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Largest 1989 Subsidies to Coal (Millions of 1989\$)

Subsidy	High Estimate	Low Estimate
Direct		
Program		
DOE R&D	385.4	385.4
Army Corps Waterways Projects	199.6	199.6
SSA Black Lung Benefits	892.0	892.0
Department of Labor Black Lung Trust Fund	348.7	260.1
OSMRE Mine Regulation and Abandoned Mineland Trust Shortfall	878.7	878.7
Total Program	3,024.8	2,878.0
Tax (General Capital and Other)		
General ITC (machinery and equipment)	167.3	65.7
Accelerated Depreciation (machinery and equipment)	812.7	201.3
Total General Tax	980.0	267.0
Tax (Energy)		
Tax-exempt Black Lung Benefits	180.0	110.0
Percentage Depletion	202.5	124.5
Total Energy Tax	382.5	234.5
Total All Tax Direct	1,362.5	501.5
Grid		
Program		
REA Losses	607.3	569.8
DOE Clean Coal Program	178.4	33.6
Total Program	785.7	748.2
Tax (General Capital and Other)		
General ITC (machinery and equipment)	195.3	76.7
Accelerated Depreciation (machinery and equipment)	948.9	276.7
Total General Tax	1,144.2	353.4
Tax (Energy)		
Tax-Exempt Public Power Bonds	406.4	333.2
Tax-Exempt Pollution Control Bonds	325.1	266.5
Tax Exclusion for Cooperative Utilities	416.1	297.2
Tax-Exempt Public Utilities	112.9	112.9
Utility Retention of Excess Deferred Taxes	225.9	0.0
Total Energy Tax	1,486.4	1,009.8
Total All Tax Grid	2,630.6	1,363.2
All Coal		
Total Large Program Subsidies	3,808.3	3,622.2
Total General Tax	2,124.2	620.4
Total Energy Tax	1,868.9	1,244.3
Total Large Tax Subsidies	3,993.1	1,864.7
Total All Large Subsidies	7,801.4	5,486.9
All Other Subsidies to Coal	241.4	70.4
TOTAL SUBSIDIES TO COAL IN 1989	8,042.8	5,557.3

Alliance to Save Energy and Douglas Koplow, April 1993

TOTAL

COAL

	<i>Total Carbon Emissions (1992 M tonnes)</i>	<i>Carbon Emissions from Coal use (1992 M tonnes)</i>	<i>Coal Share (%) of Total Primary Energy Supply (1994)</i>	<i>Coal Subsidies (1994 Million \$)</i>
US	1348	479	23.2	0 ^a
Canada	135	32	10.8	b
France	120	22	6.4	1154 ^c
Japan	322	69	16.4	914 ^d
Italy	120	13	7.4	—
Germany	255	103	28.5	6143 ^d
UK	174	70	21.9	257 ^d
G-7	2474	788	20.2	
OECD	3036	955	24.0	9500^e
FSU	872	262	21.0	
China	678	558	76.4	
ROW without China	1404	497	21.5	
Total World	5990	2272	28.4	

Sources: 1995 International Energy Outlook (IEA); Energy Policies of IEA Countries, 1996 Review (IEA); Energy Policies of France, 1996 Survey (IEA); Federal Energy Subsidies: Energy, Environmental, and Fiscal Impacts (Alliance to Save Energy, 1993); Energy Policies of IEA Countries, 1994 Review (IEA)

Notes:

^a The zero figure for the U.S. assumes a narrow definition of subsidies. Broader definitions exist, and could include some U.S. programs. A fairly comprehensive list from a private organization is attached.

^b As of 1 April 1995 federal subsidies were eliminated for the Cape Breton Development Corporation (a federal Crown corporation) in Nova Scotia.

^c All the coal mines in France are owned and operated by wholly owned subsidiaries of the state company, Charbonnages de France. This figure is reported in Energy Policies of France, 1996 Survey, and reflects total state subsidy in 1994.

^d Measure is the OECD producer subsidy equivalent (PSE) which consists of direct government payments to support current production, indirect supports to current production, plus any price support, measured by the excess of the price received by the domestic producers over the price paid for imports.

^e 1993 estimate (1993 \$) from Energy Policies of IEA Countries, 1994 Review.

Draft 4/23

APRIL

25 Congressional staff and NGO briefing on basecase results

MAY

5 - 8 AIJ Project development Workshop in Cairo

Contact: Frank Quinn, NOAA
313/741-2254

Contact: E. Haemissegar
202/260-5448

27- 29 Great Plains Regional Workshop in Colorado

Contact: J. Mellilo, OSTP
202/456-6202

3 - 6 Alaska Regional Workshop in Fairbanks

Contact: J. Mellilo, OSTP
202/456-6202

9 - 13 UN General Assembly Special Session on Environment

12-13 International Climate Change Conference in Baltimore Contact: Kevin Fay
703/841-0626

18	Climate Change and the Business Community by EPA with Business Council for Sus. Energy	
20 - 22	G-7 Summit, Denver	
24-7	South East Regional Workshop at Vanderbilt U.	Contact: J. Mellilo, OSTP 202/456-6202
26	EPA Region 1 (Boston) Impacts Conference	Contact: E. Haemisseggar 202/260-5448

JULY

14-16	North West Regional Workshop in Seattle	Contact: J. Mellilo, OSTP 202/456-6202
28 - 8/3	SBSTA and SBI in Bonn	
29 -8/7	Aspen Regional Impacts Integration/Planning Meeting	Contact: J. Mellilo, OSTP 202/456-6202

AUGUST

4 - 8	AGBM negotiating session in Bonn	
5 - 14	Review of Regional Workshops in Aspen	Contact: J. Mellilo, OSTP 202/456-6202

SEPTEMBER

3-5	New England Regional Workshop, U of New Hampshire	Contact: J. Mellilo, OSTP 202/456-6202
early Sept.	South West Regional Workshop in Tucson	Contact: J. Mellilo 202/456-6202
9-11	Mid-Atlantic Regional Workshop at Penn State	Contact: Joel Scheraga 202/260-4029

OCTOBER

7-8 New York-New Jersey Coastal Impacts Conference in Ramapo, NJ
Sponsored by Climate Institute with NJDEP Contact: John Topping
202/547-0104

10-12 National Impacts Workshop at NAS in Washington Contact: J. Mellilo, OSTP
202/456-6202

27 - 29 Symposium on Climate Variability, Climate Change and Water Resource
Management in Colorado Springs organized by Corps, NOAA, EPA others
Contact: Eugene Strzepak
703/428-6370

20 - 26 SBSTA and SBI meetings in Bonn/Geneva

27 - 31 AGBM negotiating session in Bonn/Geneva

NOVEMBER

17-18 Climate Conference in Wash D.C. by Center for Environmental Information
Contact: Liz Thorndike
607/277-2604

DECEMBER

1-12 Kyoto Conference: Third Meeting of the Parties to Framework Convention

EVENTS IN THE EARLY PLANNING STAGES

Between July and Nov. EPA Regional Conferences on Climate Change in Atlanta, Baltimore, Chicago, and San Francisco

**SPEECH BY
SENATOR JOHN H. CHAFEE
on
GLOBAL CLIMATE CHANGE**

**California and the World Ocean '97
San Diego, California
March 27, 1997**

I am delighted to be with you this afternoon here in beautiful San Diego. I want to thank my friend and your outstanding Governor, Pete Wilson, for asking me to participate in this important event. I also want to thank Mayor Susan Golding and the organizers, Secretary Doug Wheeler and Conference Chair Orville Magoon, for their hospitality.

We are here to plan for the future -- the future of the great body of salt water that covers approximately seventy-one percent of the planet, the world ocean. Few natural resources are more valuable than this vast and complex frontier.

Indeed, a review of this week's featured document, *California's Ocean Resources: An Agenda for the Future*, speaks to the sheer economic value of the Pacific Ocean to California. In 1992, more than seventeen billion dollars were generated and three hundred seventy thousand jobs provided by ocean-dependent industries! Extraordinary.

We cannot measure the historical, cultural, spiritual and environmental significance of the world ocean in dollars and cents. But we can -- and the participants of this conference are -- assigning human responsibility for the long-term stewardship of the intrinsic value of the ocean and our coastal areas.

In plain terms, this is our duty: while we harness the economic and job-creating engine that is the ocean -- we must ensure its health, maintenance and biological viability.

Naturally, you are directing much of your focus this week to the host State of California and its ocean waters. And, with any luck, your collective views and experiences will be of some benefit to California as it moves forward to improve the management, conservation and enhancement of its bountiful ocean resources.

But this is also an international conference. Indeed, papers have been accepted from Russia, Japan, Australia, Taiwan, Mexico and from across the United States. It has been said by others here that resource management actions taken in California will have an impact not only on the local economy, infrastructure and ecosystem, but on the

world as well. Likewise, actions taken in distant places have meaning for California and the United States. The ocean is a great river flowing around the entire earth -- a river that connects everything.

I have looked at your *Agenda for the Future* with its four broad goals: 1) to improve stewardship; 2) to encourage economic sustainability; 3) to advance research, education and technology; and 4) to clarify jurisdiction and ownership over ocean resources.

What is the overarching factor that unites these seemingly diverse, even conflicting, ocean resource management issues? What one issue will affect our ability to meet our goals for stewardship and use of the ocean, both here in California and throughout the world?

It is the global climate.

The ocean and all that depends on it are tremendously vulnerable to fluctuations in the global climate. In fact, stabilization of the global climate is one of the greatest economic, environmental and political challenges of our time.

What do we mean by climate? Webster's New World Dictionary defines climate as the prevailing or average weather conditions of a place, as determined by the temperature and meteorological changes over a period of years.

What, if any, change is being made by man to these prevailing or average weather conditions? Are temperature and meteorological changes occurring -- or on the brink of occurring? What might such changes mean for the future of the Earth and its inhabitants?

Gradually, some have come to the conclusion that man is indeed contributing to precipitous changes in global climate. They believe that human activities, particularly the burning of fossil fuels, have increased atmospheric concentrations of carbon dioxide (CO₂) and other trace gases, including chlorofluorocarbons (CFCs), methane, and nitrous oxide. These gases, combined with natural levels of CO₂ and water vapor, act like the panes of a greenhouse and retain the sun's heat.

Others view this climate change theory as the ultimate conspiracy, a grand design by malcontents to bring down the most powerful economies in the world. Bill Reilly, EPA Administrator under President Bush, remarked at a college commencement speech in 1989 that, to some people, "Global warming is a weird idea. It sounds like a neurosis Woody Allen might dream up."

What is going on here? What are the scientists saying?

Consider this quotation:

"Would it not be possible that the earth's temperature had decreased during periods of low CO₂ and increased when the protective CO₂ had been present to a higher degree?"

This hypothesis did not originate in Al Gore's book, "Earth in the Balance." It was not culled from the text of some suspect environmental organization's manifesto. It was delivered in an 1896 lecture before the Stockholm Physics Society by the Nobel Prize-winning Swedish chemist, Svante Arrhenius.

Professor Arrhenius was the first to predict that large increases in CO₂ would result in a warming of the globe. What have the world's scientists told us at different intervals over the last one hundred years, since Professor Arrhenius first identified the warming effects of CO₂?

1924. A U.S. physicist speculated that industrial activity would double atmospheric CO₂ in five hundred years, roughly, the year 2424. (Current projections are for a doubling sometime before 2050 -- four hundred years earlier than predicted seventy years ago!)

1957. Scientists from the Scripps Institute of Oceanography reported for the first time that much of the CO₂ emitted into the atmosphere is not absorbed by the oceans as some had argued, leaving significant amounts in the atmosphere. They are said to have called carbon dioxide emissions "a large-scale geophysical experiment" with Earth's climate.

1967. The first reliable computer simulation calculated that global average temperatures may increase by more than four degrees Fahrenheit when atmospheric CO₂ levels are double that of pre-industrial times.

1985. A conference sponsored by the United Nations Environment Program (UNEP), the World Meteorological Organization (WMO), and the International Council of Scientific Unions forged a consensus of the international scientific community on the issue of climate change. The conference report warned that some future warming appears inevitable due to past emissions, regardless of future actions, and recommended consideration of a global treaty to address climate change.

