

**White House Conference on
Global Warming and Climate Change
Draft Agenda**

10:00 - 10:05 Vice President Gore: *Welcome attendees; Introduces President Clinton*

10:05 - 10:20 President Clinton: *Opening Remarks:* Importance of Global Warming and Climate Change for the American People.

10:20 – 11:20 Science Panel Discussion:

Presenter: John Holdren, Harvard University:

11:30 – 12:30 Emission Reduction Technology and Policy Roundtable

Presenter: Robert Rubin, Secretary of the Treasury

12:30 – 2:00 Lunch: Remarks by First Lady Hillary Rodham Clinton

2:00 – 3:00 Kyoto Conference and U.S. National Interests Roundtable

Presenter: Madeleine Albright, Secretary of State

3:15 – 4:15 Breakout Sessions

4:30 – 5:00 Vice President Gore: *Closing remarks:* The Road Ahead

5:30 – 6:30 White House Reception

10:00 – 10:05: Welcome

The Vice President will welcome attendees to the conference and introduce the President.

10:05 – 10:20: Opening Remarks:

The President's opening remarks will be his opportunity to speak to the American people in a substantive way about global warming and climate change. His remarks should foreshadow the day's events, endorsing the scientific consensus behind climate change, asserting the importance of this issue to the American people, outlining that action will need to be taken, and embracing the broad outlines of the U.S. negotiating position going into Kyoto.

10:20 – 11:20: Science presentation:

Goal: To concisely describe what global warming and climate change are, and to present conclusively the scientific case that they are occurring, that they have real consequences for the American people, and that action is needed to limit greenhouse gas emissions.

Physical science and impacts of global warming and climate change:

10:20 - 10:35: *John Holdren, Professor of Physics at Harvard University*, will deliver a 15 minute lecture, using slide and video graphics to display three central aspects of global warming science: the physical processes that are underway, the impacts they may have on the United States and the rest of the world, and the level of certainty within the scientific community about the future impacts of global warming.

- **What is global warming? What is climate change? What are greenhouse gases?** An overview of the sources of greenhouse gas emissions; emission trends and projections; temperature and climate trends and projections.
- **What are the global impacts?** A catalogue of consequences: increased storm activity; global sea rise; changes in arctic and tropical regions; changing soil, plant and water ecosystems; shifting diseases vectors; surprises.
- **How conclusive is scientific evidence for global warming?** Description of the IPCC report; certainties and uncertainties of human fingerprint and of future projections of temperature, changing weather patterns, sea level rise, etc.

Discussion: Using Holdren's remarks as a point of departure, the President will then lead a conversation with a panel of three/four other scientists covering these issues in more detail.

10:35 - 10:45: **Are there any indications that climate change may already be occurring?**

Tom Karl, Senior Scientist, NOAA: Dr. Karl will discuss the extensive anecdotal evidence that something serious is starting occur. The presentation could include photographs or graphics about extreme events. Follow-up questions could probe how much any one of these incidents might be attributed to global warming, as well as to the probability that this many extreme incidents might happen within so short a time period.

10:45 - 10:55: **What do most scientists say about skeptics arguments?** Some say that the upper atmosphere is cooling rather than getting warmer: which measurements are we supposed to believe? Some people say the relevant warming has all happened before 1940, and that we may be entering a cyclical trough period: how can we tell that temperatures will continue to rise?

Robert Watson, Chair of the Intergovernmental Panel on Climate Change. Dr. Watson will discuss the nature of the scientific consensus, describe the history and composition of the IPCC, and review the certainty which exists across the range of

climate change issues. Follow-up: Some question the accuracy of the computer models upon which most climate projections are based. Can we trust them?

10:55 - 11:05: **What does this mean for the United States?** What are the likely or possible regional impacts within the U.S.?

Diana Liverman, Professor of XXX, University of Arizona. Dr. Liverman will review the range of impacts on different regions of the country, describing region-by-region what might be expected to occur in the next twenty to thirty years. She might also discuss health impacts that we might be expected to see.

Don Wilhite, Dir., National Drought Mitigation Center. Dr. Wilhite will review recent droughts and floods and suggest future impacts if trends continue.

Follow up: Will different regions differ in the amount to which they will be effected? How much certainty do we have about impacts as specific as on any one region?

11:05 - 11:15: **Why we need to act now:** What will be the difference if we take steps now or twenty years from now? What kind of action should we take, considering we won't know for another twenty years whether our actions today have had any ameliorative effect? Won't our emissions reductions be dwarfed by the vast emissions that will come from the developing world later this century?

John Holdren: Dr. Holdren could discuss time lags, broad certainties and uncertainties about different climate scenarios, risk of "climate surprises," difficulties of making decisions amidst uncertainty, need for flexibility and creativity in policy.

11:15 - 11:20: **Wrap-up:** President would summarize: Overwhelming scientific evidence points to a discernable human impact on the climate, with real effects on the American people and on our children. Action is needed to address this. Demanding absolute scientific certainty is asking for more than we have had in previous efforts to protect the environment. The key question is: how big a risk are we taking by not acting?

11:30 – 12:30: Emission Reduction Policy Panel

Goal: To discuss policy options that allow us to reduce emissions without hurting our economy.

Opening presentation: The key elements of a national policy to reduce emissions.

11:30 - 11:35: *Robert Rubin, Secretary of the Treasury.* Secretary Rubin would establish that we will adopt binding emissions targets, explain where emissions come from domestically, and outline what a national strategy to reduce emissions might look like. The presentation would include:

- **National targets:** US will adopt a nation-wide binding emissions target.
- **Where emissions come from:** 95% of US emissions come from heavy industry, broad utility energy supply to homes and businesses, and transportation.
- **How to reduce emissions:** (a) Discouraging the use of carbon: Command regulation, market oriented trading system of emission permits (possibly including international trading and joint implementation), revenue-neutral auction or carbon tax; (b) climate-friendly technology, including carbon-efficient uses of fossil fuels; development of alternative fuel sources (solar, wind, biomass, nuclear); dissemination of existing energy efficiency technologies.
- **Experience in regulating emissions:** Past regulatory efforts display a range of available options for limiting emissions:.

Discussion: The President would then lead a discussion exploring (a) possible policy tools, such as emission reduction technologies and trading mechanisms, and (b) the likely impact on our economy of limiting carbon emissions.

11:35 - 11:45: **Regulation and Trading:** We have had extensive experience in trying to regulate pollution in this country. What kind of system did we set up to limit acid rain? Did it work? Is it analogous for our climate efforts, in scope and scale? If permits are applied "upstream," could such a system be combined with other measures to discourage fossil fuel use by downstream users

Richard Sandor, Chicago Board of Trade: Sandor could discuss how the sulphur dioxide trading system was designed, what the initial estimates were for permit costs, how those costs dropped as a result of fuel substitution and other factors. POTUS follow-up: Would establishing a carbon trading scheme be more difficult in scope and scale?

Linn Draper, AEP: Draper could talk about experiences of coal-burning utilities in adjusting to acid rain; efficiency and trading steps (including joint implementation) that it might take under a permit system. He could also talk about efforts being considered to be more carbon-efficient in burning coal. Follow-up: What affect might energy restructuring have on adjusting to this kind of system?

11:45 - 12:00: **Technology:** What are the most promising technologies in reducing the emissions from fossil fuels, particularly in the different emissions sources we heard about: power generation for industry; power use in homes and offices, fuel for transportation? How about shifting to renewable sources? How much can we expect to reduce emissions by increasing our energy efficiency?

Ken Lay, Enron: Lay could address the ability to shift to alternative fuels, such as natural gas and renewable energy sources. He might also talk about the capacity

for exporting such technologies overseas, and about the growth capacity for this aspect of the energy industry. Follow-up: Is solar power ready for prime-time? How about wind? How quickly can we bring them fully into the market?

Michael Porter, Harvard Business School: Porter could discuss, from firms' perspective, why responding early to impending environmental/energy regulation is distinctly in the interest of businesses. Follow-up: Do government R&D programs help advance these technologies, or is regulation or a price signal the most effective way to spur investment? How quickly can we see gains from efficiency and other technologies?

Rich Richels, Energy Policy Research Institute: Richels could realistically assess the possibilities of these technologies in achieving our emission reduction goals. Follow-up: How quickly can we see gains from efficiency and other technologies?

Possible additional participants:

Fred Buckman, PacifiCorp: Buckman could talk about the ability of a large utility to adapt to low emissions standards, particularly based on his experience in the Oregon program. Follow-up: Would you pursue these investments if you did not need to reduce emissions? Would you pursue them without government help?

Fred Krupp, EDF: Krupp could talk about the gains to the environment from a trading system, including how national budgets would work, and how it would need to be adapted to address different emissions sources. Follow-up: How difficult will it be to ensure that we're monitoring all the emissions? How do we ensure that citizens are adequately rewarded for steps that they take on their own?

Robert Shapiro, Monsanto/Pete Correl, Georgia Pacific: Shapiro or Correl could address the ability for agribusiness not only to adapt to a new carbon regime, but to take advantage of many agricultural solutions to greenhouse gases, such as biomass or carbon sequestration. Follow-up: What is biomass, exactly? Are government R&D programs helpful in advancing these technologies?

Maxine Savitz, Allied Signal: Savitz could talk about the number of different efficiency technologies available, and about the potential scope of this market. Follow-up: Would companies such as yours be subject for credit for these gains in a trading system? How would we measure such gains?

Jack Welch, General Electric: Welch could talk about broad innovations in energy production and consumption, ranging from fuel efficient lighting and heating to the role that nuclear and hydro-energy could play in a carbon-free future. Follow-up: How important is nuclear energy in the strategy of other developed or developing countries for reducing emissions?

ATT/Hewlett Packard/IBM: Panelist would talk about the critical role that information technologies can play in developing, adapting, and/or disseminating energy efficiency techniques and/or alternative fuel sources. Would discuss any current projects underway with utilities or industries, and would assess the prospects for further development of these. Follow up: Does the U.S. have a comparative advantage in adapting these technologies to environmental ends?

12:00 - 12:25: **Economy:** Can we do this in a way that won't hurt the economy? Which industries are likely to face challenges? Which are likely to reap benefits?

Robert Repetto, WRI: Repetto would lay out the case that you can bring existing technologies on line quickly and cost-effectively to reduce our emissions, and that these introductions ultimately would have a positive effect on our economy. Could also address the economic costs of not doing anything. Follow-up: If these technologies are so efficient, why have companies not yet adopted them? What is the difference, from an environmental standpoint, if we bring these technologies on sooner rather than later? Can we put our finger on quantifiable environmental damage that will occur if From a technology development standpoint, how important is a rapid time line?

John Sweeney, AFL-CIO: Broad overview of organized labor's position: that labor supports efforts that can be shown to help the environment, that won't hurt American competitiveness or move U.S. jobs overseas, or that won't send shockwaves through the American economy. Follow-up: What has labor's experience been with past emissions regulation?

Economist A; "Do it smart": [Alan Blinder?] A co-author of economists' letter on climate change; would argue that, depending on policies, mitigation does not necessarily have to have a negative impact on the economy. While not endorsing a particular target date, could say that "smart" approaches could bring sufficiently early reductions to make an middle-term date cost effective. Follow-up: How uniform are economists in their views about the best way to address the issue?

Economist B; "Go slow": Would argue that attempts to mitigate climate change can be done without significant adverse consequences, but the most economically effective approach is to stretch out implementation over the longest time frame available. Follow-up: From an economists' standpoint, will it be more difficult on the economy to take action if we allow current trends to continue? Is there value to helping key industries?

[Other possible speakers: Student leader discusses local action in addressing climate change. Governor or Utilities Commissioner of Oregon discusses state program to address these issues, and the coalition of government, businesses and environmental groups that brought it about.]

12:30 - 2:00: Lunch:

First Lady Hillary Rodham Clinton: October 6 happens to be Children's Health Day, and the First Lady has expressed interest in the health effects on children from climate change. She could address this topic in remarks at the conference luncheon.

2:00 – 3:00: International Negotiations Panel

Goal: To communicate the global nature of the problem; to identify the key issues outstanding in the negotiations; and to build support for the U.S. negotiating position.

Opening Presentation: Introduce the international component of the climate change debate, with a focus on the Kyoto negotiation.

2:00 - 2:05: *Secretary of State Madeleine Albright:* Secretary Albright would provide a brief background on the Rio Climate Treaty, the Berlin Mandate, and the Geneva Declaration as setting the scene for the ongoing negotiations. After describing the U.S. position, she would summarize the positions of key countries or country groupings (i.e., the EU, China, and the G-77). She also should discuss:

- **Importance of American leadership:** Climate change is a major foreign policy challenge in a post-Cold War world and U.S. leadership is vital to solving it.
- **Developed v. Developing Country Emissions:** breakdown of current and projected emissions from the OECD vs. the developing world.
- **Timing of emission reductions:** While underscoring the importance of reducing developing country emissions, make clear that such emissions must peak at a later date than ours, that this is a precedent used successfully in other global agreements (i.e. ozone), and that this still will allow for environmental protection.

Discussion: The Vice President would then lead a discussion, keying off the following questions:

2:05 - 2:10: **Where developed countries stand:** The EU proposes reducing emissions 15% below 1990 levels by 2010. How do they expect to do it? Is this target possible for us? How important are our proposals on flexibility for implementing the agreement, including joint projects with developing countries, and trading. How would a trading system work?

Dan Esty, Yale University Law School and School of Forestry: Esty could describe the origin and state of the Kyoto negotiations, discussing why developed countries have taken the lead, why the EU has staked out its position, and how this relates to future discussions. Follow-up: How involved have European businesses been in developing or adapting to Europe's policies? Where do other industrialized countries stand in the negotiations? What comes after Kyoto?

