5] Most of the public sector funds, it is claimed, will be transferred from other funding sources. At the same time, the Administration pro-

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4 *The Climate Change Action Plan* (Washington, D.C.: U.S. Government Printing Office, October 1993) and Office of Policy, Planning, and Program Evaluation, U.S. Department of Energy, *The Climate Change Action Plan: Technical Supplement* (Washington, D.C.: U.S. Government Printing Office, March 1994).

5 The Administration calculates a net savings of $793 million due to increased taxes and continued leasing of dams. This projected figure is not used here for two reasons: 1) the $1.9 billion represents projected cost outlays, and 2) the report incorrectly shows the tax increase that is projected to reduce the government's "net" outlays without showing the tax as a corresponding increase in private sector outlays.

jects savings to the economy of $268.1 billion, primarily in energy savings if the initiatives are implemented.

Unfortunately, the Administration's figures are highly misleading. Specifically, the Administration underestimates how much the plan will cost both the government and the private sector, and it overstates projected energy savings by using flawed accounting procedures and unduly optimistic forecasts. Experience teaches that once government programs are born, they almost never die, yet the Administration assumes that every government program initiated or augmented by the plan will cease within seven years. It also assumes that all private sector costs will drop to zero at that time. Thus, although these programs will continue to exist, and will probably grow, the Administration ignores all costs that will be incurred after the year 2000 and implicitly assumes that the costs of maintaining greenhouse gas emissions at 1990 levels will be zero—while calculating the benefits from energy savings derived from the plan until the year 2010, or for 17 years, with benefits beyond the year 2000 included in the calculation of costs and benefits. Moreover, while it is true that some costs borne in the early years will continue to reap benefits for another decade, this is not true of all programs.

This disparity in the calculation of costs and benefits is only one way in which the Administration distorts the plan's true costs and savings. Another is its highly unusual accounting method. Under the standard method, future figures would be discounted to their present value; the Administration, however, has chosen to calculate all cost and benefit figures in undiscounted 1991 dollars. The result: the plan's supposed benefits are inflated far more than its costs because cost or benefit figures occurring further in the future are inflated proportionately more. Thus, potential but undiscounted savings yielded 17 years from now are greatly inflated, while costs 7 years from now are only somewhat exaggerated. This deliberate obfuscation of the real costs and benefits indicates that the Administration knows the real present value costs of its program exceed the real benefits discounted for inflation and the time value of money. If the Administration truly believes the benefits justify the costs, it should present real figures calculated in the standard way.

Even using this flawed accounting methodology, the Administration significantly underestimates the probable costs and overestimates the likely benefits of many of the plan's initiatives. Perhaps the best example is Action #16—the source reduction, pollution prevention, and recycling program—which encourages and subsidizes increased recycling of, and reduced use in products and packaging of, certain natural resources such as paper, plastic, and other materials. The plan estimates this program will cost the government and private sector $176 million but save the economy $36.5 billion, or 207 times as much. If such a generous return on an investment was possible, it seems odd that entrepreneurs would have not already seized the opportunity without the need for government encouragement. In reality, however, recycling is expensive and generally uneconomical, with the exception of aluminum found in such products as cans.[6] Thus,

6 Aluminum cans are both economically and ecologically beneficial to recycle because it takes 95 percent less energy to recycle aluminum than to make it from bauxite (aluminum ore). Of course, since recycling aluminum cans is profitable, over 50 percent of cans already are recycled as an entrepreneurial activity.

the cost for the private sector will be much higher than the Administration forecasts, and benefits that otherwise might offset these costs will be lower.

Similarly, redesigning packaging and other products to reduce their natural resources content is very expensive. Past trends indicate that manufacturers already try to cut packaging costs because packaging, which adds weight and volume to a product, is expensive to buy, store, and transport.[7] Expensive government programs to encourage less packaging are thus unnecessary. At worst, they can be counterproductive by encouraging manufacturers to reduce packaging when it is uneconomical. For instance, reducing paper packaging of food can be counterproductive because every pound of paper packaging reduces food waste by an average of 1.41 pounds. Thus, reductions would waste valuable food while increasing total garbage destined for landfills.

The Administration also obscures the true cost of reducing greenhouse gases by not counting funds dedicated to efforts now underway, or programs already announced, that comprise part of the plan. In short, $63 billion is not the total amount to be spent on reducing greenhouse gases; it is only the additional amount to be dedicated to this effort. One cannot accurately gauge the true costs either to the government or to the private sector until the White House is more candid in estimating how much is now being spent to fight global warming and combining that with accurate, discounted, and itemized projections as to how much its new initiatives will cost Americans.