1987. An ice core from Antarctica, analyzed by French and Russian scientists, revealed an extremely close correlation between CO₂ and temperature going back more than one hundred thousand years.

1990. An appeal signed by forty-nine Nobel prize winners and seven hundred members of the National Academy of Science stated, "There is broad agreement within the scientific community that amplification of the Earth's natural greenhouse effect by the buildup of various gases introduced by human activity has the potential to produce

dramatic changes in climate ... Only by taking action now can we ensure that future generations will not be put at risk."

Also in 1990, seven hundred and forty-seven participants from one hundred sixteen countries took part in the Second World Climate Conference. The conference statement reported that, "...if the increase of greenhouse gas concentrations is not limited, the predicted climate change would place stresses on natural and social systems unprecedented in the past ten thousand years."

1995. The Intergovernmental Panel on Climate Change, representing the consensus of climate scientists worldwide, concluded that "... the balance of evidence suggests that there is a discernible human influence on global climate."

This last development is significant, because the overwhelming majority of climate scientists concluded, for the first time, that man is influencing the global climate system. That conclusion, while controversial in some quarters, was endorsed unanimously by the governments of the ninety-six countries involved in the panel's efforts.

It must be noted that virtually all climate scientists recognize that the 1995 conclusion is based on numerous variables. According to the lead author of the relevant IPCC report chapter, Benjamin D. Santer of the Lawrence Livermore National Laboratory, the human component in climate change cannot yet be quantified. We still do not know when change might occur. We do not know exactly what will happen in different parts of the world. Some believe climate change is not entirely negative -- there will actually be some beneficiaries.

Still, Dr. Santer, in an op-ed piece appearing five months ago in the San Francisco Examiner wrote that, "it's a hard fact that human activities are changing the makeup of the atmosphere, particularly with regard to 'greenhouse' gases." Dr. Santer further wrote, "If emissions of greenhouse gases and aerosol-producing substances continue at the present rate and if our understanding of the climate system is correct, the human influence on the climate will become increasingly obvious over the next decade or two."

How will it become obvious? If CO₂ and other greenhouse gases are allowed to continue to accumulate in the atmosphere at current rates, will the intensification of the natural "greenhouse effect" lead to widespread, uncontrolled, harmful global climate change?

A great many climate scientists believe such warming could adversely affect

agriculture, forestry, water resources, human health, and, under certain scenarios, could lead to either rising or falling sea levels depending upon climate system responses.

Most climate scientists agree that the Earth has warmed by 1 degree Fahrenheit since the turn of the century. An October 1991 report issued by the California Energy Commission, said that warmer temperatures, in the order of 3 to 8 degrees Fahrenheit, could cause a thermal expansion of the world ocean and melting of the polar ice fields. This could result in sea level rises of three feet over the next one hundred years. Sea level rise of this magnitude would cause coastal flooding and salt water intrusion into the Sacramento Delta, according to numerous studies commissioned by the State and Federal government. A 1991 University of California report warned of "a complete collapse of the Delta and the potential loss of approximately sixty-five percent of California's total water supply -- and forty-five percent of its drinking water supply."

One of the most interesting -- and troubling -- theories on the oceans and climate change is the possibility that manmade emissions of carbon dioxide could upset the natural, pattern-like flow of oceanic currents. The climate in many areas of the globe depends on stable ocean currents. For example, Europe owes its mild climate, in part, to the Gulf Stream.

Professor Wallace Broecker of Columbia University has theorized that man's influence on atmospheric temperatures could trigger a change in the Gulf Stream and other important ocean currents, with catastrophic results. Oceanic current shifts add another looming variable to our attempts to predict the effects of global warming.

What about marine ecosystems? Global warming will affect sea-surface temperatures, sea level, ice cover, and oceanic circulation patterns. Sea-surface warming in polar latitudes is projected to lead to a decrease in trade-wind intensity, weaker upper ocean currents, and changes in upwelling of water from deeper layers of the ocean.

These changes in the upwelling could drastically upset the food chain, and could cause shifts in the population and geographical distribution of a wide range of oceanic life. Some species will be able to adapt to warmer waters and altered habitat, and perhaps thrive, but others clearly will not.

About seventy percent of global fish resources depend on near-shore or estuarine habitats at some point in their life cycle. Fish production, already reduced by overfishing, will consequently suffer if wetlands and other such habitats that serve as nurseries are consumed by rising sea waters.

An estimated fifty to seventy percent of the global human population lives in coastal communities -- and coastal populations are growing at a faster rate than most other settled areas. While the U.S. may be able to stave off rising water with an enormous investment in seawalls and other measures, less wealthy countries simply will not have the means to protect their coastal populations from potential sea rise and storms.

A story appearing the New York Times on March 2 of this year referred to studies suggesting that, "... a rise of 3 feet in ocean levels would force the evacuation of perhaps 70 million Chinese and 32 million Bangladeshis." According to a 1993 study published in the journal BioScience, a total of 150 million people would be displaced worldwide by the year 2050 as a result of climate change -- and they are all heading for sunny California!

CO2 and other greenhouse gases are emitted when oil and coal are burned to generate electricity, to power automobiles, and for countless other industrial processes. Thus, global warming cuts right to the heart of our industrial society. Make no mistake about it, the stakes are high.

It sounds like all gloom and doom. Is there any hope? Bill Reilly once said, "I confess I concluded global warming was probably a hopeless problem when I first learned that a major contributor was methane from cows! But not three months after I learned that, I read of a new enzyme that can be put into cattle feed to reduce cow methane, and my hope in technology was restored."

Because economic growth and energy consumption have historically marched in lockstep, there is great concern that policy measures aimed at reducing fossil fuel use could constrain future prosperity. Fortunately, the world need not choose between catastrophic climate change and economic growth. Bill Reilly is right: A host of new technologies offers the means simultaneously to boost the economy and to reduce greenhouse gas emissions.

U.S. businesses, municipalities, and educational institutions are finding that investments in energy efficiency cut power bills and provide rapid payback, while reducing carbon dioxide emissions. When businesses improve their manufacturing processes to use energy and raw materials more efficiently, carbon dioxide emissions and environmental compliance costs fall while profitability, productivity, and competitiveness improve, creating jobs.

But don't just take my word for it. Last month, more than 2,500 economists, including eight Nobel Laureates, endorsed a consensus statement on the economics of climate change. It was drafted by five very distinguished economists, including two of those Nobel Prize winners: Kenneth J. Arrow of Stanford University; and Robert M. Solow of M.I.T. Never before have so many economists joined to issue a policy declaration.

Here is what they said: "economic studies have found that there are many potential policies to reduce greenhouse gas emissions for which the total benefits outweigh the total costs. For the United States in particular, sound economic analysis shows that there are policy options that would slow climate change without harming American living standards, and these measures may in fact improve U.S. productivity in the longer run."

One of the economists who helped to organize the consensus statement, Dr. William Nordhaus of Yale University, was quoted in a March 10, 1997, Wall Street Journal story that, "no serious economist has come to the conclusion that one should do nothing ... The idea of waiting around until everything is resolved in this particular case means doing something that's much more costly."

An impressive number of American businesses and municipalities, in anticipation of global warming, and have already taken sensible steps to curb their own CO2 emissions.

Monsanto is monitoring its CO2 emissions.

Dow Chemical has established a goal of improving energy efficiency at a rate of two percent per year.

AES Corp., which builds independent power generating plants, has planted trees or purchased endangered forests, because it has been proven that trees absorb CO2.

DuPont has installed energy efficiency improvements through the EPA and US Department of Energy "Climate Wise Program," that are currently saving thirty-one million dollars annually.

AT&T is installing energy efficiency improvements through the Climate Wise Program, projected to save the company 50 million dollars each year and offset one hundred fifty four thousand metric tons of carbon dioxide by the year 2000!

The California Energy Commission is seeking to cut the energy demand of local government facilities through its "Energy Partnership Program." This program, which provides technical and financial assistance for energy upgrades at cities and counties throughout the State, prevented the emission of 56,900 metric tons of carbon dioxide during the period of 1989 through 1993!

Here in San Diego County, managers have upgraded lighting in many of its six hundred and ten buildings to save nearly one hundred thousand dollars annually while reducing carbon dioxide emissions by 365 metric tons. Just by changing the light bulbs!

And in 1992, nearby Chula Vista became the first municipality in the country to draft a plan of action to counter global warming. A city task force recommended 20 steps to reduce CO2 emissions, including: Solar heating or motorized, insulated covers for new swimming pools; requiring businesses to provide fewer parking spaces; planting shade trees for new single-family homes (to help cut residential energy use); and installing walkways between bus stops and surrounding businesses (to make it more convenient for people to take mass transit to do their shopping).

The measures are estimate to cost a total of \$95 million over the next 14 years, while saving up to \$130 million in energy bills and driving expenses.

Even the individual in his own home can help, through such simple measures as using energy-efficient appliances, proper insulation and weather-stripping, and low-flow plumbing.

The U.S. is the world's worst offender in terms of CO2 emissions (responsible for 20 percent of the global total). But, by the early part of the next century, it is believed that China will become the world's leading emitter of CO2. Thus, it will be critical to include developing countries in a concerted global effort to curb greenhouse emissions.

An international effort is proceeding. More than 160 countries are now Parties to the U.N. Framework Convention on Climate Change, which was adopted in Rio de Janeiro in the summer of 1992. One of its key provisions was the establishment of a goal for developed countries to return their greenhouse gas emissions to 1990 levels by the year 2000. This agreement represented an important first step toward developing a comprehensive international solution to climate change.

Few countries, however, will succeed in meeting the Framework Convention's goal. Today, these nations are in the process of negotiating an agreement to cover emissions in the post-2000 period. The negotiations are scheduled to be completed in December of this year at the Convention's Third Conference of the Parties in Kyoto, Japan.

I am hopeful that the treaty will include realistic, achievable and flexible but binding emissions targets for signatory nations, including developing nations.

At a minimum, we must insist upon tools like "joint implementation," which would allow U.S. industries to provide energy efficient technology, or to help provide the protection and planting of forests to absorb atmospheric CO2. Under such a plan, the developed countries and their participating industries would receive emissions reduction credits for providing means of reducing greenhouse gas emissions. Oftentimes the

reductions can be made more cheaply in the developing countries. If a credit scheme were permitted, then the global costs would be reduced dramatically, and the developing countries would gain access to state-of-the-art technology. Including such a policy would have the added and important advantage of getting the developing countries involved.

In 1855, Chief Seattle (of the Suquamish people of the Pacific Northwest) wrote, "All things are connected like the blood which unites one family. Whatever befalls the earth, befalls the sons of earth. Man did not weave the web of life. He is merely a strand of it. Whatever he does to the earth, he does to himself."

This applies to the ocean. If we've learned one thing at this conference, it's how precious the ocean is to us. It feeds our bodies, it fuels our economies, it nourishes our spirits. But that mighty ocean is extremely vulnerable. It must not be abused. If we do abuse it, we will indeed pay dearly.

Thank you.

March 19, 1997
Revised April 17, 1997

MEMORANDUM FOR DAN TARULLO

FROM: JEFF FRANKEL 96

SUBJECT: A Proposal:

The United States proposes at the Denver G-7 Summit that each of the G-7 countries undertakes to eliminate all subsidies on coal by the year 2005, and that the G-7 calls on other countries to follow suit.

There would be a variety of environmental, economic and fiscal advantages to a ban on coal subsidies, as well as political advantages to the U.S. proposing such a ban:

(1) The policy would be an important operational measure toward reducing global carbon emissions, as the U.S. and other countries are supposedly agreeing to do in the negotiations on global climate change. One study has estimated that eliminating coal producer subsidies in OECD countries would reduce global CO₂ emissions by about 1.5% (DOE). The hope would be that others, including Russia and eventually China, would accede, saving far more carbon emissions in the long run.

(2) An historic agreement like this would be more serious than is typical of either international climate change negotiations or G-7 summits.

(3) It would be pro-market. No government intervention in the marketplace is required; rather the reverse.