- 2:10 - 2:30: **Developing country commitments:** Environmentally, what kind of emissions path do developing countries need to follow? What are the economic and environmental implications of having their emissions peak at a later date? What are realistic obligations for developing countries to adopt in Kyoto with respect to their current and future emissions? How can the U.S. help these nations achieve reductions?

Jonathan Lash, WRI: Lash can discuss the emissions paths developing countries can legitimately adopt, and the impact it may have on their economies. He could also speak to the potential environmental advantages of JI in introducing technologies into the developing world. Follow-up: What effect would our adopting a later timetable have on the likelihood of getting developing countries to adopt binding targets?

Advocate of Ambitious Developing Country Commitments: A second panelist would make a broad-based case for the environmental, economic, and political need for developing country commitments. Follow-up: How significant is the timing of developing country commitments?

John Adams, NRDC: Adams can discuss how efforts to mitigate climate change in the developing world can help make important contributions on other critical environmental issues, such as saving forests and reducing smog and airborne pollution. He might also usefully touch on the difficult irony that while developing countries have contributed the least to current emission concentrations, they are most adversely effected by the consequences of climate change. Follow-up: What is an acceptable level of emissions growth for developing countries?

- 2:30 - 2:40: **Flexibility:** The U.S. domestic experience has shown that flexible, market oriented techniques have allowed businesses to adapt to environmental regulation in a cost-effective manner. What are the international prospects for establishing such market-oriented approaches, such as trading and joint implementation?

John Browne, BP: Browne could lay out why international businesses would benefit by getting ahead of the game, but why flexible implementation strategies are critical. Follow-up: Where do you see the greatest potentials for progress with developing countries in reducing emissions? Does JI achieve reductions that would not otherwise have occurred?

Roger Sant, AES/Michael Bonsignore, Honeywell: Sant/Bonsignore could lay out the international possibilities for existing climate-friendly technologies, including carbon sequestration, and could outline the opportunities for export of these to the developing world, particularly if joint implementation were allowed. Follow-up: Are emissions reduction strategies underway in the developing world? What do you make of the argument that U.S. industries would only help with, and profit from, making the cheapest reductions, such as converting power plants from coal to natural gas?

Gus Speth, Director UNDP/Joseph Stiglitz, World Bank: Can speak to multilateral

efforts being taken, and to the possible nature of an international emissions trading system. Follow-up: Will supervising a trading system create a new international bureaucracy? Will the U.S. sacrifice its sovereignty if it signs onto this treaty?

2:40 - 2:55: **National Security:** Is there a national security dimension to climate change?

Jessica Matthews, Carnegie Foundation: Can discuss preventing future loss of cropland, desertification, flooding, etc. Can also discuss competitiveness benefits from making our economy more energy efficient. Follow-up: Is it possible to fully protect ourselves from these consequences? Why are these developments our responsibility? How do they affect us?

Daniel Yergin, Cambridge Energy Research Associates: Can discuss nature of our reliance on foreign oil, how it has increased over the last two decades, and the structure of defense and alliances we have built to protect our access to oil. Follow-up: Were we to be completely self-sufficient for our energy needs, wouldn't we still need to care about conflict in the Persian Gulf or Caspian Sea?

Frank Wisner, Former US Ambassador to India: Wisner can speak to the energy development issues faced in developing countries, particularly those that see their energy needs expanding by as much as 7% per year. He also can discuss steps developing countries already are taking on the environment. Follow-up: How do developing countries view joint implementation? What more can we do to help them both meet their energy needs while protecting the environment?

The White House Conference on Climate Change: The Challenge of Global Warming

Summary Agenda

Welcome and Introduction by Vice President Al Gore

Opening Remarks by President Bill Clinton

Panel 1: The Science of Global Warming and Climate Change

This panel will present and discuss the science of global warming and climate change. Topics will include the basic physical science, the possible impacts of climate change on the United States, and the level of scientific certainty regarding different aspects of the issue.

Remarks by Vice President Al Gore

Panel 2: The Role of Technology in Reducing Greenhouse Gas Emissions

This panel will discuss how presently available and developing technologies can play an important role in reducing emissions. Panelists will consider each of the major sources of energy supply and sectors of energy demand contributing to U.S. emissions, as well as examine the potential for the export of environmental technologies.

Lunchtime Breakout Sessions

Invited guests will break into small groups and have the opportunity to discuss climate change science and policy with senior Administration officials.

Panel 3: The Kyoto Negotiations and U.S. National Interests

This panel will consider the global nature of the climate change problem, identify key issues outstanding in the current round of international negotiations, and discuss the broader foreign policy implications of global warming.

Panel 4: Climate Change Policy and the U.S. Economy

This panel will examine various policy options for reducing U.S. greenhouse gas emissions, consistent with maintaining a strong economy.

Reception

10:00 - 10:05

Vice President Gore: *Welcome attendees; Introduces President Clinton*

10:05 - 10:20

President Clinton: *Opening Remarks: Importance of Global Warming and Climate Change for the American People.*

10:20 - 11:15

Panel I: The Science of Global Warming and Climate Change

Presentation: **John Holdren**, Professor, Department of Earth and Planetary Sciences and the John F. Kennedy School of Government, Harvard University. Head of President's Council of Advisors on Science and Technology (PCAST).

Panelists: **Robert Watson**, Incoming Chair of the Intergovernmental Panel on Climate Change (IPCC); Director for Environment, World Bank.
Tom Karl, Senior Scientist, NOAA, National Climatic Data Center.
Diana Liverman, Chair, National Academy of Sciences Committee on Human Dimensions of Global Change; Director, Latin American Studies Program, University of Arizona.
Don Wilhite, Director, National Drought Mitigation Center, University of Nebraska.

11:30 - 11:45

Vice President Gore: *Where we've come from; Where we're going.*

11:45 - 12:45

Panel II: The Role of Technology in Reducing Greenhouse Gas Emissions

Presentation: **Federico Peña**, Secretary of Energy.

Panelists: **Maxine Savitz**, General Manager, AlliedSignal Aerospace Company's Ceramic Components Unit. Member of the President's Council of Advisors on Science and Technology (PCAST).
Tom Casten, President & CEO, Trigen Energy Corporation.
Michael Bonsignore, President and CEO, Honeywell Corporation.
Mason Willrich, CEO, EnergyWorks, a renewable energy joint venture between Bechtel and Pacificorp.
Kurt Yaeger, President, Electric Power Research Institute, a non-profit collaborative research enterprise of the electric power industry.

1:00 - 2:00

Lunch: Breakout Discussions with the Cabinet

2:15 - 2:30

Remarks by First Lady Hillary Rodham Clinton

2:30 – 3:30

Panel III: Kyoto Conference and U.S. National Interests

Presentation: **Madeleine Albright**, Secretary of State.

Panelists: **Jessica Tuchman Mathews**, President, Carnegie Endowment for International Peace.

James D. Wolfensohn, President, World Bank.

E. Linn Draper, Chairman, President, and Chief Executive Officer, American Electric Power.

Fred Krupp, Executive Director, Environmental Defense Fund.

Daniel Yergin, President, Cambridge Energy Research Associates; author of "The Prize: The Epic Quest for Oil, Money and Power," winner of the Pulitzer Prize.

Mae Jemison, President, Jemison Group, Inc. and Jemison Institute for Advancing Technology in Developing Countries at Dartmouth University. Former NASA astronaut.

Richard Schmalensee, Professor of Economics and Management, Massachusetts Institute of Technology; Director of MIT Center for Energy and Environmental Policy Research; member of Council of Economic Advisers, 1989-91.

3:30 – 4:30

Panel IV: Climate Change Policy and the U.S. Economy

Presentation: **Larry Summers**, Deputy Secretary of the Treasury.

Panelists: **Robert Repetto**, Vice President and Senior Economist, World Resources Institute. Co-author, "The Costs of Climate Protection: A Guide for the Perplexed."

William Nordhaus, Whitney Griswold Professor of Economics, Yale University. Author of "Efficient Use of Energy Resources," "Managing the Global Commons."

Robert Stavins, Professor of Public Policy and Chair of Environment and Natural Resources Program, the John F. Kennedy School of Government, Harvard University.

Richard Sandor, Chairman & Chief Executive, Centre Financial Products Limited; Vice-Chair of Chicago Board of Trade.

Laura d'Andrea Tyson, Professor of Economics and Business, University of California, Berkeley. Chair of the Council of Economic Advisers, 1993-95; Chair of National Economic Council, 1995-96; member of President's Council of Advisors on Science and Technology (PCAST).

Richard Trumka, Secretary-Treasurer, AFL-CIO.

***- CONFIRMED**

10:00 - 10:05

Vice President Gore: *Welcome attendees; Introduces President Clinton*

10:05 - 10:20

President Clinton: *Opening Remarks: Importance of Global Warming and Climate Change for the American People.*

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Tom Casten, President & CEO, Trigen Energy Corporation
Michael Bonsignore, President and CEO, Honeywell Corporation
Mason Willrich, CEO, EnergyWorks
Kurt Yaeger, President, Electric Power Research Institute

1:00 - 2:00

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Panelists: **Robert Repetto**, Vice President, World Resources Institute

William Nordhaus, Whitney Griswold Professor of Economics, Yale University

Robert Stavins, Professor of Public Policy, Harvard University

Richard Sandor, Chairman & Chief Executive, Centra Financial Products Limited

Richard Trumka, AFL-CIO

PRESIDENT CLINTON'S OPENING REMARKS: 10:00 - 10:20

Vice President Welcomes attendees; introduces the President. (5 mins)

President Soberly endorses the scientific consensus behind climate change, asserts the importance of this issue to the American people, outlines that action will need to be taken, and embraces the broad outlines of the U.S. negotiating position going into Kyoto. (15 mins)

10:20 – 11:15

PANEL I:**THE SCIENCE OF GLOBAL WARMING AND CLIMATE CHANGE:**

Review and discuss evidence that global warming and climate change are occurring, that they have real consequences for the American people, and that action is needed to limit greenhouse gas emissions.

President Introduces Holdren.

Holdren Describes physical science of global warming and climate change, discussing level of certainty among scientists about how humans may be affecting the climate and how much that might happen in the next century. (15 mins)

President Asks Karl to discuss evidence that something is starting to occur.

Karl Presents extensive data and anecdotal evidence of climate change. (5 mins)

Vice President Asks Liverman, Wilhite and Karl to describe possible impacts on regions of U.S.

Liverman Presents projected impacts. (5 mins)

Wilhite Presents projected impacts. (5 mins)

Vice President Asks Watson to discuss what is clear and what is unclear about the science.

Watson Discusses level of agreement for how rapidly the climate will change and about where impacts will be most felt, as well as what the skeptics are arguing. Also could describe who participates in the IPCC, and how it came into being. (10 mins)

President Asks Dr. Holdren how policymakers should act when uncertainties exist about different climate scenarios.

Holdren Discusses previous experience in enacting environmental regulation with credible yet incomplete scientific data. Would discuss why it is important to think about climate change policy as an insurance policy, why waiting to act allows carbon concentrations to develop to potentially dangerous levels, and why we should be concerned about surprises in the climate system. (5 mins)

11:30 - 11:40

VICE PRESIDENT'S REMARKS

Outlines history of how fossil fuels have been central to building modern societies and economies, and sketches where world population and development are going. He then outlines the new challenge: marshalling modern technology and entrepreneurial spirit to develop more efficient and innovative forms and uses of energy.

11:45 - 12:45

PANEL II:

ROLE OF TECHNOLOGY IN REDUCING GREENHOUSE GAS EMISSIONS

Review and discuss existing and possible technologies that can help us reduce emissions, and what is needed to expand the use of these technologies in the next century.

Peña Presents an overview of sectors that are major sources of greenhouse gas emissions, and of technologies that will most help reduce emissions. (5 mins)

President Asks Dr. Savitz to talk about how we can consume less energy in how we live, work, and travel. How much can we expect to reduce emissions in these areas?

Savitz Sketches the potential for technological advances to reduce energy consumption and GHG emissions in transportation, housing/buildings, and industry. (5 mins)

Vice President Asks Tom Casten to talk about what Trigen has done to recapture unused energy from power plants.

Casten Describes his company's work in energy saving techniques -- particularly in recapturing unused energy in manufacturing and using it to heat houses and buildings -- and the impact and potential market that measures like these can make across U.S. industry. (5 mins)

- Peña** Asks [Lary Papay, Bechtel\ Kurt Yaeger, EPRI] to discuss what energy utilities are doing to cut emissions in their basic coal, gas, and nuclear plants.
- Papay/Yaeger** Describes the newest generation of coal-fired electric plants, the ongoing switch from coal and nuclear to natural gas plants, the lessons learned from previous efforts to design plants that use less fuel, and the worldwide demand for cleaner burning power. (5 mins)
- President** Asks Willrich to describe the current state of renewables, and what it will take to make these energy sources both more powerful and competitive.
- Willrich** Describes the current market share of solar, wind, bioenergy, and the potential for these energy sources in the future, particularly in the developing world. Discusses R&D and regulatory measures we might consider to expand the use of renewables. Sketches some of the carbon savings possible from these energy sources. (5 mins)
- Vice President** Asks Bonsignore to discuss the role of energy efficiency in reducing our consumption, and the export potential for this.
- Bonsignore** Describes efficiency gains in lighting and heating systems, as well as nuclear and hydro-energy power plants. Discusses the potential for energy and cost savings from these measures in the U.S. Assesses the worldwide application of efficiency savings, particularly in countries such as Russia, India, China. (5 mins)
- President** Asks Savitz what role the government should or should not play in encouraging the next wave of technological developments.
- Savitz** Discusses the role of research and development in producing further reductions over a longer-term period, why PCAST encourages significant increases in efficiency and renewables, and which government incentives and regulations are most likely to encourage reductions.

1:00 - 2:00

LUNCH AND BREAKOUT DISCUSSIONS

Cabinet members in attendance will each lead discussions in separate rooms, with a short list of questions tailored to economic, technological, or other scientific questions.