WHY THE PLAN WILL BE INEFFECTIVE

The technical supplement explaining many of the plan's underlying assumptions does not support the Administration's claim that the plan will be effective. For instance, a major goal of the plan is to reduce carbon dioxide releases, but the Administration has included in this comprehensive package many other environmental initiatives that will increase net carbon dioxide releases. The Administration also proposes in Action #16 to encourage and subsidize increased recycling of paper and other materials as a way to reduce carbon emissions, assuming that trees left to grow instead of being cut for pulpwood will continue to absorb carbon dioxide. But this turns the facts upside down.

If paper recycling increases, net carbon dioxide emissions actually will rise, not fall. Eighty-five percent of all pulpwood comes from tree farms where the trees are planted, grown, and harvested on about a twenty-year cycle. These smaller, fast-growing trees absorb much more carbon dioxide than slow-growing, older trees. Thus, by continuing to harvest every twenty years to supply the paper market, tree farmers are encouraged to replant young carbon-absorbing saplings. If increased paper recycling caused the virgin pulpwood market to contract, tree farmers generally would cut down their trees and replant their land with some other crop — if they plant at all — in order to make a living. The number of trees in the U.S. would drop and net carbon dioxide releases would increase, not decrease.[8]

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7 Packaging accounted for 30.3 percent of waste in 1986, down from the 1970 level of 33.5 percent. See John Shanahan, "A Plain Man's Guide to Garbage: The Reauthorization of the Resource Conservation and Recovery Act," Heritage Foundation *Issue Bulletin* No. 172, March 30, 1992.

8 This refers to the effect of the recycling initiative alone on carbon dioxide releases, not to total carbon releases that actually

While some of the mandatory provisions no doubt would achieve limited success at high cost, other provisions are less likely to prove effective. For instance, Action #3—Establish State Revolving Fund for Public Buildings—assumes that providing $1 million in seed money to ten competitively selected states each year, for a total of $55 million through 1999, will result in energy savings of 29 percent for one in ten state and local public buildings and two percent of all commercial buildings.[9] The Administration claims that loan repayments funded from energy savings will allow these funds to be lent several times over; but this assumes that all energy-saving technologies are cost-effective, and experience shows this is not always the case. Many of these upgrades will never repay their investment. Administration officials also make the questionable assumption that the private sector will be motivated to spend $2.5 billion in upgrades based solely on the $55 million seed money provided to states and localities,[10] but this would mean investing $45 for the benefits of a $1 loan.[11]

Another program that is unlikely to produce any significant benefits is Action #39—Improve Ruminant Productivity and Product Marketing—which attempts to reduce cow flatulence by increasing beef productivity. Cattle flatulence contains methane, a greenhouse gas. The Administration assumes that a $28 million investment over six years will increase significantly the productivity of this multi-billion dollar industry. It proposes to achieve this goal through improved nutrition and grazing management practices, "production-enhancing agents to improve feed efficiency," disease control, and improved genetic characteristics and reproduction. The White House is correct in arguing that, if this initiative were to be successful, less methane would be produced per pound of beef at the supermarket, but it assumes falsely that increased beef productivity per unit will not mean increased total beef production. In fact, increased productivity presumably would cause lower prices, spurring greater demand for beef and more production. While the amount of methane produced per unit might decrease, the total amount from cow flatulence actually could increase.

Even the environmental lobby is skeptical of the plan's effectiveness. As Steve Kretzman of Greenpeace said when briefed by the Administration, "It's a repackaging of some old ideas and a few scattered new ones. There is no guarantee that any of this will get us anywhere. The only thing worse than this policy would have been no policy."[12]

Echoing this sentiment, Michael Oppenheimer of the Environmental Defense Fund, a vocal and well known advocate of the global warming theory, said, "I have doubts as to whether even taken all together [the 44 initiatives] can achieve reductions to 1990 levels.

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will occur given increased production, other initiatives, and likely technological advances. See *ibid.*

9 Presumably, this statistic applies only to commercial buildings; the technical supplement is not specific. See Technical Supplement, *op. cit.*

10 The Technical Supplement specifically states that two percent of all buildings and ten percent of state and local buildings "are assumed to use new technologies as a result of this action" and will thus incur the $2.5 billion investment in energy saving technology projected under this program. *Ibid.*

11 Even if the Administration's assumption is correct and the $55 million could be re-lent, say, three more times, the ratio still would be approximately 11 to 1.