(4) It would save governments money. This could make it a very attractive feature, e.g., for Germany's current efforts to keep its budget deficit below the critical 3%-of-GDP target (under the Maastricht criteria). Finance Ministers would probably support the proposal.

(5) Germany and the others could use the G-7 agreement as an excuse for making domestic policy changes that they want to make anyway.

(6) In the United States -- the G-7 country where international pressure is not usually a very positive force in

domestic politics -- our level of coal subsidies is relatively minor, even zero under a very narrow definition.

(7) U.S. coal exports would benefit from an elimination of foreign subsidies. No effort to address global warming will leave the U.S. coal industry untouched. But the high level of subsidies in other countries means that this proposal is relatively friendly to U.S. producers.

(8) If the global environment is to be discussed at Denver, the other countries are likely to raise the issue of the low level of gasoline prices in the United States. (If one favors serious efforts to address global warming or other pollution externalities, then one might argue that American public awareness would be usefully raised when G-7 partners make the point at Denver. But that is another matter.) The coal subsidies proposal would give the U.S. a useful debating point with which to respond.

(9) Even if economic/environmental ideals must bow to political constraints (and I hope they won't), it would be useful to force the Europeans to reject the coal proposal explicitly. They are currently proposing unrealistically aggressive targets for reductions in greenhouse gas emissions. If they find it politically impossible to do away with coal subsidies, then it is questionable when they can meet the much more stringent policies implicit in their proposals. The coal proposal might take some of the wind out of their sails (and help defend the Administration in the eyes of environmentalists).

There are some questions that would have to be answered before the U.S. went ahead with this proposal:

(1) How, precisely, are we to define subsidy? (For example, we would not want to preclude fixed income transfers to coal miners who worked in 1990 or before, as a means of adjustment assistance or side-payment to compensate for dislocation.)

(2) What political price, if any, would we have to pay?

(3) Would there be some sort of international monitoring authority (e.g., in the World Bank)?

(4) Should the proposed ban be broadened (perhaps later) to include subsidies on other fossil fuels? One study estimates that world energy subsidies amount to a negative carbon tax of \$40 a ton, and that their removal would reduce CO₂ emissions by 4-5 per cent.

The accompanying pages give some statistics on current coal use and subsidies, among G-7 countries as well as among others. Also a memo from Mark Mazur makes a very good attempt at answering the four questions posed above.

THE WHITE HOUSE

WASHINGTON

April 3, 1997

TO: DAN TARULLO

FROM: MARK MAZUR 

SUBJECT: PROPOSAL TO BAN COAL SUBSIDIES

I read through Jeff Frankel's proposal to ban coal subsidies and thought that it would be helpful to put some flesh on the skeletal proposal. In particular, I thought it would be useful to try and sketch out some answers to the questions that are posed toward the end of his memo.

How should "subsidy" be defined? One approach is to define a "subsidy" for coal production as being either direct government spending or tax incentives to support production and utilization of coal (e.g., spending for coal research and development or the availability of percentage depletion for coal production). Under this definition, United States subsidies for coal are about \$500 million per year (about \$300 million in discretionary spending for coal research and clean coal technology; about \$100-200 million for percentage depletion; about \$15 million for capital gains treatment of coal royalty payments; and less than \$10 million each for providing favorable tax treatment for coal mine development costs and mine reclamation reserves).

What political price would have to be paid? Clearly, the coal industry would be outraged about the proposed ban on subsidies. However, if this special interest clamor would derail efforts to reduce these subsidies, imagine how difficult it would be to make significant headway in the context of overall climate change policy. Reducing the discretionary spending items might be easier than eliminating the tax subsidies, in part because reducing a tax subsidy can be portrayed by opponents as a "tax increase".

Would a monitoring organization be required? Not necessarily. Since most of the government subsidy programs are either direct spending programs or tax incentives, the amounts spent on these items are available in government budget documents. Therefore, it should be easy for the G-7 countries to police each other in this matter.

Should the proposed ban be broadened? The proposed coal subsidy ban makes sense as a first step constraining greenhouse gas emissions. If it is successful, the subsidy ban can be extended to other fossil fuels. Of course, the political opposition to the proposed ban will increase with the number of affected industries, so it may be sensible to start with a single fuel that is relatively greenhouse gas intensive.

I am beginning to think that a plausible coal subsidy ban proposal could be crafted in time for the G-7 meeting in Denver, but that would require at least a Deputies-level decision process. Please let me know how you wish to proceed.

Outline: Sectors Paper

Needs:

1. Sources and Trends of US Emissions

breakout by key industries

2. Transportation

better discussion of Car Talk recommendations and impacts

Technology (PNGV) and other regulatory impacts

Other transportation sectors (eg: aircraft/air engine)

3. Electricity

Impact of deregulation/restructuring?

4. Industry Sectors that will benefit

? -- Needs analysis/

5. Energy Intensive Industry Sectors

All: tie analysis to the modeling results

All: final review by agency analysts

a. Aluminum

b. Petroleum refining

c. Steel

d. Cement

e. Pulp and paper

Needs to be prepared

f. Chemicals

Needs to be prepared

g. Others?

Identified?

6. Buildings/residential stock

?

PRESS RELEASE



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GLOBAL PARTNERSHIP FOR ENVIRONMENT
REMARKS BY
VICE PRESIDENT ALBERT GORE
MARCH 24, 1997

Thank you very much for your very generous introduction. Ladies and gentlemen, it is an honor for me to be able to join you and deliver the closing address at your plenary session. I would like to thank Birgitta Dahl, your chairperson, for her courtesy and her leadership. I would also like to thank our host, Gaishi Hiraiwa, and acknowledge the other distinguished guests who have been a part of the leadership of this meeting.

I am deeply honored that three former prime ministers of Japan are present here today, and may I acknowledge former Prime Minister Takeshita, former Prime Minister Kaifu, and former Prime Minister Murayama. Thank you all three very much for being here. It is a great pleasure to see a longtime friend, Education Minister Takashi Kosugi. Also, the Secretary of the Commission for Sustainable Development, Nitin Desai; Tom Spencer from Britain, the President of the organization known as GLOBE; and from my own country, Michele Perrault, International Vice President of the Sierra Club. Doomo arigato. Thank you very much ladies and gentlemen.

It is such a pleasure to be back in Japan, especially during this beautiful season of the year. Earlier today I had an opportunity to view the beginning of some cherry blossom blooms at the Imperial Palace. They are a vivid symbol of the elegance and fragility of nature and also a reminder of the importance of our stewardship.

In Washington, D.C., cherry blossom viewing attracts visitors from around the country each year, and, of course, this is a U.S. tradition that we owe to Japan from your gift of the first cherry trees to our capital city 85 years ago.

The roots of our environmental cooperation were also planted at the dawn of this century. Now as we near the closing years of this century, it is a special honor to address this Global Partnership Summit. It has been five years since your organizing committee sponsored an eminent persons meeting which helped lay the foundation for success at the Earth Summit in Rio. Now we

are preparing to see the seed planted at Rio grow into a strong shared commitment by nations around the world to reduce the devastating risks of global climate change.

I would like to again thank our hosts for making this conference possible and for inviting me to address you all. I mentioned the distinguished former prime ministers who are here, all three of whom have played a significant role in helping to address this issue. I also wish to note the participation of several members of the present Japanese cabinet, Foreign Minister Ikeda, Environment Minister Ishii, and, again, Education Minister Kosugi, all of whom are environmental leaders working within the Japanese government. We also have with us a Japanese woman recognized as one of the world's true heroes of the environment, House of Councillors Member Akiko Domoto, head of the Diet members group on environmental issues, who was recognized this month at the United Nations as one of the world's twenty-five leading women on environmental matters. I had the pleasure of working with Akiko Domoto and Takashi Kosugi for many years in addressing the issues related to the environment, along with Tom Spencer and others. From Canada we have Maurice Strong, Chairman of the Earth Council, Elizabeth Dowdeswell, Executive Director of UNEP, and others who have worked for many years on this issue.

I mentioned that I had the privilege of visiting the Imperial Palace this morning. I was deeply impressed by the harmony of the landscape, and I have been taught that Japanese gardens are designed to draw us into a more complete understanding of man's oneness with nature. It is this same understanding that we seek among ourselves as we meet the challenges of harmonizing our economic development with the well-being of our societies and the environment.

Professor Takeshi Umehara, one of Japan's most prominent philosophers, has asserted that the new post-modern era requires a new ethic, and I quote, "an ethic of being the custodian of the continuity of life, instead of a one-shot plunderer during a brief episode of mortal splendor."

In the United States years ago, after the publication of a book by Rachel Carson, Silent Spring, we began to look at the environment in a different way. As our awareness of the environment spread, as both the United States and Japan were on the verge of establishing environmental protection agencies, it was at that precise moment in history that we first sent human beings to the moon. Of course, they sent back a stunning image of the earth from space, bringing home to us how small our planet really is and how important our stewardship of its future really is.

In an increasingly global society, our prosperity and our well-being are more intimately linked, as are our responsibilities.

Japan has much to teach the rest of the world, as this nation addressed many of its pollution challenges of the 70's and 80's successfully, while maintaining steady economic growth. Japan's engagement with the rest of the world is also critical, as Japan holds a special place as the economic and technological leader in a prospering Asia.

When I leave here I will be visiting China and Korea, and during those visits I also intend to discuss how we can work in unison to combat our common challenges. Of course, in addition to taking up vital trade and security concerns, I plan to discuss ways we can approach the serious long-term energy, food and environmental challenges which will face this region and our world in the near future. Progress in all of these areas will be made more effective through Japan's greater role in dealing with these issues. Of course, I'm very pleased that the United States and Japan have such a long history of working together. Our security alliance has endured for half a century. This alliance, maintained throughout the Cold War, provided a stable basis for not just Japan's remarkable growth, but for that of all Asia as well. Our efforts to promote stability have strengthened our resolve to promote peace throughout the world. I wish on this occasion to salute Japan for its brave decision to support the peace-loving people of the world by sending peacekeepers to Cambodia, Mozambique, Goma, Zaire, and most recently to the Golan Heights.

In our economic relations, we continue to make progress. It is worth remembering that only a few short years ago books were written on both sides of the Pacific suggesting that our trade differences would rend us apart. Of course, we still have concerns, serious ones, especially over Japan's recently rising surpluses, but we are working together to solve our differences in an atmosphere less charged with rhetoric and more focused on our common good.

Our bilateral cooperation has strengthened our regional economic cooperation. Since President Clinton convened the first APEC Leaders Meeting in 1993, tremendous strides have been made. In 1994, we set the vision of a Pacific community with free and open trade by 2020. In 1995, I had the privilege of representing President Clinton at the APEC meeting in Osaka, and we agreed at that meeting to develop a road map to achieve the vision. Last year, we brought our individual plans for action and elevated the priority of sustainable development. This regional cooperation serves as an example to the rest of the world, opening markets, removing trade barriers, permitting the free flow of capital, and sustainable growth in Asia, the Americas, Europe and elsewhere. This can be an important step toward the creation of a true global free market.

Economic and security issues are vitally important, yet they are

undergirded and integrally connected to our stewardship of the planet. The growth of our economies and the stability of our societies are intertwined with the effects of climate change -- environmental degradation, resource depletion, threats to human health and population shifts. We must bear in mind that just as it can take a long time to see the effects of these changes emerge, it will also take a long time to achieve solutions. Our success will depend upon far-sighted wisdom in the choices that we make.

At the 1992 UN conference in Rio, the nations of the world pledged to tackle our most serious global environmental threats - from climate change and deforestation to bio-diversity loss and pollution of the marine environment. Never before had these issues been so prominently featured on the international stage. The meeting in Rio revolutionized the way governments approach environmental concerns by highlighting the linkages between sustainable development and continued freedom and prosperity. Unfortunately, while governments have become skilled at articulating the problems, we have not developed a comparable skill, as yet, in developing and implementing sustainable solutions. This challenge is at the outer boundary of what is possible for us as a global civilization to successfully solve.