2:15 - 2:30

FIRST LADY'S REMARKS

Broad remarks to open afternoon session, including mention of health effects on children from climate change.

2:30 - 3:30

PANEL III:

KYOTO CONFERENCE AND U.S. NATIONAL INTERESTS:

This panel will discuss the global nature of the problem, identify key issues outstanding in the negotiations, and clearly explain the U.S. negotiating position.

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|-----------------------|--|
| Albright | Describes origins of current negotiations (Rio Treaty, Berlin Mandate, and Geneva Declaration). Describes core elements of U.S. policy: binding targets, emissions trading, JI, developing country commitments. Summarizes positions of key countries or country groupings. (10 mins) |
| President | Asks Matthews why it is appropriate to design environmental treaties where developed countries take steps first, and developing countries follow. |
| Matthews: | Describes why developed countries have taken the lead, but why developing countries must adopt future emissions targets. Compares this treaty to others, such as ozone or nuclear non-proliferation. Describes possible impacts on developing countries; why these nations must see it in their interest to act; and why its in our interest to act. (5 mins) |
| Vice President | Asks Schmalensee whether this treaty can work without developing countries? |
| Schmalensee | Explains why developing countries must be part of any international agreement, and what might result if we sign a leaky treaty. (5 mins) |
| Vice President | Asks Wolfensohn why developing countries have resisted binding targets. |
| Wolfensohn | Argues that growth of developing economies must not be unduly restricted. Developed world is biggest source of current concentrations, have failed to live up to Rio commitments, and must be greatest engine to technological change. (3 mins) |
| Vice President | Asks Yergin to sketch the energy demands we can expect from the developing world, and the choices we should try to encourage. |
| Yergin | Describes the enormous growth and energy demands in the developing world, and the energy choices these countries face: coal, natural gas and oil, renewables, nuclear. (3 mins) |

President

Asks Jemison about how ~~people in the developing world~~ use energy, and ~~how dramatic are the changes we foresee for them.~~

*can they participate with us & heating and
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how can
they enter
to grow,
make,
what -
technology*

Jemison

Describes efforts to bring energy to remote villages in developing world. Gives sense of the magnitude of energy needs and supplies in underdeveloped world, of lack of insitutional capacity to address these issues, of how western energy use is looked to as a model (for good or bad), and of how local needs and practices need to be considered. (3 mins)

*Participate w. the
then to design
energy program that
work for them*

Vice President

We often talk about an agreement that includes flexible, market-based mechanisms. Is this a good deal for the developing world? Are we not harming the environment by taking credit for "easy" reductions?

Draper

Describes enormous export potential for American businesses and technology in helping developing nations grow their economies in a way that limits emissions. Key is flexible, market oriented techniques such as international trading and joint implementation. (3 mins)

Krupp

International trading critical in two regards: provides significant gains to the environment, brings in developing countries. (3 mins)

3:30 - 4:30**PANEL IV:****CLIMATE CHANGE POLICY AND THE US ECONOMY**

A discussion of how we can reduce our energy consumption and our carbon emissions in a way that won't hurt the economy.

Summers

Summarizes economic consequences of the technology discussion: that we either have to reduce our use of fossile fuels or develop new techniques or energy supplies that emmit less carbon. Provides an overview of the available policy tools: carbon tax, tradeable emissions permits, higher efficiency standards on appliances and vehicles. (10 mins)

President

Asks Repetto how quickly we can bring existing technologies on line to reduce our emissions.

Repetto

Reviews possible targetted economic tools available to spur investment in technology and reduce emissions, argues it is possible to act within the next 15 years without having an adverse impact on the economy, and that not acting earlier allows the installation of another generation of non-climate-friendly technology. (5 mins)

- Vice President** Asks Tyson, based on PCAST study, how much can we expect public investment in R & D to make new technologies affordable and competitive.
- Tyson** Discusses importance of different time frames for bringing on new technologies, including role of capital stock turnover, and leading role that energy efficiency and renewables should play in any R & D effort. (5 mins)
- Summers** Asks Nordhaus how one would go about calculating the costs and benefits of mitigating climate change.
- Nordhaus** Discusses importance of determining if and when we are exceeding a point of diminishing returns, and where it may be cheaper in the long term to respond to some impacts of climate change rather than trying to prevent them. (5 mins)
- President** Asks Stavins and Sandor to discuss various policy tools for reducing emissions, assessing the strengths and weaknesses.
- Stavins** Discusses the various international and domestic policy options, focusing on the strengths of a permitting system for being able to concentrate on the highest emissions, rather than simply on energy consumption. Discusses potential leakages from various systems. (5 mins)
- Sandor** Talks about experience of sulphur dioxide trading system, including how people expected it to perform, how much people thought permits would cost, why businesses prefer it to a tax, and why costs ended up being significantly lower. (5 mins)

PRESIDENT CLINTON'S OPENING REMARKS: 10:00 - 10:20

Vice President Welcomes attendees; introduces the President. (5 mins)

President Soberly endorses the scientific consensus behind climate change, asserts the importance of this issue to the American people, outlines that action will need to be taken, and embraces the broad outlines of the U.S. negotiating position going into Kyoto. (15 mins)

10:20 – 11:15**PANEL I:****THE SCIENCE OF GLOBAL WARMING AND CLIMATE CHANGE:**

Review and discuss evidence that global warming and climate change are occurring, that they have real consequences for the American people, and that action is needed to limit greenhouse gas emissions.

President Introduces Holdren.

Holdren Describes physical science of global warming and climate change, discussing level of certainty among scientists about how humans may be affecting the climate and how much that might happen in the next century. (15 mins)

President Asks Karl to discuss evidence that something is starting to occur.

Karl Presents extensive data and anecdotal evidence of climate change. (5 mins)

Vice President Asks Liverman, Wilhite and Karl to describe possible impacts on regions of U.S.

Liverman Presents projected western impacts. (5 mins)

Wilhite Presents projected midwest and eastern impacts. (5 mins)

Karl(?) Presents southeast and northeastern impacts. (5 mins)

Vice President Asks Watson to discuss what is clear and what is unclear about the science.

Watson Discusses level of agreement for how rapidly the climate will change and about where impacts will be most felt, as well as what the skeptics are arguing. Also could describe who participates in the IPCC, and how it came

into being. (10 mins)

President Asks Dr. Holdren how policymakers should act when uncertainties exist about different climate scenarios.

Holdren Discusses previous experience in enacting environmental regulation with credible yet incomplete scientific data. Would discuss why it is important to think about climate change policy as an insurance policy, why waiting to act allows carbon concentrations to develop to potentially dangerous levels, and why we should be concerned about surprises in the climate system. (5 mins)

11:30 - 11:40

VICE PRESIDENT'S REMARKS

Outlines history of how fossil fuels have been central to building modern societies and economies, and sketches where world population and development are going. He then outlines the new challenge: marshalling modern technology and entrepreneurial spirit to develop more efficient and innovative forms and uses of energy.

11:45 - 12:45

PANEL II:

ROLE OF TECHNOLOGY IN REDUCING GREENHOUSE GAS EMISSIONS

Review and discuss existing and possible technologies that can help us reduce emissions, and what is needed to expand the use of these technologies in the next century.

Peña Presents an overview of sectors that are major sources of greenhouse gas emissions, and of technologies that will most help reduce emissions. (10.5 mins)

President Asks Dr. Savitz to talk about how we can consume less energy in how we live, work, and travel. How much can we expect to reduce emissions in these areas?

Savitz *transportation* Sketches the potential for technological advances to reduce energy consumption and GHG emissions in transportation, housing/buildings, and ~~industry~~ (5 mins)

Vice President Asks Tom Casten to talk about what Trigen has done to recapture unused energy from power plants.

Casten Describes his company's work in energy saving techniques -- particularly in

recapturing unused energy in manufacturing and using it to heat houses and buildings -- and the impact and potential market that measures like these can make across U.S. industry. (5 mins)

Peña

Asks [~~Larry Papay, Bechtel~~ Kurt Yaeger, EPRI] to discuss what energy utilities are doing to cut emissions in their basic coal, gas, and nuclear plants.

~~Papay~~/Yaeger

Describes the newest generation of coal-fired electric plants, the ongoing switch from coal and nuclear to natural gas plants, the lessons learned from previous efforts to design plants that use less fuel, and the worldwide demand for cleaner burning power. (5 mins)

President

Asks Willrich to describe the current state of renewables, and what it will take to make these energy sources both more powerful and competitive.

Willrich

Describes the current market share of solar, wind, bioenergy, and the potential for these energy sources in the future, particularly in the developing world. Discusses R&D and regulatory measures we might consider to expand the use of renewables. Sketches some of the carbon savings possible from these energy sources. (5 mins)

Vice President

Asks Bonsignore to discuss the role of energy efficiency in reducing our consumption, and the export potential for this.

Bonsignore

Describes efficiency gains in lighting and heating systems, ~~as well as nuclear and hydro-energy power plants.~~ Discusses the potential for energy and cost savings from these measures in the U.S. Assesses the worldwide application of efficiency savings, particularly in countries such as Russia, India, China. (5 mins)

President

Asks Savitz what role the government should or should not play in encouraging the next wave of technological developments.

Savitz

Discusses the role of research and development in producing further reductions over a longer-term period, why PCAST encourages significant increases in efficiency and renewables, and which government incentives and regulations are most likely to encourage reductions.

1:00 - 2:00

LUNCH AND BREAKOUT DISCUSSIONS

Cabinet members in attendance will each lead discussions in separate rooms, with a short list of questions tailored to economic, technological, or other scientific questions.

2:15 - 2:30**FIRST LADY'S REMARKS**

Broad remarks to open afternoon session, including mention of health effects on children from climate change.

2:30 - 3:30**PANEL III:****KYOTO CONFERENCE AND U.S. NATIONAL INTERESTS:**

This panel will discuss the global nature of the problem, identify key issues outstanding in the negotiations, and clearly explain the U.S. negotiating position.

- | | |
|-----------------------|--|
| Albright | Describes origins of current negotiations (Rio Treaty, Berlin Mandate, and Geneva Declaration). Describes core elements of U.S. policy: binding targets, emissions trading, JI, developing country commitments. Summarizes positions of key countries or country groupings. (10 mins) |
| President | Asks Matthews, from an environmental perspective, whether developed countries can solve this alone. |
| Matthews: | Describes why developed countries have taken the lead, but why developing countries must adopt future emissions targets. Compares this treaty to others, such as ozone or nuclear non-proliferation. Describes possible impacts on developing countries and why these nations must see it in their interest to act. (10 mins) |
| Vice President | Asks Wolfensohn why developing countries have resisted binding targets. |
| Wolfensohn | Argues that growth of developing economies must not be unduly restricted. Developed world is biggest source of current concentrations, and can be greatest engine to technological change. (5 mins) |
| Albright | Asks Sweeney what difference it makes if developing countries are allowed to phase in their participation and are allowed growth budgets. |
| Sweeney | Describes potential loss to American workers from a 'leaky' treaty, including job loss from firms moving overseas to developing world rush to cheaper, dirtier fuel use. (5 mins) |
| Vice President | Asks Yergin, Jemison, Draper, and Krupp to sketch the energy demands we can expect from the developing world. |

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Yergin

Describes the enormous growth and energy demands in the developing world, and the energy choices these countries face: coal, natural gas and oil, renewables, nuclear. (5 mins)

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President

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Repetto

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can show
photos

Tyson

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Summers

Asks Nordhaus how one would go about calculating the costs and benefits of mitigating climate change.

Nordhaus

Discusses importance of determining if and when we are exceeding a point of diminishing returns, and where it may be cheaper in the long term to respond to some impacts of climate change rather than trying to prevent them. (5 mins)

President

Asks Stavins and Sandor to discuss various policy tools for reducing emissions, assessing the strengths and weaknesses.

Stavins

Discusses the various international and domestic policy options, focusing on the strengths of a permitting system for being able to concentrate on the highest emissions, rather than simply on energy consumption. Discusses potential leakages from various systems. (5 mins)

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Talks about experience of sulphur dioxide trading system, including how people expected it to perform, how much people thought permits would cost, why businesses prefer it to a tax, and why costs ended up being significantly lower. (5 mins)

Agenda**PRESIDENT CLINTON'S OPENING REMARKS: 10:00 - 10:20**

Vice President Welcomes attendees; introduces the President. (5 mins)

President Remarks foreshadow the day's events: sober endorsement of the scientific consensus behind climate change, assert the importance of this issue to the American people, outline that action will need to be taken, and embrace the broad outlines of the U.S. negotiating position going into Kyoto. (15 mins)

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Presents an overview of sectors that are major sources of greenhouse gas emissions, and of technologies that will most help reduce emissions. (10 mins)

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Asks Dr. Savitz to talk about how we can consume less energy in how we live, work, and travel. How much can we expect to reduce emissions by these efforts?