12 Gary Lee, "Clinton Sets Plan to Cut Emissions," *The Washington Post*, October 18, 1993, p. A1.

The problem is that almost all of the measures are voluntary and there is very little to encourage industry to participate and punish those who don't."[13] But while the criticism that the U.S. will not reduce its emissions to 1990 levels by the year 2000 is probably true, it is certainly not because the plan is voluntary.

THE PLAN IS FAR FROM VOLUNTARY

Approximately one-half of the $63 billion plan results from mandatory proposals.[14] In Action #7, for instance, the plan proposes to require appliance manufacturers to spend $19.5 billion to improve the energy efficiency of household appliances. These costs in large measure will be passed on to consumers in higher prices for refrigerators, heaters, air conditioners, ovens, televisions, and other appliances. The plan also calls for mandatory increases in residential building standards under Action #10, which, according to the Administration, will cost another $11.7 billion when combined with two minor programs.[15] Unfortunately, it is not possible to know the exact projected cost for this program because the Administration has combined the cost estimates of all three programs; but the others appear to be minor in scope, so that costs under the mandatory increased building standards will likely amount to nearly all of the $11.7 billion projected for the three programs combined. Added together, these two mandates will cost approximately $31 billion, or half of the total costs of the plan. This means that households will spend an average of more than $300 each over the next seven years on higher-cost houses and appliances, since these costs largely will be passed on to consumers. Moreover, this $300 per household is in addition to any costs that flow through companies to consumers from the other 42 programs.

Action #22 also calls for mandatory labeling of automobile tires to encourage consumers to buy more fuel-efficient tires. According to the Administration, this program would cost the private sector $2.2 billion but save fuel worth $3.9 billion. But, since the labeling would be informational and would not itself result in energy efficiency, it is impossible to estimate its benefits accurately. Moreover, the Administration arrives at $3.9 billion in fuel savings by making some rather suspect assumptions. For instance, it claims one out of thirteen drivers will buy new tires in response to the labels, supposedly because they will be able to drive almost a full mile further for every gallon of gas. Thus, they will burn less gas, which releases carbon. It is far from clear, however, that the government's figures are accurate. In the body of the Action Plan, the government assumes implicitly that the average car now only gets 1.7 miles per gallon; it states that a .068 miles per gallon increase in average fleet on-road fuel economy is a four percent increase over current miles per gallon. Obviously, the Administration's claim is false. Yet in the Appendix of the Action Plan, the Administration uses accurate and fairly detailed fuel consumption figures.

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13 *Ibid.*

14 It is impossible to know with certainty the exact costs of the mandatory programs because the Administration's plan combines major mandatory programs with minor voluntary programs in its cost and saving estimates.

15 Ironically, this effort to seal buildings more tightly to reduce energy loss, which will increase airborne illnesses and hazards, comes at a time when the Administration is attempting to address the problem of indoor air pollution.

Several other provisions are also mandatory, such as pesticide use reductions due to an Integrated Pest Management Program required under Action #18.[16] The plan does not rely solely on inflexible "command and control" regulation. Most of the 44 initiatives are based on new "voluntary" partnerships between government and businesses.[17] As Secretary Hazel O'Leary said when the plan was unveiled, "What 'voluntary' connotes is an agreement, among parties of equal standing with full knowledge who agree, in fact, to accomplish something."[18] But, of course, companies do not have equal standing with the federal government. This is not an agreement between sovereign powers. Rather than take control of the method of production directly, as many other environmental regulations do, the plan encourages companies to sign onto "voluntary" reductions of greenhouse gas emissions—or face the regulatory hammer.

CATASTROPHIC GLOBAL WARMING IS IMPROBABLE

The enormous drain on economic resources to achieve questionable success would cause concern even if the threat of catastrophic global warming were real, but this assumption, on which the entire plan is based, is under increasing challenge. According to a 1992 Greenpeace survey, only 13 percent of climate scientists polled believe that runaway global warming will occur, while 79 percent are split between whether it is possible or will "probably not" occur.[19] This result is not surprising. Accumulated scientific data and analyses of past studies show that the dire predictions are either highly improbable or simply wrong. Moreover, there is enormous uncertainty associated with the scientific methodologies used to predict future climate changes.