Yet we can and must rise to this challenge, because the stakes are growing every day. There are now 450 million more mouths to feed on this planet than there were a mere five years ago. We are now adding a billion people every ten years -- net. That is a development that is brand new in human history. From the first emergence of our species, which scientists tell us was approximately 200,000 years ago, until the end of WWII in 1945, it took ten thousand generations before we reached a population of two billion people. In my lifetime since the end of WWII, I have witnessed the population grow from a little over two billion to five and a half billion. If my life span is a normal one, I will see a population of nine billion or more. If it takes ten thousand generations to produce two billion people, and then a single human lifetime to move from two billion to nine billion, then obviously we are in a brand new era.

The powerful new technologies, that now magnify our ability to have an impact on the environment around us, multiply the effects of the growing population. Many of the manifestations are well known. Tropical forests, the greatest sources of biological diversity, are still being destroyed at alarming rates, historic rates. We still have much to do.

As we approach the fifth anniversary of the Rio Summit, it is, therefore, clear that we must do a better job. Nowhere is this need greater than on the issue of global climate change. Japan's public, its scientists and its leaders have played a valuable role in bringing attention to this issue. As long ago as 1931,

the impact of global warming gases was discussed in a novel by Kenji Miyazawa. In this story a student surprises his teacher by calculating that carbon dioxide would warm the earth by several degrees centigrade. Back then, little was known about the effects of this temperature rise on the globe. Today we might be less surprised by that student's analysis, and we would surely know that the consequences of this warming are indeed dramatic. The work of Japanese scientists, such as Shigeru Chubachi, has enlightened our understanding of the challenges we face. Dr. Chubachi untangled the clues of an ozone hole miles above the earth, and his presentation of the findings in 1984 had global repercussions.

The work of leaders, such as Saburo Okita and Bunpei Hara, has elevated the stage on which these discussions are placed. These individuals called for a World Commission on Environment and Development, which in 1987 produced the book, Our Common Future. This book was a catalyst for sustainable development discussions around the world. Now we must match our words with deeds.

Last year, the international scientific community confirmed what most of us have suspected for some time, namely that human activities are altering the planet's climate system. As we learn more and more about what this could mean for Japan, for the United States and for the World, the imperative for action becomes ever stronger. Some have, of course, continued to express doubts that there is any need to confront this problem.

I wish to present today the findings of scientists from around the world who have studied the ice cores in Antarctica. Many of you are familiar with their work. The ice there is two miles deep, and they drill down through the ice and measure the content of tiny air bubbles that are contained in each year's worth of snow at the time that it fell. Just as foresters can read the rings of a tree once it has been cut down and determine which years experienced droughts and which years were good for the growth of the tree, in the same way, these scientists measure the history of the earth by analyzing the ice cores in Antarctica.

If you will bear with me for a moment, I would like to demonstrate to you what they found. This looks a little more complicated than it really is. There are only two lines on the graph. The top one is carbon dioxide. The bottom one is temperature. On the right hand side of the graph is the present day's temperature in yellow and the present day's carbon dioxide levels in red. Going back to the left hand side of the chart, you can see the last ice age, the next-to-last ice age, and a period of great warming in between the last two ice ages. In my country, these differences turned out to be profound. In New York City, the difference between here and here on the chart is the difference between a nice day when the cherry blossoms bloom and having one mile of ice over our head, because that is when

the glacial sheet covered much of North America.

One thing stands out in the first glance at this graph. The relationship between carbon dioxide levels and temperature levels appears to be quite compelling. The young student in the Japanese novel of 1931 would have no difficulty seeing the relationship between these two lines. Here is the point that I wish to make with this graph. We are now increasing the levels of carbon dioxide in the entire world so dramatically that within the lifetimes of people in this hall, we will witness the level of carbon dioxide going up. It is already up here, but it will, in the lifetimes of people here, go up to this level.

Is it responsible to say that this does not represent a problem for humankind? If the relationship with the earth's temperatures and climate patterns have been so exact for as far back as the scientists are capable of measuring them, can we blithely say, well, we don't really see any ethical problem in leaving to future generations this legacy of a cavalier disregard for the consequences of what we do?

The United States applauds Japan's leadership in offering to host the Third Conference of the Parties on climate change. It is at this meeting in December in Kyoto when the world will once again attempt to come to grips with the reality that the scientists are confronting us with. Today, I want to pledge the commitment of the United States to working closely with Japan to ensure that this meeting succeeds in producing a meaningful agreement.

Over 160 countries participate in the climate change negotiations, each bringing different priorities and different concerns to the table. Many small island nations are fighting, very literally, for their continued existence, as sea levels are rising, causing fears of inundation. Even wealthy nations like Japan and the United States are at risk from climate change.

In the United States, there has been much comment from our scientists about the predicted result of increased flooding as a result of more rain and snow falling during one-time storm events. Twenty years ago, scientists told us that with the increased warming, the portion of the annual rainfall and snowfall, which falls in one-time storm events, will go up. It has gone up by twenty percent in the United States because of more evaporation from the ocean and a larger carrying capacity for moisture in the air, so that when the meteorological conditions trigger a storm, more moisture is dumped in the form of either rain or snow in a short period of time.

I spent two days a few weeks ago touring the victims of flooding in our Ohio River Valley, listening to them describe what it was like to get twelve inches of rain in a one day period. We have had many such events in recent years. Our insurance industry

encountered an event with losses of more than one billion dollars only once prior to 1988. Since that time they have experienced seventeen such events.

I know that Japan is concerned about climate change bringing more intense and more frequent coastal storms and similar extreme rainfall in mountainous regions susceptible to erosion. Ironically, the phenomenon can cause an increased incidence of drought and flooding in the same region, because when more of the annual rainfall comes in these single large events, the aquifers are not recharged, and the water rushes off, doing damage in the process. Just as the evaporation from the ocean increases, soil evaporation increases as well, causing in some regions a greater incidence of drought.

Climate change will also, according to the scientists, alter animal and plant habitats, leading to local and regional extinction. Coastal and marine fisheries may be affected as well. The United States and other countries share these concerns with Japan.

Yet the way ahead is clear. Climate change is a global issue and cannot be addressed without global action. We now recognize that such action cannot wait much longer. The United States has proposed what we feel are three essential ingredients for a successful outcome in Kyoto.

First, the developed world must agree to realistic and achievable legally binding targets for greenhouse gas emissions. Experience tells us that only through the surety of a binding commitment will nations take the necessary actions to control their emissions. At the same time we must take care to develop targets that put us on a more sustainable energy path, without sacrificing continued economic growth and sustainable development.

The second principle is that we must provide the maximum amount of flexibility to ensure that governments are given every opportunity to meet their commitments cost-effectively and consistent with individual national circumstances. While we must have a clear, common and enforceable target, nations have different economies, different cultures, and different ways of doing business that make it impossible to impose a "one-size-fits-all" prescription for reaching that target.

Third, we must acknowledge the global nature of the problem by ensuring the participation of all countries, developed and developing. While industrialized nations are responsible for the lion's share of greenhouse gas emissions in the atmosphere today, we must keep in mind that the future growth in emissions will come largely from the developing world. Shortly after the turn of the century the largest single emitters of greenhouse gases

will be developing nations.

So while the United States, Japan, the European Union and other developed countries should take on greater responsibilities, China, India, and the rest of the developing world must also have obligations. It will be extremely difficult to imagine legislatures in developed nations taking the very difficult decisions that are necessary, if the agreement they sign onto has an exemption for the largest emitters of greenhouse gases on the planet. Regardless of the difficulty this poses for reaching international agreements, we must face it, and we must incorporate a provision that requires all nations to accept obligations under the treaty.

We believe that these three principles -- binding targets for the industrialized world, flexibility in reaching those targets, and clear obligations for all countries -- are the three pillars on which we must build a new agreement.

How then can the United States and Japan work to forge a consensus on responding to climate change and to make headway on the other pressing global challenges that we face? Quite simply, we must attack these issues at every level - multilaterally, regionally and bilaterally. In the United States, as we come up on our athletic event known as the Final Four, we call this a full-court press.

Multilaterally, first of all, 1997 affords a number of important opportunities to make progress on the international environmental agenda. As the host of this year's Denver Summit, I can assure you that the United States will make environmental concerns, including climate change, forests and a thorough reform of UN institutions, a major focus of this meeting. In June, world leaders will gather in New York for the UN Special Session on the Environment, commemorating five years since Rio. We must work together to use both of these sessions to build common ground among nations on key global priorities.

Regionally, we find that shared borders and resources provide strong incentives for confronting environmental problems. It is clear, for example, that the choices China makes about its energy development path and management of its coastal resources will have implications not only for China, but also for Japan. Air and ocean currents never stop at national borders. Pacific nations are increasingly active in regional efforts to deal with these and other transboundary environmental concerns. APEC is one good example. Its initiatives on clean technologies and production, clean oceans and seas, and sustainable cities, underscore the importance of sustainable development to continuing prosperity in the Asia-Pacific region.

Bilaterally, there is much we are doing and must continue to do.

In 1993, President Clinton and former Prime Minister Miyazawa launched the Common Agenda for Cooperation in Global Perspectives. The Common Agenda is designed to create an atmosphere in which our scientists, government agencies, NGOs and individuals can jointly combat the largest challenges our planet faces, including those relating to the environment. Under the Common Agenda, we are promoting conservation and sustainable management of the world's natural resources. May I say that, in my personal view, the Common Agenda has been one of the most successful examples of bilateral cooperation the world has ever seen. It has received far less attention than, I believe, its record of dramatic success warrants. I want our friends in Japan to know that we in the United States are intensely proud of what we have been able to do together with you, and we look forward to doing even more.

By helping to launch the International Coral Reef Initiative, we are preserving marine biodiversity in the most productive and diverse of all ecosystems. By establishing an innovative biodiversity trust in Indonesia, we are combatting the disappearance of forests. Through joint conservation projects in Southeast Asia, Latin America and the Caribbean, we are supporting biodiversity research to protect national parks endangered by development, and we are protecting endangered and biologically important species.

Under the Common Agenda, we are also fighting the rise in coastal pollution from the rapid growth of coastal cities. Americans and Japanese are working together in places like Jamaica, for example, where we're cooperating to reduce water pollution in Montego Bay. Under the Common Agenda, we are also working to reduce the damage of natural disasters, such as earthquakes and hurricanes. We know the importance of this work from the devastation suffered in Kobe, and recently in my country from the flooding that I mentioned a moment ago. Under the Common Agenda, we are establishing global change prediction and research centers in the United States and Japan which will contribute to a worldwide climate observation network. This research will teach us more about the inter-connectedness of climate systems. Studies showing the relationship between the Asian monsoon system and the El Nino process off the Pacific coast of the Americas have exciting potential to warn us of tropical storms, drought and flooding, and to prepare ourselves to better deal with their impacts.

Let me cite one other recent example of our successful collaboration. Our joint work with Thailand resulted, on January 1 of this year, in Thailand being the first developing country to phase out ozone-depleting chemicals in refrigerators. This is more than ten years ahead of Thailand's requirement under the Montreal Protocol.

So we are building a substantive agenda of cooperation that is reaching to all corners of the world. In moving forward, we must never forget that the well-being of our planet depends on more than efforts by governments. All the people of our nations have important roles to play. We are finding that children at the youngest ages have a deep concern about these issues and a deep fascination with nature.

I am sure you know there is a book that was published in Japan a few years ago by a young girl, Aika Tsubota, who was a sixth grade student at the Nishino Elementary School in Shimane. Her assignment was to write an essay about environmental issues that was so clear that even first graders could understand it. Her essay was published as a short book, Secrets of the Earth, and it skillfully brings together the interplay between our lives and the environment. At her young age, this Japanese girl saw the importance of all citizens and all countries working together to achieve a common good. As many of you also know, tragically, just after she finished her project, she passed away. Her book is a lasting resource that can inspire people of all ages.

Capturing the interest and imagination of our young people was a motivation for establishing the project we call Global Learning and Observations about the Environment. By connecting schools and youth clubs, the children and their teachers can share both the unique and common features of our environment around the world. There are now forty eight countries participating in this GLOBE project, and the number grows every single month. I am very happy there are several Japanese schools and clubs participating, and I encourage others to share in this experience as well.

Active engagement in environmental issues is needed from all of us, young and old, rich and poor, American, Asian, African and European. Community groups, NGOs, and others play a critical role around the world.