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3 sectors

Sketches the potential for technological advances to reduce energy consumption and GHG emissions in transportation, housing/buildings, and industry. She discusses the role of research and development in producing these savings over a longer-term period. (5 mins)

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Describes the newest generation of coal-fired electric plants, the ongoing switch from coal and nuclear to natural gas plants, the lessons learned from

previous efforts to design plants that use less fuel, and the worldwide demand for cleaner burning power. (5 mins)

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Willrich

Renewables

Describes the current market share of solar, wind, bioenergy, and the potential for these energy sources in the future, particularly in the developing world. R&D and regulatory measures we might consider to expand the use of renewables. Sketches some of the carbon savings possible from these energy sources. (5 mins)

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govt. & future staff

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Matthews:

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Schmalensee

Matthews
Wolfensohn
Yergin
Draper
Krupp
Jemison

Matthews:
B 2 6 1

Sweeney
Tanaka

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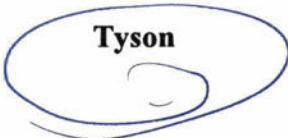
3:30 - 4:30

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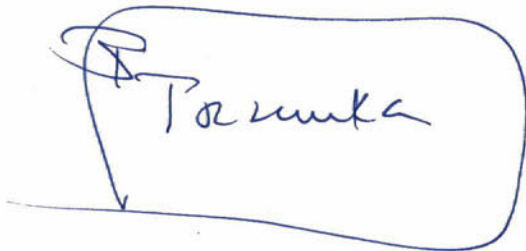
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Agenda

**White House Conference on Climate Change:
The Challenge of Global Warming
Draft Agenda**

*** - CONFIRMED**

10:00 - 10:05 **Vice President Gore:** *Welcome attendees; Introduces President Clinton*

10:05 - 10:20 **President Clinton:** *Opening Remarks: Importance of Global Warming and Climate Change for the American People.*

10:20 - 11:15 **The Science of Global Warming and Climate Change**

Presentation: **John Holdren**, Teresa and John Heinz Professor of Environmental Policy, Harvard University (*)

Panelists: **Robert Watson**, Director for Environment, World Bank (*)
 Tom Carl, Senior Scientist, NOAA, National Climatic Data Center (*)
 Diana Liverman, University of Arizona (*)
 Don Wilhite, Director, National Drought Mitigation Center, University of Nebraska (H)

11:30 - 11:45 **Vice President Gore:** *Where we've come from; Where we're going.*

11:45 - 12:45 **The Role of Technology in Reducing Greenhouse Gas Emissions**

Presentation: **Federico Peña**, Secretary of Energy

Panelists: **Maxine Savitz**, General Manager, AlliedSignal Aerospace Company's Ceramic Components Unit

Transport - **[Daniel Sperling, University of California, Davis]**

Building - **Harry Gordon**, Principal, Burt Hill Kosar Rittelmann, Architectural Engineers

Industrial - **Tom Casten**, President & CEO, Trigen Energy Corporation (*)

Exports/Efficiency Corporation - **Michael Bonsignore**, President and CEO, Honeywell

Renewables - **Mason Willrich**, CEO, EnergyWorks (*)

Fossils - **Kurt Yaeger**, President, Electric Power Research Institute

1:00 - 2:00 **Lunch: Breakout Discussions with the Cabinet**

2:15 - 2:30 **Remarks by First Lady Hillary Rodham Clinton**

2:30 - 3:30 **Kyoto Conference and U.S. National Interests**

*Obama's Future
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Presentation: **Madeleine Albright**, Secretary of State (*)
 Panelists: **Jessica Tuchman Mathews**, President, Carnegie
 Endowment for International Peace (*)

Officer,
 Fund (*)

James D. Wolfensohn, President, World Bank (*)
E. Linn Draper, Chairman, President, and Chief Executive
 American Electric Power. (*)
Fred Krupp, Executive Director, Environmental Defense

Daniel Yergin, President, Cambridge Energy Research
 Associates(*)
[William Reilly], Fmr. EPA Administrator]
[John Sweeney], AFL-CIO]
[Mae Jemison], President, Jemison Group, Inc. and
 Jemison Institute for Advancing Technology in Developing
 Countries] (H)

3:30 – 4:30 Climate Change Policy and the U.S. Economy

Presentation: **Larry Summers**, Deputy Secretary of the Treasury
 Panelists: **Robert Repetto**, Vice President, World Resources Institute

(*)

University (*)

William Nordhaus, Whitney Griswold Professor of
 Economics, Yale University (*)
Robert Stavins, Professor of Public Policy, Harvard

Richard Sandor, Chairman & Chief Executive, Centre
 Financial Products Limited (*)



White House Climate Change Task Force

734 Jackson Place, N.W. • Washington, DC 20503

FAX

To: SONATHAN/TODD

Organization/Title: _____

Fax: 456-2215

Phone: _____

Pages (including cover): _____

Date: 9-30-97

From: DIRK FORRISTER

Phone: _____

Message:

Bill asked me to Fax this to you.

***The White House Conference on Climate Change:
The Challenge of Global Warming***

Summary Agenda

Welcome and Introduction by Vice President Al Gore

Opening Remarks by President Bill Clinton

Panel 1: The Science of Global Warming and Climate Change

This panel will present and discuss the science of global warming and climate change. Topics will include the basic physical science, the possible impacts of climate change on the United States, and the level of scientific certainty regarding different aspects of the issue.

Remarks by Vice President Al Gore

Panel 2: The Role of Technology in Reducing Greenhouse Gas Emissions

This panel will discuss how presently available and developing technologies can play an important role in reducing emissions. Panelists will consider each of the major sources of energy supply and sectors of energy demand contributing to U.S. emissions, as well as examine the potential for the export of environmental technologies.

Lunchtime Breakout Sessions

Invited guests will break into small groups and have the opportunity to discuss climate change science and policy with senior Administration officials.

Panel 3: The Kyoto Negotiations and U.S. National Interests

This panel will consider the global nature of the climate change problem, identify key issues outstanding in the current round of international negotiations, and discuss the broader foreign policy implications of global warming.

Panel 4: Climate Change Policy and the U.S. Economy

This panel will examine various policy options for reducing U.S. greenhouse gas emissions, consistent with maintaining a strong economy.

Reception

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James D. Wolfensohn, President, World Bank (*)

E. Linn Draper, Chairman, President, and Chief Executive Officer,
American Electric Power. (*)

Fred Krupp, Executive Director, Environmental Defense Fund (*)

Daniel Yergin, President, Cambridge Energy Research Associates

[William Reilly, Fmr. EPA Administrator]

[John Sweeney, AFL-CIO]

[Mac Jemison, President, Jemison Group, Inc. and Jemison Institute
for Advancing Technology in Developing Countries] (H)

Prumka

3:30 – 4:30 Climate Change Policy and the U.S. Economy

Presentation: [Robert E. Rubin, Secretary of the Treasury]

Panelists: Robert Repetto, Vice President, World Resources Institute (*)

William Nordhaus, Whitney Griswold Professor of Economics, Yale
University (*)

Robert Stavins, Professor of Public Policy, Harvard University (*)

Richard Sandor, Chairman & Chief Executive, Centra Financial (*)
Products Limited

JOB

***- CONFIRMED**

10:00 - 10:05

Vice President Gore: *Welcome attendees; Introduces President Clinton*

10:05 - 10:20

President Clinton: *Opening Remarks: Importance of Global Warming and Climate Change for the American People.*

10:20 - 11:15

Panel I: The Science of Global Warming and Climate Change

Presentation: **John Holdren**, Professor, Department of Earth and Planetary Sciences and the John F. Kennedy School of Government, Harvard University

Panelists: **Robert Watson**, Director for Environment, World Bank
Tom Karl, Senior Scientist, NOAA, National Climatic Data Center
Diana Liverman, University of Arizona
Don Wilhite, Director, National Drought Mitigation Center, University of Nebraska

11:30 - 11:45

Vice President Gore: *Where we've come from; Where we're going.*

11:45 - 12:45

Panel II: The Role of Technology in Reducing Greenhouse Gas Emissions

Presentation: **Federico Peña**, Secretary of Energy

Panelists: **Maxine Savitz**, General Manager, AlliedSignal Aerospace Company's Ceramic Components Unit
Tom Casten, President & CEO, Trigen Energy Corporation
Michael Bonsignore, President and CEO, Honeywell Corporation
Mason Willrich, CEO, EnergyWorks
Kurt Yaeger, President, Electric Power Research Institute

1:00 - 2:00

Lunch: *Breakout Discussions with the Cabinet*

2:15 - 2:30

Remarks by First Lady Hillary Rodham Clinton

2:30 – 3:30

Panel III: Kyoto Conference and U.S. National Interests

Presentation: **Madeleine Albright**, Secretary of State

Panelists: **Jessica Tuchman Mathews**, President, Carnegie Endowment for International Peace

James D. Wolfensohn, President, World Bank

E. Linn Draper, Chairman, President, and Chief Executive Officer, American Electric Power.

Fred Krupp, Executive Director, Environmental Defense Fund

Daniel Yergin, President, Cambridge Energy Research Associates

Mae Jemison, President, Jemison Group, Inc. and Jemison Institute for Advancing Technology in Developing Countries

3:30 – 4:30

Panel IV: Climate Change Policy and the U.S. Economy

Presentation: **Larry Summers**, Deputy Secretary of the Treasury

Panelists: **Robert Repetto**, Vice President, World Resources Institute

William Nordhaus, Whitney Griswold Professor of Economics, Yale University

Robert Stavins, Professor of Public Policy, Harvard University

Richard Sandor, Chairman & Chief Executive, Centre Financial Products Limited

Richard Trumka, AFL-CIO

PRESIDENT CLINTON'S OPENING REMARKS: 10:00 - 10:20

Vice President Welcomes attendees; introduces the President. (5 mins)

President Soberly endorses the scientific consensus behind climate change, asserts the importance of this issue to the American people, outlines that action will need to be taken, and embraces the broad outlines of the U.S. negotiating position going into Kyoto. (15 mins)

10:20 – 11:15

PANEL I:**THE SCIENCE OF GLOBAL WARMING AND CLIMATE CHANGE:**

Review and discuss evidence that global warming and climate change are occurring, that they have real consequences for the American people, and that action is needed to limit greenhouse gas emissions.

President Introduces Holdren.

Holdren Describes physical science of global warming and climate change, discussing level of certainty among scientists about how humans may be affecting the climate and how much that might happen in the next century. (15 mins)

President Asks Karl to discuss evidence that something is starting to occur.

Karl Presents extensive data and anecdotal evidence of climate change. (5 mins)

Vice President Asks Liverman, Wilhite and Karl to describe possible impacts on regions of U.S.

Liverman Presents projected impacts. (5 mins)

Wilhite Presents projected impacts. (5 mins)

Vice President Asks Watson to discuss what is clear and what is unclear about the science.

Watson Discusses level of agreement for how rapidly the climate will change and about where impacts will be most felt, as well as what the skeptics are arguing. Also could describe who participates in the IPCC, and how it came into being. (10 mins)

President Asks Dr. Holdren how policymakers should act when uncertainties exist about different climate scenarios.

Holdren Discusses previous experience in enacting environmental regulation with credible yet incomplete scientific data. Would discuss why it is important to think about climate change policy as an insurance policy, why waiting to act allows carbon concentrations to develop to potentially dangerous levels, and why we should be concerned about surprises in the climate system. (5 mins)

11:30 - 11:40

VICE PRESIDENT'S REMARKS

Outlines history of how fossil fuels have been central to building modern societies and economies, and sketches where world population and development are going. He then outlines the new challenge: marshalling modern technology and entrepreneurial spirit to develop more efficient and innovative forms and uses of energy.

11:45 - 12:45

PANEL II:

ROLE OF TECHNOLOGY IN REDUCING GREENHOUSE GAS EMISSIONS

Review and discuss existing and possible technologies that can help us reduce emissions, and what is needed to expand the use of these technologies in the next century.

Peña Presents an overview of sectors that are major sources of greenhouse gas emissions, and of technologies that will most help reduce emissions. (5 mins)

President Asks Dr. Savitz to talk about how we can consume less energy in how we live, work, and travel. How much can we expect to reduce emissions in these areas?

Savitz Sketches the potential for technological advances to reduce energy consumption and GHG emissions in transportation, housing/buildings, and industry. (5 mins)

Vice President Asks Tom Casten to talk about what Trigen has done to recapture unused energy from power plants.

Casten Describes his company's work in energy saving techniques -- particularly in recapturing unused energy in manufacturing and using it to heat houses and buildings -- and the impact and potential market that measures like these can make across U.S. industry. (5 mins)

- Peña** Asks [Lary Papay, Bechtel\ Kurt Yaeger, EPRI] to discuss what energy utilities are doing to cut emissions in their basic coal, gas, and nuclear plants.
- Papay/Yaeger** Describes the newest generation of coal-fired electric plants, the ongoing switch from coal and nuclear to natural gas plants, the lessons learned from previous efforts to design plants that use less fuel, and the worldwide demand for cleaner burning power. (5 mins)
- President** Asks Willrich to describe the current state of renewables, and what it will take to make these energy sources both more powerful and competitive.
- Willrich** Describes the current market share of solar, wind, bioenergy, and the potential for these energy sources in the future, particularly in the developing world. Discusses R&D and regulatory measures we might consider to expand the use of renewables. Sketches some of the carbon savings possible from these energy sources. (5 mins)
- Vice President** Asks Bonsignore to discuss the role of energy efficiency in reducing our consumption, and the export potential for this.
- Bonsignore** Describes efficiency gains in lighting and heating systems, as well as nuclear and hydro-energy power plants. Discusses the potential for energy and cost savings from these measures in the U.S. Assesses the worldwide application of efficiency savings, particularly in countries such as Russia, India, China. (5 mins)
- President** Asks Savitz what role the government should or should not play in encouraging the next wave of technological developments.
- Savitz** Discusses the role of research and development in producing further reductions over a longer-term period, why PCAST encourages significant increases in efficiency and renewables, and which government incentives and regulations are most likely to encourage reductions.

1:00 - 2:00

LUNCH AND BREAKOUT DISCUSSIONS

Cabinet members in attendance will each lead discussions in separate rooms, with a short list of questions tailored to economic, technological, or other scientific questions.

2:15 - 2:30

FIRST LADY'S REMARKS

Broad remarks to open afternoon session, including mention of health effects on children from climate change.

2:30 - 3:30

PANEL III:

KYOTO CONFERENCE AND U.S. NATIONAL INTERESTS:

This panel will discuss the global nature of the problem, identify key issues outstanding in the negotiations, and clearly explain the U.S. negotiating position.