- ✔ **Climate change computer models that predict warming often rely on assumptions and oversimplifications that raise serious questions as to their reliability.** One model, for example, effectively moved the Earth's orbit two million miles closer to the sun.[20]
- ✔ **Models do not account accurately for the influence of important climate factors, such as the behavior and effect of clouds and oceans.**
- ✔ **Temperature records over the last century are inconsistent with the predictions of global climate theories.**
- ✔ **There are shortcomings in the data.** Temperature records over the last century, for example, may show warming incorrectly because many weather stations are close to growing cities.

16 The Administration assumes small energy savings from the reduction in manufacture of pesticides, but its calculations ignore the increased energy consumption needed to obtain the same crop yield without pesticides, as well as the sizable increased costs associated with pesticide reductions.

17 While "voluntary" initiatives comprise the largest number of initiatives, it appears their cost is not more than half the total cost of the plan.

18 Remarks at White House briefing, October 19, 1993.

19 Greenpeace press release, "Climate Scientists Fear Effects of Understanding Global Warming, Poll Shows," February 9, 1992.

20 John Shanahan, "A Guide to the Global Warming Theory," Heritage Foundation *Backgrounder* No. 896, May 21, 1992.

- ✔ **In contrast to measurements from ground stations, which are prone to various inaccuracies, more reliable satellite data collected since 1979 show that temperatures over the last 15 years have not increased.**[21]

- ✔ **Concern about the quality of the models used is heightened further by the fact that they fail to predict accurately today's temperatures.** When climate data from 50 years ago are fed into these models, they indicate that temperatures today should be much hotter than they actually are. Thus, the models contain a bias toward predicting hotter weather.

Further, even if scientists were to become convinced that some level of global warming is occurring and will continue, three questions need to be answered.

QUESTION #1: Is the Earth warming because of human-caused greenhouse gases, or because of natural phenomena?

QUESTION #2: If the planet is experiencing a major warming trend, how will this warming take place? Will the Earth warm up substantially at night, perhaps cooling slightly during the day? Will the warming occur only in the tropical regions or only in the high latitudes around the poles? Will it occur in the summer or the winter? (These questions are important because any single figure suggesting the average temperature of all regions of the world for all times of day and night during the entire year ignores variations amid the warming trend that would have very different—and not necessarily harmful—effects.)

QUESTION #3: What will be the effect of any changes in the climate? Will the ocean levels rise, resulting in worldwide flooding, or fall, expanding Earth's landmass? Will worldwide agricultural production increase because of more crops in areas now too cold for major cultivation, thereby helping to alleviate world hunger, or decrease, prompting famine in some regions?

These questions must be answered before the consequences of global warming—assuming there is such a thing—can be predicted. In any event, the evidence suggests strongly that:[22]

- ✔ **Widespread flooding from the melting of the ice caps will not occur.**
- ✔ **Daytime temperatures will not increase.**
- ✔ **Agricultural production will increase, not fall.**
- ✔ **Increased periods and regions of drought will not result.**
- ✔ **Plants will retain water better and thus will be more drought-resistant.**

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21 Telephone conversation with Dr. John R. Christy, Earth Systems Science Laboratory, University of Alabama in Huntsville. Dr. Christy and his co-author, Richard T. McNider, published their results in a January 27, 1994, letter in *Nature*.

22 See Shanahan, "A Guide to the Global Warming Theory."

In light of the unanswered questions, new data, and the uncertainties and inconsistencies of climate change models which are known to mirror reality inaccurately, the final and most important question is: What is the appropriate course of action?

WHAT IS PRUDENT POLICY?

Administration officials have decided to follow what some bureaucrats and environmental lobbyists call a "no-regrets" policy. Basically, this policy works on the "just in case" principle: government should take decisive, albeit expensive, action if a potentially serious problem is possible—just in case. But while this argument may sound plausible, it ignores the dangers of overreaction. Hundreds of thousands of Americans could lose their jobs as the Administration combats what may well be an entirely mythical problem.

When faced with uncertain science like the theory of global warming, what should the government do? One of four basic strategies can be adopted, depending on the particular situation.[23]

OPTION #1: Take no action, not even research. This option is, of course, costless, but it introduces the danger both of not dealing with a potential problem and of not learning the degree of a possible threat.