In Japan, I understand that public interest in global environmental issues has been growing rapidly. New citizens groups, such as the Kiko Forum, are working to foster public understanding of climate change, and this work is terribly important. Everyone's help is needed, reaching across borders. What appears to be virtually impossible now will become not only possible, but imperative, as more people around the world develop an awareness of what is at stake.

We live in an era of the possible. Our two countries, accounting for forty percent of this planet's economic power, are working together and with others to promote sustainable economic growth and freedom. The high level of attention given to environmental issues in Japan has been reflected in this nation's growing leadership on the world stage. Now, as we face challenges that

are increasingly global, Japan's determined leadership internationally will be essential.

Well, in closing, the season of the cherry blossoms is a particularly fitting time for us to renew and extend our bonds of partnership. The famous Haiku poet Issa wrote, some two hundred years ago, and I'm going to give you the English - I'm not going to venture the old form of Japanese in which it was written -- "In the midst of the cherry blossoms, none are utter strangers."

I look forward to joining with Japan in a close partnership for the 21st century to build a legacy, not of problems that we didn't have the bravery to face, but a legacy of hope and opportunity built upon the challenges that together we overcame.

Thank you very much.

DRAFT - March 10, 1997

Integrated Climate Change Analysis and Assessment

Objective: There is interagency agreement to present climate change policy information in a way that integrates climate change science, the effects of climate change, the benefits of action, and impacts of measures. The proposed report synthesizes and consolidates US Government work already completed or underway. This report will provide an integrated summary of climate change policy options, along with the results of the Interagency Analytic Team analyses, for public review and comment. This information will be combined with information on the science of climate change and the costs of inaction to provide a context within which decisions about appropriate short-, medium- and long-term strategies can be evaluated.

Proposed Outline:

I. Overview

General review of the science of climate change, the Framework Convention on Climate Change, the current international negotiations under the Berlin Mandate, and US positions to date. (CEQ lead)

II. Long-term Projections of Emissions and Concentrations

This chapter will present global projections of greenhouse gas emissions and atmospheric concentrations for business as usual and policy cases. This chapter could present: various global emission and concentration pathways; alternative emission allocation schemes to reach concentration targets; and, emission deflection points and points of global maximum emissions consistent with various trajectories. (OSTP lead)

III. Analysis of the Effects of Climate Change in the United States

This chapter will provide an assessment of the potential impacts of climate change on the United States, including effects on health, agriculture, forests, water resources, coastal areas, and species and natural areas if no actions are taken to mitigate greenhouse gas emissions. The regional distribution of impacts will be highlighted. Although the primary focus will be on the impacts in a 2xCO₂ world (i.e., CO₂ concentrations of 550 ppm), available evidence of impacts beyond atmospheric concentrations of 550 ppm will be summarized. (EPA lead)

IV. International Negotiation Options

This chapter will reiterate the current US international negotiation positions. It will define the major points of contention in the negotiations and offer options under consideration. At a minimum, the chapter should lay out the range of targets and timetables under consideration, the issues of emission budgets, comprehensiveness, banking and borrowing, Annex I trading, and Joint Implementation. (DOS lead)

V. Domestic Policy Options

This chapter will provide the domestic options to control the growth in greenhouse gas emissions. Options to be discussed include: technology diffusion programs, standards and regulations, emissions trading, sectoral policies (e.g. transportation and energy market reform), research and development. (EPA/DOE leads)

VI. Economic Impacts of Domestic Policy Options

This chapter will cover the following issues: model selection, baseline emissions projections, domestic policy scenarios, key assumptions, and results of the Interagency Analytic Team analyses including the effects on specific sectors and economic opportunities. (DOC lead)

VII. Analysis of Co-Control Benefits of Domestic Policy Options

This chapter is identify other benefits of specific policy options, including other environmental effects (e.g., reductions in criteria air pollutant emissions), energy security, and enhanced international trade opportunities and environmental technology exports. (EPA/DOE leads)

Target Dates:

Initial chapter drafts: April 30

Interagency comments: May 7

Release of drafts for public comment: May 15

Messages

Without action to address greenhouse gas emissions, global emissions and concentrations rise significantly.

For our nation, rising concentrations offer signs of potential impacts that prompt our concerns for an enhanced greenhouse world.

The U.S. and most other countries will miss our aim of returning to 1990 levels by 2000, which is prompting us to push for an improved international policy framework in Kyoto.

We are engaged in a thorough economic analysis that begins with mainstream energy, environmental and economic baselines described today.

From this baseline information, we are running a comprehensive set of modeling scenarios to inform decisions on level, timing and flexibility of policy approaches.

This work is being reviewed by 12 independent economic modeling experts to ensure that it benefits from peer critique.

OUTLOOK AND PRIORITIES: CLIMATE CHANGE OUTREACH

1. **Economic and Science Base Case Briefings.** Ev Ehrlich, Rosina Bierbaum and Tom Karl will brief congressional staff (10 am) and interest groups (2 pm) on Friday, April 25.
 - Science brief for farm groups on Thursday.
 - Science press availability for Tom Karl (also Albritton, Bierbaum?) on Thursday, due to interest following President & Vice President's remarks on Earth Day.
 - VP Op Ed offered to several major papers.
2. **Joint Implementation Recognition Ceremony.** Bob Dixon & USIJI team coordinating. No cabinet officials available because of conflicts with PCSD and Service Summit.
 - *Are agencies interested in sending Deputy or Assistant Secretaries to speak about importance as component of policy?*
3. **Climate Change Analysis Workshop.** Early June. Need a working group to plan and conduct the workshop.
 - *Should we begin with Gardiner proposal as basis for planning? Who is willing to be logistics lead?*
4. **Industrial Impacts: Strategic Focus.** Hunker effort needs "swat team" to gain closure. Interesting overtures from industry groups ready to offer constructive input.
 - *Should we have public involvement effort on strategic industries prior to finalizing draft?*
5. **Strategic Planning Session on Outreach.** The priority events above fit into a complex negotiating and issue management effort. A coordinated strategic planning "off site" could save us major time later. Our first attempt to schedule became infeasible, but we are interested in trying again with more notice.
 - *Who would like to participate in this type of planning session?*

Handouts

- President and Vice President Earth Day Remarks and Clips
- Ehrlich's Briefing Materials
- Calendar of Upcoming Events
- Notional Scope of June Workshop
- Vice President's Japan Speech
- Senator Chafee's Speech

White House Climate Change Task Force

734 Jackson Place, NW • Washington, DC 20503

Meeting Notice

This Friday we will provide base-case climate science and economics briefings, and announce next steps for peer review and public release of modeling results.

Times and locations:

- **Congressional Brief:** 10 - 12 AM Friday, April 25 In S 116 (Open To House And Senate Climate Staff)
- **Public Brief:** 2 - 4 PM. Friday, April 25 In The Department Of Commerce - Auditorium

Presenters and agenda:

- **Dirk Forrister**, chair of the White House Climate Change Task Force, will provide an overview and introduce the presenters.
- **Dr. Rosina Bierbaum**, White House Office Of Science And Technology Policy, will provide a base-level analysis of past, present and future greenhouse gas emission levels and atmospheric concentrations.
- **Tom Karl**, NOAA National Center For Climatic Data Research, will provide analysis of past climate changes in the US in the context of increasing concentrations of greenhouse gasses, and discuss potential future climate changes. Much of Tom's work is published in the most recent issue of Scientific American.
- **Dr. Ev Ehrlich**, Under Secretary Of Commerce will present economic baselines for the US and its major energy-using sectors and key assumptions for the base case. He will also announce plans for peer review of action-based scenario results, and public release.

Contact: Tom Peterson (202) 343-1060

Today's Topics

- Goals of the IAT process
- Models we'll use
- Our energy-economy baseline (before policy)
- The dimensions of the climate change policy "problem"
- IAT Reviewers

Goals

- Combine different agency perspectives into single Administration-wide view of the problem
- Develop a credible, replicable, and straight-forward analysis of the policy options for:
 - Administration decision-making
 - Communicating to important stakeholders
 - Educating the public
- Provide outcomes for a wide range of variables
 - Macroeconomic
 - International
 - Sectoral and regional

Models We'll Use

- Criteria: must be established, widely-understood, available to the public, and each must bring some distinguishing feature that adds to the analysis
- Constraints: time, cost, and staff availability.
Academic literature has already broadly swept the field.
- Our choices:
 - DRI (disequilibrium)
 - Second Generation Model (general equilibrium)
 - Markal-Macro (technology driven)

DRI Model

- Large macroeconomic model of domestic U.S. economy
- Merges aspects of Keynesian, neoclassical, monetarist, and supply-side analysis
- Short-run behavior embedded in a long-run growth model
- Modeled relationships reflect historical developments
- Linked to energy, regional and sectoral submodels

DRI Model (con't)

Strengths

- Detailed representation of the economy's adjustment to short-term shocks
- Broad detail in energy, regional, and sectoral submodels
- Role of fiscal and monetary policies during transition

Limitations

- Difficulty in managing forward-looking behavior, including innovation
- Long-term transitions represented as a series of short-run adjustments

Second Generation Model

- “Computable general equilibrium” model presumes that economies adjust and then identifies outcomes
- Includes 12 global regions, developed in international collaborations
- Detail on energy technology and oil, greenhouse gases
- Linked to models that can calculate environmental outcomes

Second Generation Model (con't)

Strengths

- CGE structure allows users to characterize long-term adjustment path
- 12-region structure identifies who gains or loses in any policy setting
- Provides details on greenhouse gas emissions and energy technology

Limitations

- Short-term adjustment issue fly-by
- Little detail on sectors or regions, or energy level-use detail

Markal-Macro Model

- Model allows for direct input of technology assumptions regarding end-use demand
- Penetration rates (implied hurdle rates) can be varied
- Model solves for those technologies that satisfy energy demands at minimum costs .
- Cost savings flow through to macro model

Markal-Macro (con't)

Strengths

- Ability to vary technological and hurdle rate assumptions as inputs
- Provides energy-use detail and emissions information
- Provides implicit values for CO₂, NO_x, and SO₂ emissions

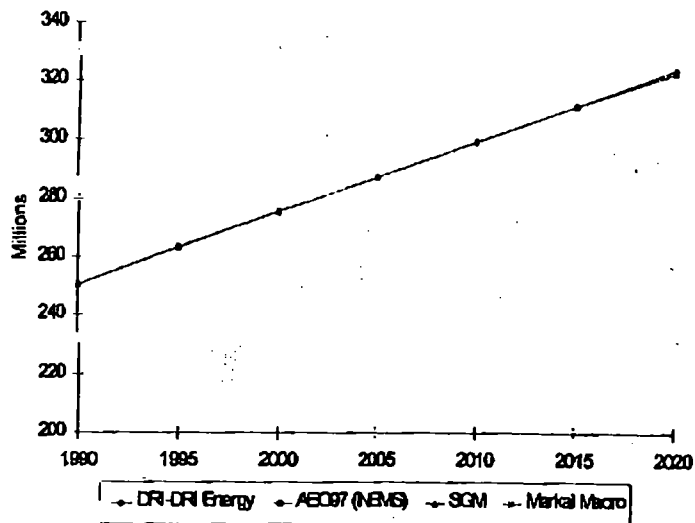
Limitations

- Limited detail on macroeconomic, sectoral, and regional effects
- Model may “over-optimize” the system or provide “knife-edge” solutions, as well as assuming perfect foresight

Baseline Projections

- Domestic baseline projections from EIA's 1997 Annual Energy Outlook
- International baseline projections from IEA's 1997 World Energy Outlook
- Models calibrated to baseline
- Charts and data, including growth rates follow

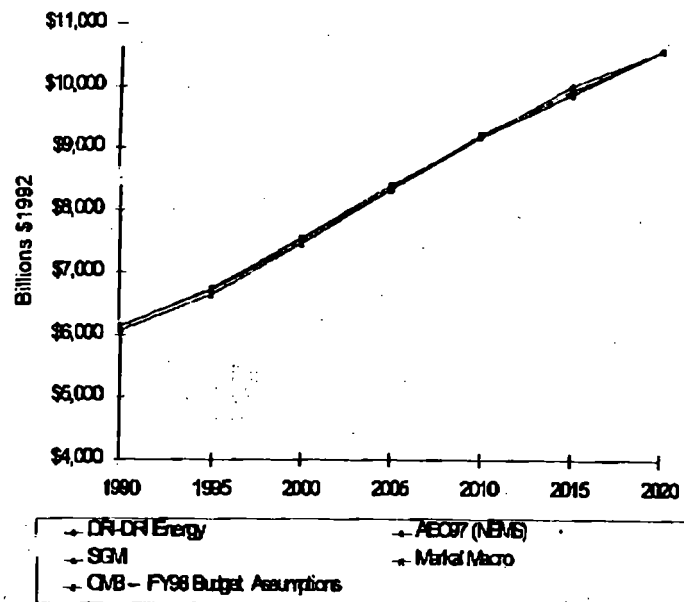
Population



Population	1990	1995	2000	2005	2010	2015	2020
DRI-DRI Energy	250	264	276	287	299	311	324
AEO97 (NEMS)	250	264	276	287	299	311	
SGM	250	263	276	287	299	311	323
Markal Macro	250	263	276	287	299	311	323
Average Annual Growth Rate (percent)							
		90-95	95-00	00-05	05-10	10-15	15-20
DRI-DRI Energy		1.0	0.9	0.8	0.8	0.8	0.8
AEO97 (NEMS)		1.0	0.9	0.8	0.8	0.8	
SGM		1.0	0.9	0.8	0.8	0.8	0.7
Markal Macro		1.0	0.9	0.8	0.8	0.8	0.7

- Population grows at a steady rate of about 0.8 percent annually, consistent with Census estimates.