- | | |
|-----------------------|--|
| Albright | Describes origins of current negotiations (Rio Treaty, Berlin Mandate, and Geneva Declaration). Describes core elements of U.S. policy: binding targets, emissions trading, JI, developing country commitments. Summarizes positions of key countries or country groupings. (10 mins) |
| President | Asks Matthews why it is appropriate to design environmental treaties where developed countries take steps first, and developing countries follow. |
| Matthews: | Describes why developed countries have taken the lead, but why developing countries must adopt future emissions targets. Compares this treaty to others, such as ozone or nuclear non-proliferation. Describes possible impacts on developing countries; why these nations must see it in their interest to act; and why its in our interest to act. (5 mins) |
| Vice President | Asks Schmalensee whether this treaty can work without developing countries? |
| Schmalensee | Explains why developing countries must be part of any international agreement, and what might result if we sign a leaky treaty. (5 mins) |
| Vice President | Asks Wolfensohn why developing countries have resisted binding targets. |
| Wolfensohn | Argues that growth of developing economies must not be unduly restricted. Developed world is biggest source of current concentrations, have failed to live up to Rio commitments, and must be greatest engine to technological change. (3 mins) |
| Vice President | Asks Yergin to sketch the energy demands we can expect from the developing world, and the choices we should try to encourage. |
| Yergin | Describes the enormous growth and energy demands in the developing world, and the energy choices these countries face: coal, natural gas and oil, renewables, nuclear. (3 mins) |

- President** Asks Jemison about how people in the developing world use energy, and how dramatic are the changes we foresee for them.
- Jemison** Describes efforts to bring energy to remote villages in developing world. Gives sense of the magnitude of energy needs and supplies in underdeveloped world, of lack of institutional capacity to address these issues, of how western energy use is looked to as a model (for good or bad), and of how local needs and practices need to be considered. (3 mins)
- Vice President** We often talk about an agreement that includes flexible, market-based mechanisms. Is this a good deal for the developing world? Are we not harming the environment by taking credit for "easy" reductions?
- Draper** Describes enormous export potential for American businesses and technology in helping developing nations grow their economies in a way that limits emissions. Key is flexible, market oriented techniques such as international trading and joint implementation. (3 mins)
- Krupp** International trading critical in two regards: provides significant gains to the environment, brings in developing countries. (3 mins)

3:30 - 4:30

PANEL IV:

CLIMATE CHANGE POLICY AND THE US ECONOMY

A discussion of how we can reduce our energy consumption and our carbon emissions in a way that won't hurt the economy.

- Summers** Summarizes economic consequences of the technology discussion: that we either have to reduce our use of fossil fuels or develop new techniques or energy supplies that emit less carbon. Provides an overview of the available policy tools: carbon tax, tradeable emissions permits, higher efficiency standards on appliances and vehicles. (10 mins)
- President** Asks Repetto how quickly we can bring existing technologies on line to reduce our emissions.
- Repetto** Reviews possible targeted economic tools available to spur investment in technology and reduce emissions, argues it is possible to act within the next 15 years without having an adverse impact on the economy, and that not acting earlier allows the installation of another generation of non-climate-friendly technology. (5 mins)

- Vice President** Asks Tyson, based on PCAST study, how much can we expect public investment in R & D to make new technologies affordable and competitive.
- Tyson** Discusses importance of different time frames for bringing on new technologies, including role of capital stock turnover, and leading role that energy efficiency and renewables should play in any R & D effort. (5 mins)
- Summers** Asks Nordhaus how one would go about calculating the costs and benefits of mitigating climate change.
- Nordhaus** Discusses importance of determining if and when we are exceeding a point of diminishing returns, and where it may be cheaper in the long term to respond to some impacts of climate change rather than trying to prevent them. (5 mins)
- President** Asks Stavins and Sandor to discuss various policy tools for reducing emissions, assessing the strengths and weaknesses.
- Stavins** Discusses the various international and domestic policy options, focusing on the strengths of a permitting system for being able to concentrate on the highest emissions, rather than simply on energy consumption. Discusses potential leakages from various systems. (5 mins)
- Sandor** Talks about experience of sulphur dioxide trading system, including how people expected it to perform, how much people thought permits would cost, why businesses prefer it to a tax, and why costs ended up being significantly lower. (5 mins)

THE WHITE HOUSE
Washington, DC

OFFICE OF THE STAFF SECRETARY

Fax Transmittal Sheet

To: Mr. George David

Fax Number: 860-728-7611

Telephone Number: 860-728-7000

From: Todd Stern

Subject: White House Conference on Climate Change

Date: September 26, 1997

Number of Pages (including cover sheet): 2

Message:

(If all pages are not received, please call (202) 456-2702.)

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MESSAGE CONFIRMATION

SEP-26-97 19:25

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FAX NUMBER : 918607287611

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ELAPSED TIME : 01'06"

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RESULTS : O.K

THE WHITE HOUSE
Washington, DC

OFFICE OF THE STAFF SECRETARY

Fax Transmittal Sheet

To: Mr. Phil Condit

Fax Number: 206-655-4206

Telephone Number: 206-544-7000

From: Mr. Todd Stern

Subject: White House Conference on Climate Change

Date: September 26, 1997

Number of Pages (including cover sheet): 2

Message:

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MESSAGE CONFIRMATION

SEP-26-97 19:29

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NAME :

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RESULTS : O.K

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Washington, DC

OFFICE OF THE STAFF SECRETARY

Fax Transmittal Sheet

To: Mr. Larry Bossidy

Fax Number: 973-455-4002

Telephone Number: 973-455-2000

From: Todd Stern

Subject: White House Conference on Climate Change

Date: September 26, 1997

Number of Pages (including cover sheet): 2

Message:

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MESSAGE CONFIRMATION

SEP-26-97 19:34

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MODE : G3 STD

RESULTS : O.K

THE WHITE HOUSE
Washington, DC

OFFICE OF THE STAFF SECRETARY

Fax Transmittal Sheet

To: Mr. Paul O'Neil

Fax Number: 412-553-4947

Telephone Number: 412-553-3362

From: Todd Stern

Subject: White House Conference on Climate Change

Date: September 26, 1997

Number of Pages (including cover sheet): 2

Message:

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MESSAGE CONFIRMATION

SEP-26-97 19:15

FAX NUMBER : 2024562215

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RESULTS : O.K

Wt Agenda C

The White House Conference on Climate Change: The Challenge of Global Warming

Summary Agenda

Welcome and Introduction by Vice President Al Gore

Opening Remarks by President Bill Clinton

Panel 1: The Science of Global Warming and Climate Change

This panel will present and discuss the science of global warming and climate change. Topics will include the basic physical science, the possible impacts of climate change on the United States, and the level of scientific certainty regarding different aspects of the issue.

Remarks by Vice President Al Gore

Panel 2: The Role of Technology in Reducing Greenhouse Gas Emissions

This panel will discuss how presently available and developing technologies can play an important role in reducing emissions. Panelists will consider each of the major sources of energy supply and sectors of energy demand contributing to U.S. emissions, as well as examine the potential for the export of environmental technologies.

Lunchtime Breakout Sessions

Invited guests will break into small groups and have the opportunity to discuss climate change science and policy with senior Administration officials.

Panel 3: The Kyoto Negotiations and U.S. National Interests

This panel will consider the global nature of the climate change problem, identify key issues outstanding in the current round of international negotiations, and discuss the broader foreign policy implications of global warming.

Panel 4: Climate Change Policy and the U.S. Economy

This panel will examine various policy options for reducing U.S. greenhouse gas emissions, consistent with maintaining a strong economy.

Reception

DRAFT

1

09/22/97; 10:10 am

**White House Conference on Climate Change:
The Challenge of Global Warming
Draft Agenda**

10:00 - 10:05 Vice President Gore: *Welcome attendees; Introduces President Clinton*

10:05 - 10:20 President Clinton: *Opening Remarks: Importance of Global Warming and Climate Change for the American People.*

10:20 - 11:15 The Science of Global Warming and Climate Change

Presentation: John Holdren, Harvard University

Panelists: Robert Watson, World Bank

Tom Carl, NOAA

Diana Liverman, University of Arizona

Don Wilhite, University of Nebraska

11:30 - 11:45 Vice President Gore: *Where we've come from; Where we're going.*

11:45 - 12:45 The Role of Technology in Reducing Greenhouse Gas Emissions

Presentation: Frederico Pena, Secretary of Energy

**Panelists: Maxine Savitz, Allied Signal & Presidential Commission of Advisors
on Science and Technology**

Roger Sant, AES Corporation

Tom Casten, Trigen Corporation

Michael Bonsignore, Honeywell Corporation

Larry Papay, Bechtel Corporation

1:00 - 2:30 Lunch:

**Remarks by First Lady Hillary Rodham Clinton
Breakout Discussions with the Cabinet**

2:30 - 3:30 Kyoto Conference and U.S. National Interests

Presentation: Madeleine Albright, Secretary of State

Panelists: William Reilly, Fmr. EPA Administrator

[John Sweeney, AFL-CIO]

James Wolfensohn, World Bank

Linn Draper, AEP

Fred Krupp, Environmental Defence Fund

Jessica Tuchman Matthews, Carnegie Endowment for Peace

Daniel Yergin, Cambridge Energy Research Associates
[Gen. William Odom, (Ret.), Hudson Institute]

3:30 – 4:30 Climate Change Policy and the U.S. Economy

Presentation: ^{STET}~~Larry Summers~~, Deputy Secretary of the Treasury

Panelists: **Richard Repetto, World Resources Institute**

^{Rich Richels} ~~[William Nordhaus, Yale University]~~

^{Robt Solow} ~~[Alan Blinder, Princeton University]~~

Richard Sandor, Chicago Board of Trade

[Michael Porter, Harvard Business School]

10:00 - 10:20: Opening Remarks

10:00: The Vice President welcomes attendees; introduces the President.

10:05: The President speaks to the American people in a substantive way about global warming and climate change. His remarks foreshadow the day's events, endorse the scientific consensus behind climate change, assert the importance of this issue to the American people, outline that action will need to be taken, and embrace the broad outlines of the U.S. negotiating position going into Kyoto.

10:20 – 11:15: The Science of Global Warming and Climate Change: This panel will present and discuss evidence about global warming and climate change, and present the scientific case that they are occurring, that they have real consequences for the American people, and that action is needed to limit greenhouse gas emissions.

10:20: John Holdren, Professor of Physics, Harvard University, will concisely describe the physical science of global warming and climate change, as well as the level of certainty about its different aspects within the scientific community.

10:35: The President asks Dr. Tom Karl, Senior Scientist at NOAA, to discuss extensive data and anecdotal evidence that something serious is starting to occur.

10:45: The Vice President asks Dr. Diana Liverman, University of Arizona, and Don Wilhite, University of Nebraska, to describe possible impacts on regions of U.S. in the next twenty to thirty years.

11:00: The Vice President can ask Dr. Robert Watson, Chair of the IPCC, to discuss what is clear and what is unclear about how rapidly the climate will change and about where impacts will be most felt, as well as what the skeptics are arguing. He also could ask who participates in the IPCC, and how it came into being.

11:10: The President asks John Holdren how policymakers should act when uncertainties about different climate scenarios.

- 11:30 - 11:40: Vice President Al Gore: Where we've come from; where we're going:** Outlines history of how fossil fuels have been central to building modern societies and economies, and sketches where world population and development are going. He then outlines the new challenge: marshalling modern technology and entrepreneurial spirit to develop more efficient and innovative forms and uses of energy.
- 11:45 - 12:45: The Role of Technologies in Reducing Greenhouse Gas Emissions:** This panel will discuss policy options that allow us to reduce emissions without hurting our economy.
- 11:45: Secretary Pena presents an overview of the sectors that are the major sources of greenhouse gas emissions, and of the technologies that could play a part in reducing emissions.
- 11:55: The President asks Maxine Savitz, Allied Signal and PCAST member, to discuss the potential for building cars, homes and buildings that use less fuel.
- 12:05: The Vice President asks [Lary Papay, Bectel or Roger Sant, AES] to discuss advances in the newest generation of coal-fired electric plants, the lessons learned from previous efforts to design plants that use less fuel, and the worldwide demand for cleaner burning power.
- 12:15: The Vice President asks [DuPont/Dow/Monsanto] to discuss advances being made in introducing energy efficiency into manufacturing.
- 12:20: The President asks Tom Casten to describe what Trigen has done to develop and market systems that recapture unused energy from power plants, and rechannel it to heat other buildings. Mr. Casten should also describe the kinds of companies that have benefited from this kind of technology, as well as to speculate on the market share for these kinds of technologies.
- 12:30: The Vice President asks Steve Percy, British Petroleum USA, to describe efforts to develop and market solar and other alternative fuels. Larry Papet, Bectel, could describe how much we can expect solar, wind, and other renewables to reduce our carbon emissions. Mr Papet can also describe the most effective government programs or policies in helping develop these technologies.
- 12:40: The Vice President asks Michael Bonsignore to discuss Honeywell's experience in trying to export technologies such as more efficient lighting and heating systems, as well as nuclear and hydro-energy power plants.

1:00 - 2:15: Lunch and Breakout discussions:

1:00: First Lady Hillary Rodham Clinton will give broad remarks, including brief mention of the health effects on children from climate change.

1:15: Breakout sections: Cabinet members in attendance will each lead discussions at their tables, with a short list of questions tailored to economic, technological, or other scientific questions.

2:30 – 3:30: International Negotiations Panel. This panel will discuss the global nature of the problem, identify key issues outstanding in the negotiations, and clearly explain the U.S. negotiating position.

2:30 - 2:35: Secretary Albright provides a brief background on the ongoing negotiations, mentioning the Rio Climate Treaty, the Berlin Mandate, and the Geneva Declaration. She describes the core elements of the U.S. position (i.e. binding targets, emissions trading, JI, developing country commitments), and summarizes the positions of key countries or country groupings (i.e., the EU, China, and the G-77).