OPTION #2: Conduct more research, but take no other action. This option is relatively inexpensive, yet increases knowledge of the scope and likelihood of a potential problem. It risks the possible consequences associated with deferring action and having to catch up later; but if stepped-up research shows the problem to have been overrated, or nonexistent, huge and unnecessary costs will have been avoided.

OPTION #3: Take limited action to control greenhouse emissions, phased in over a period. This option is also less expensive than tackling the problem—again, assuming it exists—completely and immediately; but it is extremely expensive when compared with research, and the result may be huge expenditures on a problem that does not exist.

OPTION #4: Undertake full control of emissions on an emergency timetable. This option addresses the potential harm as quickly and thoroughly as possible, but it also means a heavy cost to the economy for what may be a nonexistent problem.

If real, the threat posed by global warming is large enough to rule out the first option as sound policy. Likewise, the cost to Americans of an emergency program to avert an improbable catastrophe is heavy enough to rule out the fourth option.

The decision as to whether the U.S. should "take action" or increase research should be based on the potential cost of delaying action while research is conducted compared with the cost of action. According to a scientific panel of the George C. Marshall Institute, a Washington, DC.-based public policy institute focusing on scientific matters, two important studies indicate that the cost of delay is in fact very small:

23 S. Fred Singer, "Environmental Strategies with Uncertain Science," *Regulation*, Winter 1990, p. 65.

> The calculations [of both studies] show that a five-year delay in limiting carbon emissions will make the world warmer in the next century by at most one tenth of a degree, compared to how warm it will be if there were no delay.[24]

Meanwhile, knowledge is increasing rapidly because of stepped-up research. The vast majority of what scientists know about climate change has been learned in the last three or four years, and this knowledge is expected to increase substantially more within a few years.

Despite the need for more data, and although the United States is under no international obligation to leap without looking, the Administration is pursuing the third option. Indeed, "this [national action plan] is a political commitment of the president," according to Dr. Susan Tierney, Assistant Secretary for Policy, Planning, and Program Evaluation at the Department of Energy.[25] Yet the total costs are unknown. The $63 billion cost of the Administration's plan almost certainly is an underestimate—and it is only the first installment. If the aim is to limit CO_2 emissions during the next century, the United States will have to continue its efforts beyond the year 2000.

Given the enormous but unknown costs and the negligible danger from delay, the focus of U.S. efforts should be to expand scientific knowledge about global warming, not to spend billions on a program to minimize the risk of an improbable theory. Specifically, the U.S. should:

1. **Continue federal funding for climate change research.** Currently, the U.S. spends more on climate change research than the rest of the world combined. Yet some environmentalists, as well as the Office of Technology Assessment, advocate reducing scientific research on whether global climate change will occur.[26] Instead, they want funds to be devoted to studying the effects of global warming based on the assumption that because runaway global warming could come suddenly at any time, it is better to act now on this extreme improbability than to determine whether it is even possible.

2. **Open the National Archives to climate change researchers.** Subject to legitimate national security concerns, such as sources and methods of intelligence gathering and existing programs, scientific researchers should have access to the National Archives, which houses mountains of data that could be used to accelerate research. Collected by surveillance satellites, aircraft, submarines, and oceanographic vessels, these data could aid in research on past contours and thaw rates of polar ice caps, ocean chemistry and temperatures, and scores of other questions.

These two steps would ensure that scientists could continue to increase their knowledge of climate interaction at a rapid rate. Moreover, America would avoid the mistake of spending enormous sums of money on what science may show to be a non-problem.

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24 George C. Marshall Institute, "Global Warming Update: Recent Scientific Findings," 1992.

25 Speaking before U.S. Senate Committee on Energy and Natural Resources hearing on Administration's National Action Plan to Reduce Greenhouse Gases, October 28, 1993.

26 Office of Technology Assessment, *Preparing for an Uncertain Climate—Volume II*, OTA-568, October 1993.

CONCLUSION

Faced with an uncertain science and the known consequences of rash action, sound public policy demands that lawmakers use care in choosing how the United States addresses global warming. If billions of dollars are squandered on what turns out to be a "Chicken Little" threat, lawmakers will have failed in their duty.

As envisioned, the Clinton Administration's National Action Plan will impose large costs on all households even though scientists remain divided as to whether adverse climate changes will occur. The wisest course of action would be to increase the corpus of knowledge of the Earth's atmosphere before spending billions on potentially unnecessary programs.

John Shanahan
Policy Analyst

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