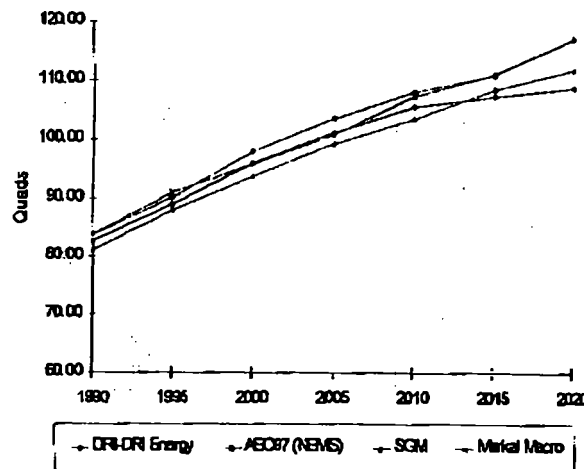
GDP



GDP (\$Billion 1992)	1990	1995	2000	2005	2010	2015	2020
DR-DRI Energy	\$6,138	\$6,743	\$7,522	\$8,337	\$9,172	\$10,003	\$10,574
AEO97 (NEMS)	\$6,138	\$6,739	\$7,544	\$8,380	\$9,185	\$9,880	\$10,593
SGM	\$6,077	\$6,635	\$7,484	\$8,324	\$9,172	\$9,873	\$10,593
Markal Macro	\$6,138	\$6,738	\$7,554	\$8,383	\$9,181	\$9,888	\$10,576
OMB - FY98 Budget Assumptions	\$6,142	\$6,721	\$7,470	\$8,343	\$9,225	\$9,929	\$10,581
Average Annual Growth Rate (percent)							
		90-95	95-00	00-05	05-10	10-15	15-20
DR-DRI Energy		2.0	2.3	2.2	2.0	1.8	1.1
AEO97 (NEMS)		2.0	2.4	2.2	1.9	1.5	
SGM		1.8	2.5	2.3	2.0	1.5	1.5
Markal Macro		2.0	2.4	2.2	1.9	1.5	1.4
OMB - FY98 Budget Assumptions		1.9	2.2	2.3	2.1	1.5	1.3

- Aging population reduces labor force, lowers long-term growth potential by 2020.

Total Energy Consumption

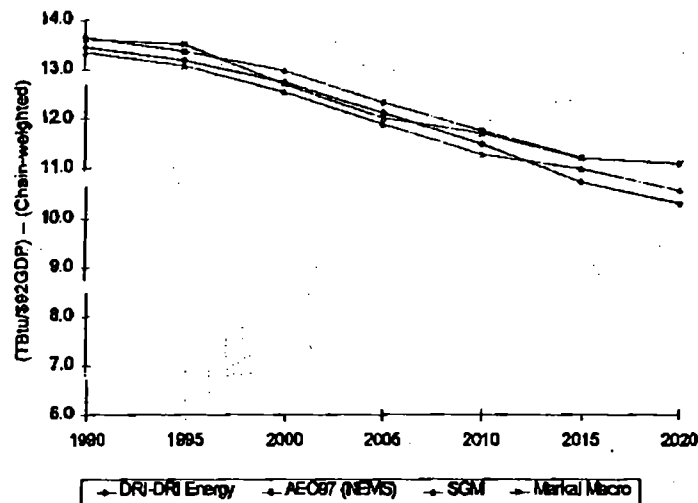


Total Energy Consumption (Quads)	1990	1995	2000	2005	2010	2015	2020
DRI-DRI Energy	82.60	88.90	95.80	101.00	105.40	107.30	108.90
AEO97 (NEMS)	83.73	90.03	97.85	103.40	107.90	110.90	
SGM	81.06	87.89	93.63	99.05	103.37	106.44	111.85
Markal Macro	83.73	90.90	95.60	100.70	107.30	111.00	117.10
Average Annual Growth Rate (percent)							
		80-85	85-90	90-95	95-100	100-105	105-110
DRI-DRI Energy		1.5	1.6	1.1	0.9	0.4	0.3
AEO97 (NEMS)		1.5	1.7	1.1	0.9	0.6	
SGM		1.7	1.3	1.2	0.9	1.0	0.6
Markal Macro		1.7	1.0	1.1	1.3	0.7	1.1

SGM Projections do not include: geothermal, wind, biomass waste, and other municipal waste

- Energy consumption growth rates decline in response to slow growth and enjoy efficiency improvements.

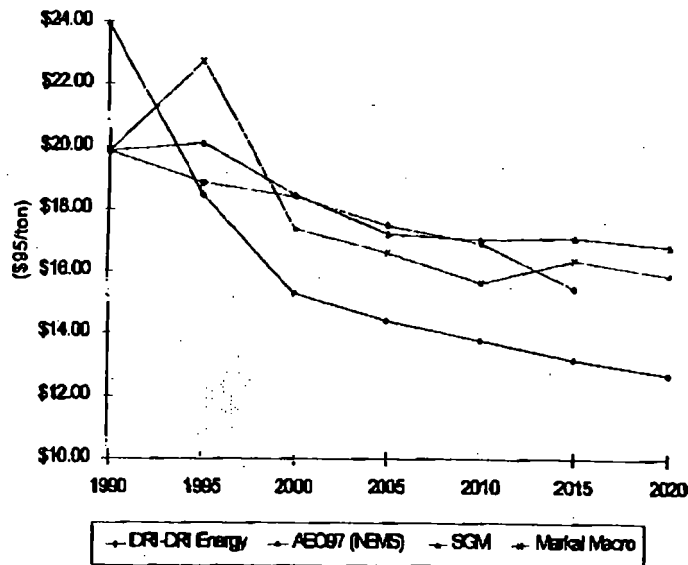
Energy Intensity



Energy Intensity (Tbbl/\$92GDP)	1990	1995	2000	2005	2010	2015	2020
DRI-DRI Energy	13.5	13.2	12.7	12.1	11.5	10.7	10.3
AEO87 (NEMS)	13.6	13.4	13.0	12.3	11.7	11.2	
SGM	13.3	13.1	12.5	11.9	11.3	11.0	10.8
Markal Macro	13.6	13.5	12.7	12.0	11.7	11.2	11.1
Average Annual Growth Rate (percent)		90-95	95-00	00-05	05-10	10-15	15-20
DRI-DRI Energy		-0.4	-0.7	-1.0	-1.0	-1.3	-0.8
AEO87 (NEMS)		-0.4	-0.6	-1.0	-0.9	-0.9	
SGM		-0.4	-0.8	-1.1	-1.0	-0.5	-0.8
Markal Macro		-0.1	-1.2	-1.1	-0.5	-0.9	-0.2

- Energy intensity falls, reflecting ongoing technical improvements.

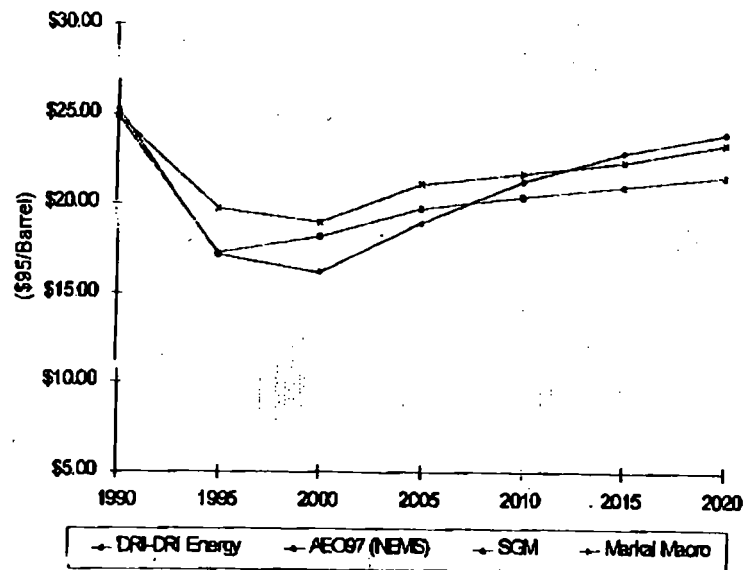
Minemouth Coal Prices



Minemouth Coal Price (\$95/ton)	1990	1995	2000	2005	2010	2015	2020
DRI-DRI Energy	\$23.92	\$18.45	\$15.28	\$14.41	\$13.76	\$13.18	\$12.70
AEO97 (NEMS)	\$19.88	\$18.83	\$18.38	\$17.47	\$16.92	\$15.46	
SGM	\$19.88	\$20.10	\$18.44	\$17.21	\$17.04	\$17.08	\$16.81
Markal Macro	\$19.88	\$22.73	\$17.35	\$16.62	\$15.64	\$16.37	\$15.88
Average Annual Growth Rate (percent)		90-95	95-00	00-05	05-10	10-15	15-20
DRI-DRI Energy		-4.6	-3.4	-1.1	-0.9	-0.9	-0.7
AEO97 (NEMS)		-1.1	-0.5	-1.0	-0.6	-1.7	
SGM		0.2	-1.7	-1.3	-0.2	0.0	-0.3
Markal Macro		2.9	-4.7	-0.8	-1.2	0.9	-0.6

- Coal prices decline as low-cost sources gain prevalence in the market.

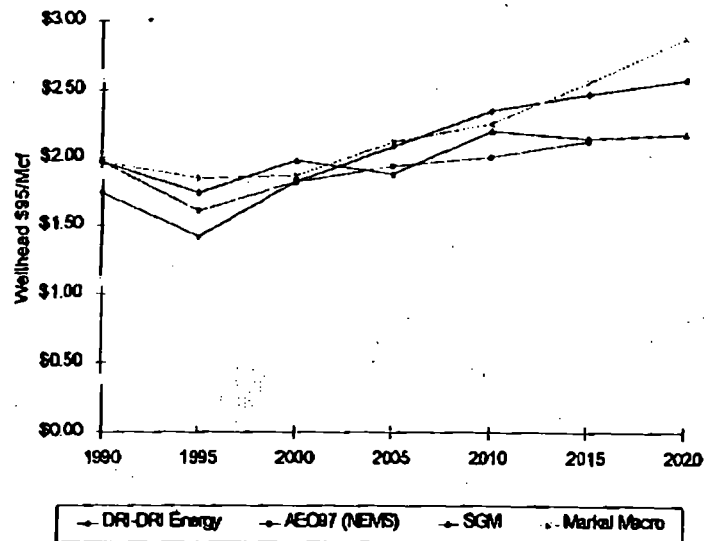
World Oil Prices



(World Oil Price (\$95/Barrel))	1990	1995	2000	2005	2010	2015	2020
DRI-DRI Energy	\$25.23	\$17.14	\$16.18	\$18.93	\$21.24	\$22.86	\$23.95
AEO97 (NEMS)	\$24.67	\$17.26	\$18.20	\$19.72	\$20.41	\$20.98	
SGM	\$24.67	\$17.26	\$18.20	\$19.72	\$20.41	\$20.98	\$21.57
Markal Macro	\$24.67	\$18.73	\$18.98	\$21.09	\$21.70	\$22.32	\$23.34
Average Annual Growth Rate (percent)							
		90-95	95-00	00-05	05-10	10-15	15-20
DRI-DRI Energy		-6.4	-1.1	3.4	2.4	1.5	1.0
AEO97 (NEMS)		-6.1	1.1	1.7	0.7	0.6	
SGM		-6.1	1.1	1.7	0.7	0.6	0.6
Markal Macro		-4.1	-0.8	2.2	0.6	0.8	0.8

- World oil prices rise slightly in real terms as supplies tighten and level grows.