2:35 - 2:45: Vice President Gore asks William Reilly, Fmr. EPA Administrator, why developed countries have taken the lead, and what are realistic, environmentally sound and politically equitable obligations for developing countries to adopt for current and future emissions.

[2:45 - 2:50: Vice President Gore asks John Sweeney, AFL-CIO, to discuss labor's perspective on a fair international agreement to address climate change.]

2:50 - 2:55: Secretary Albright asks James Wolfensohn, World Bank, to describe why developing countries have opposed committing to binding targets at Kyoto, and any whether we risk choking off economic development.

2:55 - 3:00: Vice President Gore asks Linn Draper, AEP, whether flexible, market oriented techniques can allow businesses such as coal burning utilities to adapt to environmental regulation in a cost-effective manner. What are the international prospects for establishing such market-oriented approaches, such as trading and joint implementation?

3:00 - 3:05: The Vice President asks Fred Krupp, EDF, to describe whether an international trading system could provide significant gains to the environment.

3:05 - 3:15: Secretary Albright asks Jessica Matthews, Carnegie Foundation, about the foreign policy considerations regarding climate change. Do we have a national interest in preventing climate change impacts in the developing world?

3:15 - 3:20: Vice President Gore asks Daniel Yergin, Cambridge Energy Research Associates, to talk about strategic energy considerations, especially how developing view their energy security, and what the prospects are for the current system.

3:20 - 3:25: Secretary Albright asks General William Odom, Ret., Hudson Institute, how these issues are likely to affect strategic balances in several key regions such as the Caspian Sea and South China Sea.

3:30 - 4:30: Climate Change Policy and the US Economy: Can we do this in a way that won't hurt the economy? Which industries are likely to face challenges? Which are likely to reap benefits?

3:30 - 3:35: Secretary Rubin lays out the challenge of reducing climate emissions without hurting the economy. He would summarize the economic consequences of the technology discussion: that we either have to reduce our use of fossil fuels or develop new techniques or energy supplies that emit less carbon.

3:35 - 3:45: Vice President Gore asks Robert Repetto, WRI, how quickly it is possible to bring existing technologies on line quickly and cost-effectively to reduce our emissions.

3:45 - 3:55: Secretary Rubin asks Rich Richels, Electric Power Research Institute, what would be the most cost effective strategy for mitigating climate change. How important are time frames for bringing on new technologies? How can we know if we are exceeding a point of diminishing returns?

3:55 - 4:05: The Vice President asks Robert Solow, MIT, how, amidst uncertainty, we should craft an "insurance" strategy, and how we might design sufficiently early reductions to make a middle-term date cost effective.

4:05 - 4:15: Secretary Rubin asks Richard Sandor, Chicago Board of Trade, to talk about his experience in helping establish the sulphur dioxide trading system, including how people expected it to perform, how much people thought permits would cost, and why the cost ended up being significantly lower.

4:15 - 4:25: The Vice President asks Michael Porter what makes investors move quickly into environmental technologies, and firms and countries' find it in their competitive advantage to invest early in these technologies.

WHITE HOUSE STAFFING MEMORANDUM

Document No. _____

WH Conf- Agenda

DATE: 9/13/97

ACTION/CONCURRENCE/COMMENT DUE BY: —

SUBJECT: WH Conf. on Global Warming + Climate Change - Dan
Agenda

	ACTION	FYI		ACTION	FYI
VICE PRESIDENT	☐	☐	McCURRY	☐	☐
BOWLES	☐	☐	McGINTY	☐	☒
McLARTY	☐	☐	NASH	☐	☐
PODESTA	☐	☒	RADD	☐	☐
MATHEWS	☐	☐	REED	☐	☐
RAINES	☐	☐	RUFF	☐	☐
BLUMENTHAL	☐	☒	SMITH	☐	☐
BERGER	☐	☐	SOSNIK	☐	☐
ECHAVESTE	☐	☐	SPERLING	☐	☒
EMANUEL	☐	☒	STREETT	☐	☐
GIBBONS	☐	☒	TARULLO	☐	☒
HILLEY	☐	☐	VERVEER	☐	☒
IBARRA	☐	☐	WALDMAN	☐	☒
KLAIN	☐	☒	YELLEN	☐	☒
LEWIS	☐	☒	BEGALA	☐	☒
LINDSEY	☐	☐	<u>Stern</u>	☐	☒
MARSHALL	☐	☐	<u>[REDACTED]</u>	☐	☒
				☐	☐

REMARKS:

FYI - Please bring to 3:30 meeting

RESPONSE:

Staff Secretary
Ext. 6-2702

MESSAGE CONFIRMATION

SEP-15-97 08:03

FAX NUMBER : 2024562215

NAME :

FAX NUMBER : 96229373

PAGE : 10

ELAPSED TIME : 04'16"

MODE : G3 STD

RESULTS : O.K

THE WHITE HOUSE
Washington, DC

OFFICE OF THE STAFF SECRETARY

Fax Transmittal Sheet

To: Bob Boorstin

Fax Number: 622-9373

Telephone Number: 622-0486

From: Todd Stern

Subject: White House Conference on Global Warming

Date: 9-15-97

Number of Pages (including cover sheet): 10

Message: Bob --

I will call you between 9:30 - 10:00 a.m. re the
attached.

Todd

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**White House Conference on
Global Warming and Climate Change
Draft Agenda**

10:00 - 10:05 Vice President Gore: *Welcome attendees; Introduces President Clinton*

10:05 - 10:20 President Clinton: *Opening Remarks:* Importance of Global Warming and Climate Change for the American People.

10:20 - 11:20 Science Panel Discussion:

Presenter: John Holdren, Harvard University:

11:30 - 12:30 Emission Reduction Technology and Policy Roundtable

Presenter: Robert Rubin, Secretary of the Treasury

12:30 - 2:00 Lunch: Remarks by First Lady Hillary Rodham Clinton

2:00 - 3:00 Kyoto Conference and U.S. National Interests Roundtable

Presenter: Madeleine Albright, Secretary of State

3:15 - 4:15 Breakout Sessions

4:30 - 5:00 Vice President Gore: *Closing remarks:* The Road Ahead

5:30 - 6:30 White House Reception

10:00 - 10:05: Welcome

The Vice President will welcome attendees to the conference and introduce the President.

10:05 - 10:20: Opening Remarks:

The President's opening remarks will be his opportunity to speak to the American people in a substantive way about global warming and climate change. His remarks should foreshadow the day's events, endorsing the scientific consensus behind climate change, asserting the importance of this issue to the American people, outlining that action will need to be taken, and embracing the broad outlines of the U.S. negotiating position going into Kyoto.

10:20 - 11:20: Science presentation:

Goal: To concisely describe what global warming and climate change are, and to present conclusively the scientific case that they are occurring, that they have real consequences for the American people, and that action is needed to limit greenhouse gas emissions.

Physical science and impacts of global warming and climate change:

10:20 - 10:35: *John Holdren, Professor of Physics at Harvard University*, will deliver a 15 minute lecture, using slide and video graphics to display three central aspects of global warming science: the physical processes that are underway, the impacts they may have on the United States and the rest of the world, and the level of certainty within the scientific community about the future impacts of global warming.

- **What is global warming? What is climate change? What are greenhouse gases?** An overview of the sources of greenhouse gas emissions; emission trends and projections; temperature and climate trends and projections.
- **What are the global impacts?** A catalogue of consequences: increased storm activity; global sea rise; changes in arctic and tropical regions; changing soil, plant and water ecosystems; shifting diseases vectors; surprises.
- **How conclusive is scientific evidence for global warming?** Description of the IPCC report; certainties and uncertainties of human fingerprint and of future projections of temperature, changing weather patterns, sea level rise, etc.

Discussion: Using Holdren's remarks as a point of departure, the President will then lead a conversation with a panel of three/four other scientists covering these issues in more detail.

10:35 - 10:45: **Are there any indications that climate change may already be occurring?**

Tom Karl, Senior Scientist, NOAA: Dr. Karl will discuss the extensive anecdotal evidence that something serious is starting occur. The presentation could include photographs or graphics about extreme events. Follow-up questions could probe how much any one of these incidents might be attributed to global warming, as well as to the probability that this many extreme incidents might happen within so short a time period.

10:45 - 10:55: **What do most scientists say about skeptics arguments?** Some say that the upper atmosphere is cooling rather than getting warmer: which measurements are we supposed to believe? Some people say the relevant warming has all happened before 1940, and that we may be entering a cyclical trough period: how can we tell that temperatures will continue to rise?

Robert Watson, Chair of the Intergovernmental Panel on Climate Change. Dr. Watson will discuss the nature of the scientific consensus, describe the history and composition of the IPCC, and review the certainty which exists across the range of

climate change issues. Follow-up: Some question the accuracy of the computer models upon which most climate projections are based. Can we trust them?

10:55 - 11:05: **What does this mean for the United States?** What are the likely or possible regional impacts within the U.S.?

Diana Liverman, Professor of XXX, University of Arizona. Dr. Liverman will review the range of impacts on different regions of the country, describing region-by-region what might be expected to occur in the next twenty to thirty years. She might also discuss health impacts that we might be expected to see.

Don Wilhite, Dir., National Drought Mitigation Center. Dr. Wilhite will review recent droughts and floods and suggest future impacts if trends continue.

Follow up: Will different regions differ in the amount to which they will be effected? How much certainty do we have about impacts as specific as on any one region?

11:05 - 11:15: **Why we need to act now:** What will be the difference if we take steps now or twenty years from now? What kind of action should we take, considering we won't know for another twenty years whether our actions today have had any ameliorative effect? Won't our emissions reductions be dwarfed by the vast emissions that will come from the developing world later this century?

John Holdren: Dr. Holdren could discuss time lags, broad certainties and uncertainties about different climate scenarios, risk of "climate surprises," difficulties of making decisions amidst uncertainty, need for flexibility and creativity in policy.

11:15 - 11:20: **Wrap-up:** President would summarize: Overwhelming scientific evidence points to a discernable human impact on the climate, with real effects on the American people and on our children. Action is needed to address this. Demanding absolute scientific certainty is asking for more than we have had in previous efforts to protect the environment. The key question is: how big a risk are we taking by not acting?

11:30 – 12:30: Emission Reduction Policy Panel

Goal: To discuss policy options that allow us to reduce emissions without hurting our economy.

Opening presentation: The key elements of a national policy to reduce emissions.

11:30 - 11:35: *Robert Rubin, Secretary of the Treasury.* Secretary Rubin would establish that we will adopt binding emissions targets, explain where emissions come from domestically, and outline what a national strategy to reduce emissions might look like. The presentation would include:

- **National targets:** US will adopt a nation-wide binding emissions target.
- **Where emissions come from:** 95% of US emissions come from heavy industry, broad utility energy supply to homes and businesses, and transportation.
- **How to reduce emissions:** (a) Discouraging the use of carbon: Command regulation, market oriented trading system of emission permits (possibly including international trading and joint implementation), revenue-neutral auction or carbon tax; (b) climate-friendly technology, including carbon-efficient uses of fossil fuels; development of alternative fuel sources (solar, wind, biomass, nuclear); dissemination of existing energy efficiency technologies.
- **Experience in regulating emissions:** Past regulatory efforts display a range of available options for limiting emissions.

Discussion: The President would then lead a discussion exploring (a) possible policy tools, such as emission reduction technologies and trading mechanisms, and (b) the likely impact on our economy of limiting carbon emissions.

11:35 - 11:45: **Regulation and Trading:** We have had extensive experience in trying to regulate pollution in this country. What kind of system did we set up to limit acid rain? Did it work? Is it analogous for our climate efforts, in scope and scale? If permits are applied "upstream," could such a system be combined with other measures to discourage fossil fuel use by downstream users

Richard Sandor, Chicago Board of Trade: Sandor could discuss how the sulphur dioxide trading system was designed, what the initial estimates were for permit costs, how those costs dropped as a result of fuel substitution and other factors. POTUS follow-up: Would establishing a carbon trading scheme be more difficult in scope and scale?

Linn Draper, AEP: Draper could talk about experiences of coal-burning utilities in adjusting to acid rain; efficiency and trading steps (including joint implementation) that it might take under a permit system. He could also talk about efforts being considered to be more carbon-efficient in burning coal. Follow-up: What affect might energy restructuring have on adjusting to this kind of system?

11:45 - 12:00: **Technology:** What are the most promising technologies in reducing the emissions from fossil fuels, particularly in the different emissions sources we heard about: power generation for industry; power use in homes and offices, fuel for transportation? How about shifting to renewable sources? How much can we expect to reduce emissions by increasing our energy efficiency?

Ken Lay, Enron: Lay could address the ability to shift to alternative fuels, such as natural gas and renewable energy sources. He might also talk about the capacity

for exporting such technologies overseas, and about the growth capacity for this aspect of the energy industry. Follow-up: Is solar power ready for prime-time? How about wind? How quickly can we bring them fully into the market?

Michael Porter, Harvard Business School: Porter could discuss, from firms' perspective, why responding early to impending environmental/energy regulation is distinctly in the interest of businesses. Follow-up: Do government R&D programs help advance these technologies, or is regulation or a price signal the most effective way to spur investment? How quickly can we see gains from efficiency and other technologies?

Rich Richels, Energy Policy Research Institute: Richels could realistically assess the possibilities of these technologies in achieving our emission reduction goals. Follow-up: How quickly can we see gains from efficiency and other technologies?

Possible additional participants:

Fred Buckman, PacifiCorp: Buckman could talk about the ability of a large utility to adapt to low emissions standards, particularly based on his experience in the Oregon program. Follow-up: Would you pursue these investments if you did not need to reduce emissions? Would you pursue them without government help?

Fred Krupp, EDF: Krupp could talk about the gains to the environment from a trading system, including how national budgets would work, and how it would need to be adapted to address different emissions sources. Follow-up: How difficult will it be to ensure that we're monitoring all the emissions? How do we ensure that citizens are adequately rewarded for steps that they take on their own?

Robert Shapiro, Monsanto/Pete Correl, Georgia Pacific: Shapiro or Correl could address the ability for agribusiness not only to adapt to a new carbon regime, but to take advantage of many agricultural solutions to greenhouse gases, such as biomass or carbon sequestration. Follow-up: What is biomass, exactly? Are government R&D programs helpful in advancing these technologies?

Maxine Savitz, Allied Signal: Savitz could talk about the number of different efficiency technologies available, and about the potential scope of this market. Follow-up: Would companies such as yours be subject for credit for these gains in a trading system? How would we measure such gains?

Jack Welch, General Electric: Welch could talk about broad innovations in energy production and consumption, ranging from fuel efficient lighting and heating to the role that nuclear and hydro-energy could play in a carbon-free future. Follow-up: How important is nuclear energy in the strategy of other developed or developing countries for reducing emissions?

ATT/Hewlett Packard/IBM: Panelist would talk about the critical role that information technologies can play in developing, adapting, and/or disseminating energy efficiency techniques and/or alternative fuel sources. Would discuss any current projects underway with utilities or industries, and would assess the prospects for further development of these. Follow up: Does the U.S. have a comparative advantage in adapting these technologies to environmental ends?

12:00 - 12:25: **Economy:** Can we do this in a way that won't hurt the economy? Which industries are likely to face challenges? Which are likely to reap benefits?

Robert Repetto, WRI: Repetto would lay out the case that you can bring existing technologies on line quickly and cost-effectively to reduce our emissions, and that these introductions ultimately would have a positive effect on our economy. Could also address the economic costs of not doing anything. Follow-up: If these technologies are so efficient, why have companies not yet adopted them? What is the difference, from an environmental standpoint, if we bring these technologies on sooner rather than later? Can we put our finger on quantifiable environmental damage that will occur if From a technology development standpoint, how important is a rapid time line?

John Sweeney, AFL-CIO: Broad overview of organized labor's position: that labor supports efforts that can be shown to help the environment, that won't hurt American competitiveness or move U.S. jobs overseas, or that won't send shockwaves through the American economy. Follow-up: What has labor's experience been with past emissions regulation?

Economist A; "Do it smart": [Alan Blinder?] A co-author of economists' letter on climate change; would argue that, depending on policies, mitigation does not necessarily have to have a negative impact on the economy. While not endorsing a particular target date, could say that "smart" approaches could bring sufficiently early reductions to make an middle-term date cost effective. Follow-up: How uniform are economists in their views about the best way to address the issue?

Economist B; "Go slow": Would argue that attempts to mitigate climate change can be done without significant adverse consequences, but the most economically effective approach is to stretch out implementation over the longest time frame available. Follow-up: From an economists' standpoint, will it be more difficult on the economy to take action if we allow current trends to continue? Is there value to helping key industries?

[Other possible speakers: Student leader discusses local action in addressing climate change. Governor or Utilities Commissioner of Oregon discusses state program to address these issues, and the coalition of government, businesses and environmental groups that brought it about.]

12:30 - 2:00: Lunch:

First Lady Hillary Rodham Clinton: October 6 happens to be Children's Health Day, and the First Lady has expressed interest in the health effects on children from climate change. She could address this topic in remarks at the conference luncheon.

2:00 – 3:00: International Negotiations Panel

Goal: To communicate the global nature of the problem; to identify the key issues outstanding in the negotiations; and to build support for the U.S. negotiating position.

Opening Presentation: Introduce the international component of the climate change debate, with a focus on the Kyoto negotiation.

2:00 - 2:05: *Secretary of State Madeleine Albright:* Secretary Albright would provide a brief background on the Rio Climate Treaty, the Berlin Mandate, and the Geneva Declaration as setting the scene for the ongoing negotiations. After describing the U.S. position, she would summarize the positions of key countries or country groupings (i.e., the EU, China, and the G-77). She also should discuss:

- **Importance of American leadership:** Climate change is a major foreign policy challenge in a post-Cold War world and U.S. leadership is vital to solving it.
- **Developed v. Developing Country Emissions:** breakdown of current and projected emissions from the OECD vs. the developing world.
- **Timing of emission reductions:** While underscoring the importance of reducing developing country emissions, make clear that such emissions must peak at a later date than ours, that this is a precedent used successfully in other global agreements (i.e. ozone), and that this still will allow for environmental protection.

Discussion: The Vice President would then lead a discussion, keying off the following questions:

2:05 - 2:10: **Where developed countries stand:** The EU proposes reducing emissions 15% below 1990 levels by 2010. How do they expect to do it? Is this target possible for us? How important are our proposals on flexibility for implementing the agreement, including joint projects with developing countries, and trading. How would a trading system work?

Dan Esty, Yale University Law School and School of Forestry: Esty could describe the origin and state of the Kyoto negotiations, discussing why developed countries have taken the lead, why the EU has staked out its position, and how this relates to future discussions. Follow-up: How involved have European businesses been in developing or adapting to Europe's policies? Where do other industrialized countries stand in the negotiations? What comes after Kyoto?

- 2:10 - 2:30: **Developing country commitments:** Environmentally, what kind of emissions path do developing countries need to follow? What are the economic and environmental implications of having their emissions peak at a later date? What are realistic obligations for developing countries to adopt in Kyoto with respect to their current and future emissions? How can the U.S. help these nations achieve reductions?

Jonathan Lash, WRI: Lash can discuss the emissions paths developing countries can legitimately adopt, and the impact it may have on their economies. He could also speak to the potential environmental advantages of JI in introducing technologies into the developing world. Follow-up: What effect would our adopting a later timetable have on the likelihood of getting developing countries to adopt binding targets?

Advocate of Ambitious Developing Country Commitments: A second panelist would make a broad-based case for the environmental, economic, and political need for developing country commitments. Follow-up: How significant is the timing of developing country commitments?

John Adams, NRDC: Adams can discuss how efforts to mitigate climate change in the developing world can help make important contributions on other critical environmental issues, such as saving forests and reducing smog and airborne pollution. He might also usefully touch on the difficult irony that while developing countries have contributed the least to current emission concentrations, they are most adversely effected by the consequences of climate change. Follow-up: What is an acceptable level of emissions growth for developing countries?

- 2:30 - 2:40: **Flexibility:** The U.S. domestic experience has shown that flexible, market oriented techniques have allowed businesses to adapt to environmental regulation in a cost-effective manner. What are the international prospects for establishing such market-oriented approaches, such as trading and joint implementation?

John Browne, BP: Browne could lay out why international businesses would benefit by getting ahead of the game, but why flexible implementation strategies are critical. Follow-up: Where do you see the greatest potentials for progress with developing countries in reducing emissions? Does JI achieve reductions that would not otherwise have occurred?

Roger Sant, AES/Michael Bonsignore, Honeywell: Sant/Bonsignore could lay out the international possibilities for existing climate-friendly technologies, including carbon sequestration, and could outline the opportunities for export of these to the developing world, particularly if joint implementation were allowed. Follow-up: Are emissions reduction strategies underway in the developing world? What do you make of the argument that U.S. industries would only help with, and profit from, making the cheapest reductions, such as converting power plants from coal to natural gas?

Gus Speth, Director UNDP/Joseph Stiglitz, World Bank: Can speak to multilateral

efforts being taken, and to the possible nature of an international emissions trading system. Follow-up: Will supervising a trading system create a new international bureaucracy? Will the U.S. sacrifice its sovereignty if it signs onto this treaty?

2:40 - 2:55: **National Security:** Is there a national security dimension to climate change?

Jessica Matthews, Carnegie Foundation: Can discuss preventing future loss of cropland, desertification, flooding, etc. Can also discuss competitiveness benefits from making our economy more energy efficient. Follow-up: Is it possible to fully protect ourselves from these consequences? Why are these developments our responsibility? How do they affect us?

Daniel Yergin, Cambridge Energy Research Associates: Can discuss nature of our reliance on foreign oil, how it has increased over the last two decades, and the structure of defense and alliances we have built to protect our access to oil. Follow-up: Were we to be completely self-sufficient for our energy needs, wouldn't we still need to care about conflict in the Persian Gulf or Caspian Sea?

Frank Wisner, Former US Ambassador to India: Wisner can speak to the energy development issues faced in developing countries, particularly those that see their energy needs expanding by as much as 7% per year. He also can discuss steps developing countries already are taking on the environment. Follow-up: How do developing countries view joint implementation? What more can we do to help them both meet their energy needs while protecting the environment?

**White House Conference on Climate Change:
The Challenge of Global Warming
Draft Agenda**

10:00 - 10:05 Vice President Gore: *Welcome attendees; Introduces President Clinton*

10:05 - 10:20 President Clinton: *Opening Remarks:* Importance of Global Warming and Climate Change for the American People.

10:20 – 11:15 The Science of Global Warming and Climate Change

Presentation: John Holdren, Harvard University

11:30 – 12:30 Reducing Greenhouse Gasses

Opening Remarks: The Vice President
Presentation: Secretary Frederico Pena

12:30 – 2:00 Lunch:

Remarks by First Lady Hillary Rodham Clinton
Breakout Discussions with the Cabinet

2:00 – 2:45 Kyoto Conference and U.S. National Interests

Presentation: Madeleine Albright, Secretary of State

3:00 – 3:45 Climate Change Policy and the U.S. Economy

10:00 - 10:20: Opening Remarks

10:00: The Vice President welcomes attendees; introduces the President.

10:05: The President speaks to the American people in a substantive way about global warming and climate change. His remarks foreshadow the day's events, endorse the scientific consensus behind climate change, assert the importance of this issue to the American people, outline that action will need to be taken, and embrace the broad outlines of the U.S. negotiating position going into Kyoto.

10:20 – 11:15: The Science of Global Warming and Climate Change: This panel will present and discuss evidence about global warming and climate change, and present the scientific case that they are occurring, that they have real consequences for the American people, and that action is needed to limit greenhouse gas emissions.

10:25: John Holdren, Professor of Physics, Harvard University, will concisely describe the physical science of global warming and climate change, as well as the level of certainty about its different aspects within the scientific community.

10:40: The President asks Dr. Tom Karl, Senior Scientist at NOAA, to discuss extensive data and anecdotal evidence that something serious is starting to occur.

10:50: The Vice President asks Dr. Diana Liverman, University of Arizona, and Don Wilhite, University of Nebraska, to describe possible impacts on regions of U.S. in the next twenty to thirty years.

11:05: The President asks Dr. Robert Watson, Chair of the IPCC, to discuss the nature of the scientific consensus across the range of climate change issues, and about the history and composition of the IPCC.

11:10: The President asks John Holdren how policymakers should act amidst certainties and uncertainties about different climate scenarios.

11:30 – 12:30: Reducing Greenhouse Gas Emissions: This panel will discuss policy options that allow us to reduce emissions without hurting our economy.

11:30: The Vice President outlines the historic nature of the effort we are about to undertake, including the history of technological development and fossil fuels use built our economy. He outlines the new challenge: to marshal the same technological and entrepreneurial forces to develop more efficient and innovative approaches to producing and using energy.

Alternative
Fuels

11:40: Secretary Pena will outline the ~~key elements and broad technological approaches of a national policy~~ ⁵⁵ to reduce greenhouse gas emissions, ~~with an emphasis on the technological innovations needed to achieve national goals.~~

11:45: The President asks Maxine Savitz, Allied Signal and PCAST member, to discuss the potential for increasing fuel efficiency in automobiles, transportation, and consumer products.

11:50: The Vice President asks Roger Sant, AES, to discuss efficiency gains in power generation and the international applications, particularly if joint implementation were allowed.

11:55: The President asks Tom Casten, Trigen Corp, to discuss energy inefficiencies in power generation, and how difficult it is to establish more efficient power processes to recapture unused energy and channel it to productive uses (i.e. cogeneration technologies).

12:00: The Vice President asks Michael Bonsignore, Honeywell, to discuss the export opportunities from environmental technologies for U.S. businesses in energy production and consumption, ranging from fuel efficient lighting and heating to nuclear and hydro-energy.

12:30 - 2:00: Lunch and Breakout discussions:

12:30: First Lady Hillary Rodham Clinton will give broad remarks, including brief mention of the health effects on children from climate change.

12:45: Breakout sections: Cabinet members in attendance will each lead discussions at their tables, with a short list of questions tailored to economic, technological, or other scientific questions.

2:00 – 2:45: International Negotiations Panel

Goal: To communicate the global nature of the problem; to identify the key issues outstanding in the negotiations; and to build support for the U.S. negotiating position.

Opening Presentation: Introduce the international component of climate change, with a focus on the Kyoto negotiation.

2:00 - 2:05: *Secretary of State Madeleine Albright:* Secretary Albright would provide a brief background on the Rio Climate Treaty, the Berlin Mandate, and the Geneva Declaration as setting the scene for the ongoing negotiations. Would describe the U.S. position, would summarize the positions of key countries or country groupings (i.e., the EU, China, and the G-77).

Discussion: The Vice President would then lead a discussion, keying off the following questions:

2:05 - 2:25: **Developed and developing country commitments:** What are realistic, environmentally sound and politically equitable obligations for developing countries to adopt for current and future emissions?

William Reilly, Fmr EPA Administrator: Origins and status of the Kyoto negotiations, why developed countries have taken the lead, why EU has staked out its position, and future of global climate policy.

John Sweeney, AFL-CIO: Developing countries must take on commitments for important environmental, economic, and political reasons. U.S. should not take steps that would move jobs overseas, nor send shockwaves through the economy.

James Wolfensohn, World Bank: From the developing country perspective, two basic facts: the vast majority of current concentrations come from the developed world, any commitment to emissions stabilization must begin with growth budgets.