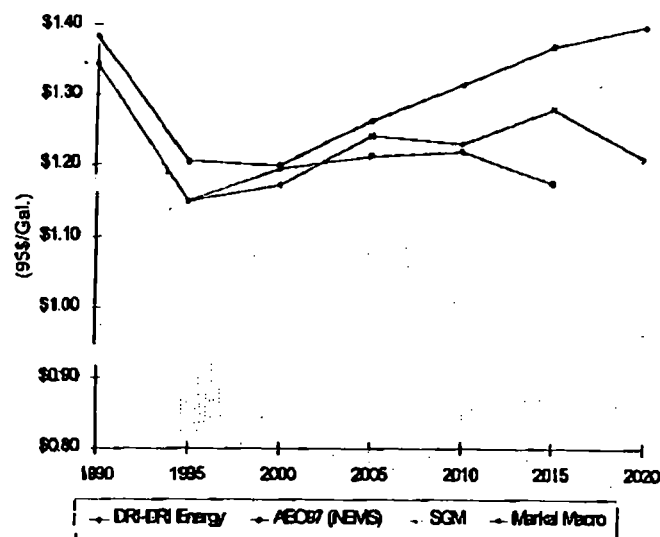
Natural Gas Prices



Natural Gas Price (wellhead \$95/Mcf)	1990	1995	2000	2005	2010	2015	2020
DRI-DRI Energy	\$1.74	\$1.42	\$1.82	\$2.09	\$2.35	\$2.47	\$2.58
AEO97 (NEMS)	\$1.97	\$1.61	\$1.82	\$1.84	\$2.01	\$2.13	
SGM	\$1.97	\$1.74	\$1.88	\$1.88	\$2.20	\$2.15	\$2.18
Market Macro	\$1.97	\$1.65	\$1.87	\$2.12	\$2.28	\$2.56	\$2.88
Average Annual Growth Rate (percent)							
		90-95	95-00	00-05	05-10	10-15	15-20
DRI-DRI Energy		-3.7	5.8	3.0	2.5	1.0	0.9
AEO97 (NEMS)		-3.7	2.6	1.3	0.7	1.2	
SGM		-2.3	2.8	-1.0	3.4	-0.5	0.3
Market Macro		-1.2	0.2	2.7	1.3	2.7	2.5

- Natural gas prices rise as natural gas moves into higher-value uses.

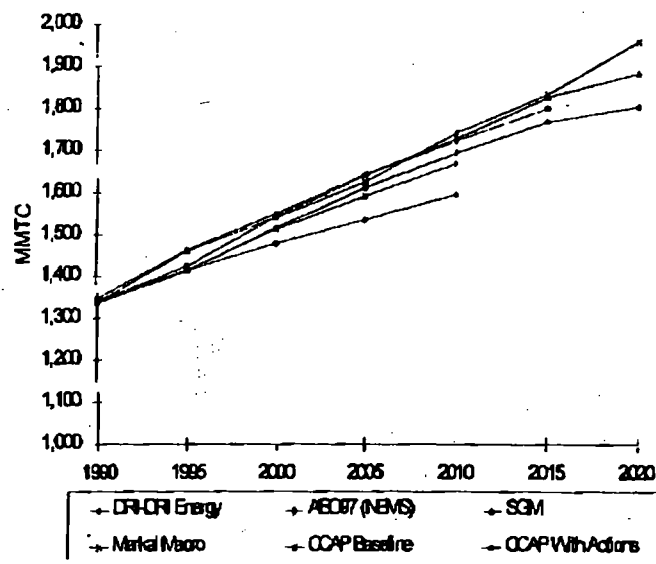
Gasoline Prices



Gasoline Prices (\$/Gal.)	1990	1995	2000	2005	2010	2015	2020
DRI-DRI Energy	\$1.38	\$1.21	\$1.20	\$1.26	\$1.31	\$1.37	\$1.40
AEO97 (NEMS)	\$1.34	\$1.15	\$1.19	\$1.21	\$1.22	\$1.17	
SGM							
Market Macro	\$1.34	\$1.15	\$1.17	\$1.24	\$1.23	\$1.28	\$1.21
Average Annual Growth Rate (percent)							
		90-95	95-00	00-05	05-10	10-15	15-20
DRI-DRI Energy		-2.6	-0.1	1.1	0.8	0.8	0.4
AEO97 (NEMS)		-2.9	0.8	0.3	0.1	-0.7	
SGM							
Market Macro		-2.9	0.4	1.2	-0.2	0.8	-1.1

- Price projection differences reflect different treatments of transportation demand technology.

U.S. Carbon Emissions



Carbon Emissions (MMTC) -							
Total	1990	1995	2000	2005	2010	2015	2020
DRI-DRI Energy	1,338	1,413	1,516	1,612	1,693	1,767	1,805
AEO97 (NEMS)	1,339	1,424	1,543	1,639	1,722	1,799	
SGM	1,346	1,464	1,549	1,642	1,727	1,826	1,883
Markal Macro	1,338	1,459	1,540	1,624	1,741	1,833	1,859
CCAP Baseline	1,344	1,414	1,512	1,589	1,667		
CCAP With Actions	1,344	1,414	1,477	1,535	1,593		
Average Annual Growth Rate (percent)							
		90-95	95-00	00-05	05-10	10-15	15-20
DRI-DRI Energy		1.13	1.45	1.27	1.01	0.88	0.43
AEO97 (NEMS)		1.26	1.68	1.24	1.02	0.89	
SGM		1.75	1.17	1.20	1.03	1.15	0.62
Markal Macro		1.81	1.11	1.08	1.44	1.06	1.37
CCAP Baseline		1.04	1.38	1.03	0.98		
CCAP With Actions		1.04	0.90	0.79	0.76		

- Emission growth projected at (?) annually over the 1990-2020 period.

Non-CO2 Greenhouse Gas Emissions and Sinks

Gas/Source	1990	1995	2000		2010		2020	
			No CCAP Action	With CCAP Action	No CCAP Action	With CCAP Action	No CCAP Action	With CCAP Action
Methane	169	177	170	148	182	151	186	154
Nitrous Oxides	37	37	36	31	39	34	43	37
HFCs/PFCs/ SF6	24	N/A	62	42	132	91	183	133
Total	230	214	268	221	352	276	412	325
Sinks	-136	N/A	-121	-131	-119	-129	-103	-113

Foreign Baseline

	Real Economic Growth (Annual)			Energy Growth (Quads)			Emissions Growth (MMTC)		
	1990-00	2000-10	2010-20	1990-00	2000-10	2010-20	1990-00	2000-10	2010-20
Australia	2.6	2.5	1.7	1.8	1.2	0.8	1.7	1.2	0.7
Canada	2.4	2.4	1.2	1.7	1.0	0.4	2.2	1.5	0.6
China	8.5	7.7	5.9	3.9	2.8	2.1	3.8	2.8	2.2
Former Soviet Union	-4.0	1.5	1.4	-3.5	1.8	1.2	-4.0	1.6	1.1
India	4.8	4.0	3.5	4.7	2.4	2.9	4.7	2.0	2.9
Japan	2.1	1.8	0.9	2.2	0.8	0.1	2.1	0.9	0.1
Korea	4.5	6.0	4.5	3.9	3.0	2.4	2.7	3.1	3.0
Mexico	3.9	4.0	3.2	4.1	2.9	2.3	4.2	2.9	2.4
Western Europe	2.9	2.2	2.4	2.5	1.6	1.0	2.2	1.8	1.0
Rest-Of-World	3.8	3.7	3.2	3.0	2.3	2.3	2.9	2.4	2.5

Dimensions of the Problem

- Emission limits -- levels and timing
- International trading -- “Annex I” vs. “Joint Implementation”
- Innovation and diffusion
- Related revenue recycling
- Collateral benefits, but no climate benefits

IAT Reviewers

- Dale Jorgensen, Harvard, energy and environmental modeling
- William Nordhaus, Yale, economic effects of energy and environmental problems
- Larry Goulder, Stanford, taxation issues in climate modeling
- John Weyent, Stanford, head of the Stanford Energy Modeling Forum
- Ray Kopp, Resources for the Future, technical change and carbon policy
- Kerry Smith, Duke, trade consequences of environmental policy

IAT Reviewers (con't)

- Robert Repetto, World Resources Institute, capital markets and environmental policy
- Stephen DeCanio, U. of California, energy efficiency and technology change
- Tom Rutherford, U. of Colorado, energy and environmental modeling
- Rich Richels, Electric Power Research Institute, energy industry perspective
- Steve Bernow, Tellus Institute, energy and environmental modeling
- Robert Scott, Economic Policy Institute, labor issues

TENTATIVE TIME LINE FOR DECISION PROCESS

Third Week in May

Principals Meeting

Mid-May

Deputies Meeting

(implies that Assistant Secretaries sign off on decision memo by May 9)

May 7

Assistant Secretaries make final decisions on memo

April 30

Assistant Secretaries meet to discuss decision memo/attachments

Date: 04/22/97 Time: 10:19
CClinton expands campaign against polluters

WASHINGTON (AP) Suggesting that global warming may be to blame for this year's severe floods, President Clinton today expanded an "early warning system" for detecting toxic chemicals in the environment.

Under new regulations in the decade-old "Community Right to Know" program, seven additional industries and 6,100 new facilities will be forced to disclose the levels of toxic chemicals they release into the air, water and land.

"By expanding community right-to-know, we're giving Americans a powerful, very powerful early-warning system to keep their children safe from toxic pollution," the president said. "We're giving them the most powerful tool in a democracy knowledge."

With Vice President Al Gore at his side on the White House lawn, Clinton timed the announcement to coincide with today's 27th annual Earth Day celebration. The president was to have unveiled the news at an environmental fair along Washington's endangered Anacostia River but instead decided at the last-minute to tour the flooded upper Midwest.

Gore was substituting for the president at the outdoor Anacostia celebration that was expected to draw 1,000 local schoolchildren to learn about the polluted river and cleanup efforts.

Speaking to reporters before his departure for Grand Forks, N.D., Clinton questioned whether global warming had anything to do with this year's severe floods.

"We do not know for sure that the warming of the earth is responsible ... but many people believe that it is and we have to keep looking into it," he said.

"Every American has noticed a substantial increase in the last few years of the kind of thing we're going to see in North Dakota today, and if there is a larger cause that can be eased in the future, we ought to go after that solution."

Clinton's right-to-know directive expanded the information required of companies already disclosing how much pollution they emit and increased by about 30 percent or 6,100 sites the number of industrial facilities required to file reports.

He also added seven industrial categories, including some which used mercury, lead and arsenic, to the 20 that already report on toxic releases. The new categories are metal mining, coal mining, electric utilities, commercial hazardous-waste treatment, petroleum bulk terminals, chemical wholesalers and solvent recovery services.

Gore said the plan will streamline the collection of data and reduce burdens on businesses.

"This measure probably has more support across all lines in America than any other thing that we do, because when you give the American people information they can use to protect themselves, people at the grassroots level find very creative ways to convince those sources of pollution to reduce the emissions into the air and water," Gore said.