2:25 - 2:35: **Flexibility:** Flexible, market oriented techniques can allow businesses to adapt to environmental regulation in a cost-effective manner. What are the international prospects for establishing such market-oriented approaches, such as trading and joint implementation? How would a trading system work?

Linn Draper, AEP: Coal-burning utilities will undergo enormous adjustments; but can adapt to them both domestically and internationally (including through joint implementation) under a permit system.

Fred Krupp, EDF: An international trading system could provide significant gains to the environment.

2:35 - 2:55: **National Security:** Is there a national security dimension to climate change?

Jessica Matthews, Carnegie Foundation: A difficult irony: while developing countries have contributed the least to current emission concentrations, they are most adversely effected by the consequences of climate change. In our interest and theirs to prevent adverse effects.

Daniel Yergin, Cambridge Energy Research Associates: Developing nations, facing rising demands for energy, will need to recognize two key facts: (a) their energy security is bound up in being part of the global energy economy; (b) basing their economies on fossil fuels is potentially risky, since source countries are often unstable, and use of fossils comes with enormous environmental and social costs.

Condoleezza Rice, Stanford University: The largest emerging countries are developing using old, non-fuel-efficient technologies, with important investments in key regions such as the Caspian Sea and South China Sea. While problematic for these countries, their investments are heavy enough that they will not be easily persuaded to abandon them.

3:00 - 3:30: **Closing Remarks: *Where we've come from; where we're going.*** *Vice President Gore:* The Vice President's closing remarks would outline the historic nature of the challenge at hand. It would review, in the broadest terms, the impact of human life on the rest on the earth, and talk about what sustainable development means over the longer term. It would mark out why taking out an insurance policy on the earth's future is critical, not only for us but for generations to come.

11:35:**Economy:** Can we do this in a way that won't hurt the economy? Which industries are likely to face challenges? Which are likely to reap benefits?

Robert Repetto, WRI: Possible to bring existing technologies on line quickly and cost-effectively to reduce our emissions; these introductions ultimately would have a positive effect on our economy.

[Alan Blinder/Robert Solow/Paul Krugman]: Mitigation does not necessarily have to harm the economy; the key is adopting "smart" approaches that bring sufficiently early reductions to make an middle-term date cost effective.

[Optional: William Nordhaus; "Go slow"]: Cost effective efforts to mitigate climate change require (a) stretching implementation out over the longest time frame available and (b) not exceeding a point of diminishing returns.

11:55 - 12:05: **Regulation and Trading:** We have had extensive experience in trying to regulate pollution in this country. What kind of system did we set up to limit acid rain? Did it work? Is it analogous for our climate efforts, in scope and scale?

Richard Sandor, Chicago Board of Trade: History of the sulphur dioxide trading system, including expectations about its performance.

W/H Agenda

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09/19/97; 4:57 pm

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The Challenge of Global Warming
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10:25 - 11:25 Science Panel Discussion:

Presenter: John Holdren, Harvard University:

11:30 - 12:30 Emission Reduction Technology and Policy Roundtable

Presenter: Robert Rubin, Secretary of the Treasury

12:30 - 2:00 Lunch: Remarks by First Lady Hillary Rodham Clinton

Breakout Sessions

2:00 - 3:00 Kyoto Conference and U.S. National Interests Roundtable

Presenter: Madeleine Albright, Secretary of State

3:00 - 3:30 Vice President Gore: *Closing remarks:* Where we've come from; Where we're going?

10:00 - 10:05: Welcome

The Vice President will welcome attendees to the conference and introduce the President.

10:05 - 10:25: Opening Remarks:

The President's will speak to the American people in a substantive way about global warming and climate change. His remarks should foreshadow the day's events, endorsing the scientific consensus behind climate change, asserting the importance of this issue to the American people, outlining that action will need to be taken, and embracing the broad outlines of the U.S. negotiating position going into Kyoto.

10:25 - 11:25: Science panel discussion:

Goal: To concisely describe what global warming and climate change are, and to present conclusively the scientific case that they are occurring, that they have real consequences for the American people, and that action is needed to limit greenhouse gas emissions.

10:25 - 10:40: Physical science of global warming and climate change.

John Holdren, Professor of Physics at Harvard University: Three central aspects of global warming science: the physical processes underway, potential impacts they may have on the U.S. and worldwide, and the level of certainty within the scientific community about future impacts of global warming.

Discussion: Using Holdren's remarks as a point of departure, the President will then lead a conversation with a panel of three/four other scientists covering these issues in more detail.

10:40 - 10:50: Indications that climate change may already be occurring.

Tom Karl, Senior Scientist, NOAA: Extensive data and anecdotal evidence that something serious is starting occur.

10:50 - 11:00: Impacts on the United States.

Diana Liverman, University of Arizona: Possible impacts on different regions of U.S. in the next twenty to thirty years.

10:50 - 11:00: The scientific consensus about what is or is not happening to the climate

Robert Watson, Chair of the Intergovernmental Panel on Climate Change: The nature of scientific consensus, history and composition of the IPCC, and the certainty across the range of climate issues.

John Christy, University of Alabama: Satellite data suggests upper atmosphere is cooling; variability of predictive models suggests we should not jump to conclusions; evidence does exist for warming.

11:10 - 11:20: Why do we need to act now?

John Holdren: The need for flexibility and creativity in policymaking, amidst current certainties and uncertainties about different climate scenarios, risk of "climate surprises."

11:30 - 12:30: Emission Reduction Policy Panel

Goal: To discuss policy options that allow us to reduce emissions without hurting our economy.

11:30 - 11:35: **Opening presentation:** The key elements of a national policy to reduce emissions.

Robert Rubin, Secretary of the Treasury. U.S. will adopt binding emissions targets; a national strategy to reduce emissions requires discouraging the use of carbon and adopting climate friendly technologies.

Discussion: The President would then lead a discussion exploring (a) the likely impact on our economy of limiting carbon emissions, and (b) possible policy tools, such as emission reduction trading mechanisms and technologies.

11:35 - 11:55: **Economy:** Can we do this in a way that won't hurt the economy? Which industries are likely to face challenges? Which are likely to reap benefits?

Robert Repetto, WRI: Possible to bring existing technologies on line quickly and cost-effectively to reduce our emissions; these introductions ultimately would have a positive effect on our economy.

[Alan Blinder/Robert Solow/Paul Krugman]: Mitigation does not necessarily have to harm the economy; the key is adopting "smart" approaches that bring sufficiently early reductions to make a middle-term date cost effective.

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11:55 - 12:05: **Regulation and Trading:** We have had extensive experience in trying to regulate pollution in this country. What kind of system did we set up to limit acid rain? Did it work? Is it analogous for our climate efforts, in scope and scale?

Richard Sandor, Chicago Board of Trade: History of the sulphur dioxide trading system, including expectations about its performance.

12:05 - 12:15: **Technology:** What are the most promising technologies in reducing the emissions from fossil fuels?

Maxine Savitz, Allied Signal; member of Presidential Commission of Advisors on Science and Technology: Nation-wide potential of technologies for reducing emissions, increasing efficiency, and developing new energy sources.

Roger Sant, AES: Existing renewable energy technologies have enormous international applications, particularly if joint implementation were allowed.

Michael Bonsignore, Honeywell: Environmental technologies offer promising export opportunities for U.S. businesses in energy production and consumption, ranging from fuel efficient lighting and heating to nuclear and hydro-energy.

Tom Casten, Trigen Corp: Possible energy inefficiencies in power generation, more efficient power processes that recapture unused energy and channel it to productive uses (i.e. cogeneration technologies).

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Linn Draper, AEP: Coal-burning utilities will undergo enormous adjustments; but can adapt to them both domestically and internationally (including through joint implementation) under a permit system.

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Daniel Yergin, Cambridge Energy Research Associates: Developing nations, facing rising demands for energy, will need to recognize two key facts: (a) their energy security is bound up in being part of the global energy economy; (b) basing their economies on fossil fuels is potentially risky, since source countries are often unstable, and use of fossils comes with enormous environmental and social costs.

Condoleezza Rice, Stanford University: The largest emerging countries are developing using old, non-fuel-efficient technologies, with important investments in key regions such as the Caspian Sea and South China Sea. While problematic for these countries, their investments are heavy enough that they will not be easily persuaded to abandon them.

- 3:00 - 3:30: **Closing Remarks:** *Where we've come from; where we're going.* *Vice President Gore:* The Vice President's closing remarks would outline the historic nature of the challenge at hand. It would review, in the broadest terms, the impact of human life on the rest on the earth, and talk about what sustainable development means over the longer term. It would mark out why taking out an insurance policy on the earth's future is critical, not only for us but for generations to come.

**White House Conference on Climate Change:
The Challenge of Global Warming
Draft Agenda**

10:00 - 10:05 Vice President Gore: *Welcome attendees; Introduces President Clinton*

10:05 - 10:25 President Clinton: *Opening Remarks:* Importance of Global Warming and Climate Change for the American People.

10:25 - 11:25 Science Panel Discussion:

Presenter: John Holdren, Harvard University:

11:30 - 12:30 Emission Reduction Technology and Policy Roundtable

Presenter: Robert Rubin, Secretary of the Treasury

12:30 - 2:00 Lunch: Remarks by First Lady Hillary Rodham Clinton

Breakout Sessions

2:00 - 3:00 Kyoto Conference and U.S. National Interests Roundtable

Presenter: Madeleine Albright, Secretary of State

3:00 - 3:30 Vice President Gore: *Closing remarks:* Where we've come from; Where we're going?

10:00 - 10:05: Welcome

The Vice President will welcome attendees to the conference and introduce the President.

10:05 - 10:25: Opening Remarks:

The President's will speak to the American people in a substantive way about global warming and climate change. His remarks should foreshadow the day's events, endorsing the scientific consensus behind climate change, asserting the importance of this issue to the American people, outlining that action will need to be taken, and embracing the broad outlines of the U.S. negotiating position going into Kyoto.

10:25 - 11:25: Science panel discussion:

Goal: To concisely describe what global warming and climate change are, and to present conclusively the scientific case that they are occurring, that they have real consequences for the American people, and that action is needed to limit greenhouse gas emissions.

10:25 - 10:40: Physical science of global warming and climate change.

John Holdren, Professor of Physics at Harvard University. Three central aspects of global warming science: the physical processes underway, potential impacts they may have on the U.S. and worldwide, and the level of certainty within the scientific community about future impacts of global warming.

Discussion: Using Holdren's remarks as a point of departure, the President will then lead a conversation with a panel of three/four other scientists covering these issues in more detail.

10:40 - 10:50: Indications that climate change may already be occurring.

Tom Karl, Senior Scientist, NOAA: Extensive data and anecdotal evidence that something serious is starting occur.

10:50 - 11:00: Impacts on the United States.

Diana Liverman, University of Arizona: Possible impacts on different regions of U.S. in the next twenty to thirty years.

10:50 - 11:00: The scientific consensus about what is or is not happening to the climate

Robert Watson, Chair of the Intergovernmental Panel on Climate Change: The nature of scientific consensus, history and composition of the IPCC, and the certainty across the range of climate issues.

John Christy, University of Alabama: Satellite data suggests upper atmosphere is cooling; variability of predictive models suggests we should not jump to conclusions; evidence does exist for warming.

11:10 - 11:20: Why do we need to act now?

John Holdren: The need for flexibility and creativity in policymaking, amidst current certainties and uncertainties about different climate scenarios, risk of "climate surprises."

11:30 - 12:30: Emission Reduction Policy Panel

Goal: To discuss policy options that allow us to reduce emissions without hurting our economy.

11:30 - 11:35: **Opening presentation:** The key elements of a national policy to reduce emissions.

Robert Rubin, Secretary of the Treasury. U.S. will adopt binding emissions targets; a national strategy to reduce emissions requires discouraging the use of carbon and adopting climate friendly technologies.

Discussion: The President would then lead a discussion exploring (a) the likely impact on our economy of limiting carbon emissions, and (b) possible policy tools, such as emission reduction trading mechanisms and technologies.

11:35 - 11:55: **Economy:** Can we do this in a way that won't hurt the economy? Which industries are likely to face challenges? Which are likely to reap benefits?

Robert Repetto, WRI: Possible to bring existing technologies on line quickly and cost-effectively to reduce our emissions; these introductions ultimately would have a positive effect on our economy.

[Alan Blinder/Robert Solow/Paul Krugman]: Mitigation does not necessarily have to harm the economy; the key is adopting "smart" approaches that bring sufficiently early reductions to make an middle-term date cost effective.

[Optional: William Nordhaus; "Go slow": Cost effective efforts to mitigate climate change require (a) stretching implementation out over the longest time frame available and (b) not exceeding a point of diminishing returns.

11:55 - 12:05: **Regulation and Trading:** We have had extensive experience in trying to regulate pollution in this country. What kind of system did we set up to limit acid rain? Did it work? Is it analogous for our climate efforts, in scope and scale?

Richard Sandor, Chicago Board of Trade: History of the sulphur dioxide trading system, including expectations about its performance.

12:05 - 12:15: **Technology:** What are the most promising technologies in reducing the emissions from fossil fuels?

Maxine Savitz, Allied Signal; member of Presidential Commission of Advisors on Science and Technology: Nation-wide potential of technologies for reducing emissions, increasing efficiency, and developing new energy sources.

Tom Casten, Trigen Corp: Possible energy inefficiencies in power generation, more efficient power processes that recapture unused energy and channel it to productive uses (i.e. cogeneration technologies).

Jack Welch, General Electric: Environmental technologies offer promising export opportunities for U.S. businesses in energy production and consumption, ranging

Born, George

from fuel efficient lighting and heating to nuclear and hydro-energy.

Ref: Enron
~~Ken Lay~~ *Enron*: Great opportunity to shift to alternative fuels, such as natural gas and renewable energy sources.

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Roger Sant, AES/Michael Bonsignore, Honeywell: Existing climate-friendly technologies have enormous international applications, particularly if joint implementation were allowed.

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