APNP-04-22-97 1032EDT

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

April 22, 1997

REMARKS BY THE PRESIDENT
AND VICE PRESIDENT
UPON DEPARTURE

The South Lawn

9:05 A.M. EDT

THE VICE PRESIDENT: Good morning, ladies and gentlemen. Of course, as you know, the President is about to depart for North Dakota and the surrounding area to bring some additional help and encouragement and solidarity to the victims of the 500 Year Flood in that area.

Prior to leaving, the President is going to make an important announcement concerning a major new step forward in our effort to empower the American people with information needed to protect their environment. This new step being taken by the President vastly expands the community's right to know about pollutants being released into their neighborhoods and into their communities.

One important aspect of this announcement is the reinventing feature that streamlines the collection of information by the businesses affected by this new announcement and protects the environment in new ways, while at the same time reducing the burden of information collection on businesses. This measure probably has more support across all lines in America than any other thing that we do; because when you give the American people they can use to protect themselves, then people at the grassroots level find very creative ways to convince those sources of pollution to reduce the emissions into the air and water in the communities where these individuals live.

It is only one example of the broad-based effort led by President Bill Clinton to greatly improve the protection of the environment. Everything from emissions in the smallest community to the global issues, such as climate change. And, incidentally, our research effort is continuing to pin down what many scientists have said is a link between extreme weather events -- not only in this country, but in other nations as well -- that have long been predicted to become more common in a world where temperatures are

rising even slightly.

I preceded the President to the north central area two weeks ago and talked with one mayor who said his community had had six hundred-year floods in the last 10 years. The scientific community cautions that no one can ever say that a particular event, even a 500 hundred year flood, is connected to global climate change. But they do say and have said for two decades that the probability that such events will occur increases along with climate change.

This announcement, again, on the community's right to know is a major advance, emblematic of this President's leadership on the environment. Therefore, on this Earth Day, it is a particular privilege and pleasure for me to present President Bill Clinton.

THE PRESIDENT: Thank you very much, Mr. Vice President. Good morning, ladies and gentlemen. As all of you know I am about to leave for North Dakota, where the people are quite literally in the fight of their lives. What they have endured is enormous. How they

are enduring it is remarkable. I am going to view the flood damage to pledge our nation's support to see that we are doing everything we can do to help them.

You know, Americans have a habit of joining together at times like this and I think all Americans have been very deeply moved by the pictures we have seen of a town being flooded and burning at the same time, the people in North Dakota losing everything they have. I, personally, can't remember a time when a community that large was entirely evacuated. And we have to stay together.

I think it is appropriate, for the reasons the Vice President said, that coincidentally this trip is occurring on Earth Day, because since 1970, the first Earth Day, Americans have stood side by side against a rising tide of pollution and for the proposition that we have to find a way to live in harmony with and grow our economy in a way that is consistent with preserving our environment.

Earth Day started at the grassroots. Soon the force of neighbor joining with neighbor grew into a national movement to safeguard our air, our land and our water. The movement led national leaders of both parties to put in place the environmental safeguards that protect us today: the Clean Air Act, the Clean Water Act, the Environmental Protection Act. In 1995, an attempt to reverse this consensus and to radically weaken our environmental laws was strongly rebuffed here in Washington and, even more importantly, all across America. And in 1996, that consensus began to be restored again.

These environmental protections have done an awful lot of good. But one of the best things we can do in Washington to protect the environment is to give people in communities all across our country the power to protect themselves from pollution. That is

the mission of the Community Right to Know law. This law tells citizens exactly what substances are being released into their neighborhoods. In the decade its been on the books, citizens have joined with government and industry to reduce the release of toxic chemicals by 43 percent. Under our administration we strengthened Right to Know, nearly doubling the number of chemicals that must be reported, making it easier for Americans to find out what toxics, if any, are being sent into the world around them.

In 1995, I directed EPA Administrator Carol Browner to find ways to expand Community Right to Know even further. Today, we are making good on that pledge. Today, we increased by 6,100 -- 30 percent -- the number of facilities that need to tell the public what they are releasing into our environment. Today, seven new industries -- including mining, electric utilities and hazardous waste treatment centers that use substances like mercury, lead and arsenic -- will now be subject to the Community Right to Know law. Today, more information will be required from 700 companies already providing information under the law. It will be more accessible to Americans. And today we set in motion a process that will guarantee that all the stakeholders -- including citizens, community groups, environmental groups and businesses -- will have opportunities to work together from now on to continue to improve this law.

By expanding Community Right to Know we're giving Americans a powerful, very powerful early warning system to keep their children safe from toxic pollution. We're giving them the most powerful tool in a democracy: knowledge. We are truly living up to the promise of Earth Day.

I also want to say a special word of thanks to Katie McGinty for the work that she has done on this, and the White House. And I want to thank the Vice President for taking my place at the Earth Day celebration at Anacostia today, to talk about Community Right to Know and for all of his work on the environment.

And just let me say in closing, with regard to the comments he made about climate change and the possible impact it may have had on the enormous number of highly disruptive weather events that have occurred just since we've been here in the last four years and a few months, I think it is very important that we continue to intensify our government's research efforts in this regard and that we take the very best knowledge we have and bring it to bear on a lot of the decisions we'll be having to make together as a country over the next four years.

We do not know, as the Vice President said, for sure that the warming of the earth is responsible for what seems to be a substantial increase in highly disruptive weather events; but many people believe that it is and we have to keep looking into it. We have to find the best scientific evidence we have and we have to keep searching for the answers to this. I think every American has

noticed a substantial increase in the last few years of the kind of thing we're going to see in North Dakota today. And if there is a larger cause which can be eased into the future, we ought to go after that solution as well. Thank you.

Q Is a Marshall Plan appropriate? Your Chief of Staff suggested yesterday it may take a Marshall Plan to help North Dakota.

THE PRESIDENT: You know, we've had -- I suppose because North Dakota is not highly populated we may -- we've had disasters which have affected more people. But I believe that probably this is the highest percentage of people in any state or community that I have seen affected by this. And, you know, if you look at Grand Forks you see a place that literally has to be completely rebuilt, or people have to reconstitute their lives elsewhere. So I do believe that we're going to have to be prepared to be very creative here.

The Congress has shown in the past, even when it was quite costly -- after the earthquake in California, for example -- that we can unite across party lines to do what has to be done. We need to take a hard look at this. This situation in North Dakota is virtually unprecedented in many, many ways and I want to go out there, make sure that I have read all the information available, talk to the people there, see for myself and then I'll come back and, along with the Congressional delegation with Senator Dorgan and Senator Conrad and Congressman Pomeroy, we'll put our heads together and see where we go from here.

Q Any idea, Mr. President, on how much money it might take and will it be there when you need it?

THE PRESIDENT: I think, as I said, my experience in dealing with the flood in the middle west and all the disasters in California, the Pacific northwest, the floods in the southeast, is that Congress finds a way. And I think everybody in America has been totally overwhelmed by what we have seen on television and seen in the news reports -- these pictures of buildings completely surrounded by water, burning down. You know, I think it's been an overwhelming experience. I think the American people are with the people of North Dakota and I think we'll do what we have to do.

Q Mr. President, are you making any tangible headway on the Chemical Weapons treaty, on getting the votes for the Chemical Weapons treaty?

THE PRESIDENT: Well, I hope so. We're working hard on it. We are working very, very hard on it -- I am, the Vice President is, everyone in our administration is. I worked over the weekend some on it. We're doing the best we can to put together a strong case. I think the fact that we have come up with a package of 28 clarifying amendments that respond to 90 percent of the objections, even of the strongest opponents of the treaty, I think shows the good faith in which we have proceeded. And we've worked very hard on this

04/22/87 10:14:10 AM
and I'm actually quite optimistic.

Q Have you talked to Senator Lott?

Q -- for Saddam Hussein and honoring the no-fly zone?

THE PRESIDENT: Well, my message is that we support people in exercising their religious liberties and in living out their religious convictions everywhere in the world. And we certainly support that in the Muslim world. But we don't want to see religion, in effect, used and distorted in a way to try to avoid the international obligations that are imposed. And we intend to continue to observe the no-fly zone and continue to support the embargo until he lives up to the conditions of the United Nations resolutions.

END

9:19 A.M. EDT

Message Sent To:

Kathleen A. McGinty/CEQ/EOP
Shelley N. Fidler/CEQ/EOP
Wesley P. Warren/CEQ/EOP
Dinah Bear/CEQ/EOP
Elisabeth A. Blaug/CEQ/EOP
Bradley M. Campbell/CEQ/EOP
Edward R. Clark/CEQ/EOP
Thomas C. Jensen/CEQ/EOP
Robert S. Kapla/CEQ/EOP
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Date: Tue, 22 Apr 1997 12:23:49 -0500
From: Kelly Sims <ksims@ozone.org>
Subject: Clinton on Floods/Global Warming
To: uscan-talk@igc.apc.org
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>From CNN this morning:

WASHINGTON

(AllPolitics, April 22) --
Before he departed this morning for the flood-ravaged upper Midwest, President Bill Clinton called for intensifying the research into links between global climate change and destructive weather.

Clinton, who will tour devastated Grand Forks, N.D., by helicopter and meet with evacuees, said it will take more research to find if there is a link between weather disasters and global warming.

"We do not know ... for sure that the warming of the earth is responsible for what seems to be a substantial increase in highly disruptive weather events, but many people believe that it is," Clinton said. "And we have to keep looking into it. We have to find the best scientific evidence we have. And we have to keep searching for the answers to this."

Clinton and Vice President Al Gore used the occasion to mark the 27th observance of Earth Day, also announcing an expansion of the right-to-know law

that allows people to learn about toxic substances that industries release in their communities.

"We're giving them the most powerful tool in a democracy — knowledge," Clinton said.

Federal authorities are expanding the 10-year-old law to cover seven new industries, including mining, electrical utilities and hazardous waste treatment.

Clinton said making the information available is "one of the best things we can do in Washington to protect the environment."

"In the decade that it [the law] has been on the books, citizens have joined with government and industry to reduce the release of toxic chemicals by 43 percent," the president said.

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**Possible scenarios for five-year periods centered on 2010, 2015, and 2020
(100% = 1990 levels of GHG emissions)**

	2008-2012	2013-2017	2018-2022
A	100%	100%	100%
B	95%	95%	95%
C	90%	90%	90%
D	100%	95%	90%
E	90%	90%	80%
F	Above options with added limit of 110% of 1990 levels in 2005-2007		
G	Same as D but shift each period three years forward to 2005-2009, 2010-2014, and 2015-2019		

Comments:

Scenarios (a) - (d) in the draft memo present a number of difficulties:

- 1) They are not clear enough about what is to be assumed for the years between those mentioned in the scenarios. The modeling requires a constraint for each year.
- 2) They contain not only different levels but also cover different total time periods. Implicitly, they also have different length budget periods. The scenarios should be structured more comparably. Only one variable should be changed at a time.
- 3) Lines A, B, and E, below are attempts to make scenarios (a)-(d) more specific and comparable; different judgments could be made. They are ranked in order of increasing stringency.
 - Lines A and B correspond to scenario (a) and (b) in the memo, with the additional specificity that a five-year period around 2010 is assumed, and it is held constant for two subsequent five-year periods.
 - Line C is similar, a bit more stringent.
 - Line D is a new proposal by EPA. Note that it has the same net emissions as line C, with more in the first period and less in the third. EPA also proposes Line G, which is equivalent to Line D with the periods shifted forward to begin in 2005.

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- Line E corresponds fairly well to scenario (c) in the draft memo.
 - Scenario (d) in the draft memo is the least stringent, but is difficult to model and compare with the others because the models go out only to 2020, not 2030. For the period modeled, scenario (d) corresponds to Line A. How would we model the 2020-2030 period?
 - Line F is intended to represent modest additional reductions in 2005 as suggested in the draft memo.
- 4) None of these proposals simulates the benefit of multi-year averaging. It should be remembered that long-period averaging competes with bindingness/compliance considerations. We still need a way to simulate the savings potential of 3, 5, or 10 years.