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**HARVARD UNIVERSITY'S JOHN F. KENNEDY
SCHOOL OF GOVERNMENT/
PROJECT 88 CONFERENCE:**

**HARNESSING MARKET FORCES
TO PROTECT THE ENVIRONMENT**

SUMMARY OF PROCEEDINGS

August 1989

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Harvard University's
John F. Kennedy School of Government/Project 88 Conference:
Harnessing Market Forces to Protect the Environment

SUMMARY OF PROCEEDINGS

June 13 and 14, 1989

Washington, D.C.

EXECUTIVE SUMMARY

In June of 1988, U.S. Senators Timothy Wirth (D-Colorado) and John Heinz (R-Pennsylvania) initiated Project 88, a bipartisan effort to identify innovative approaches to addressing the nation's major environmental problems. They engaged Robert Stavins, an Assistant Professor of Public Policy at the John F. Kennedy School of Government, to direct the project. A team of 50 persons was assembled from academia, the business community, government, and environmental organizations to submit ideas and manuscripts, and review preliminary drafts.

That effort culminated in the December 1988 release of the report of Project 88, "Harnessing Market Forces to Protect Our Environment: Initiatives for the New President." The report examines 13 major natural resource and environmental problems facing the country, and proposes 36 specific policy recommendations to address them.¹ A central theme in the Project 88 report is that inefficient natural resource use and environmental degradation could be reduced by ensuring that consumers and producers face the true costs of their decisions -- not just their direct costs, but the full social costs of their actions. Hence, many of the recommendations provide for the use of economic-incentive mechanisms for the achievement of environmental goals -- tradeable permit systems to control industrial air pollutants; deposit-refund systems to manage containerizable hazardous waste; least-cost bidding at electrical utilities to encourage greater energy efficiency; removal of market barriers which promote inefficient resource use; and removal of unwarranted subsidies of environmentally destructive activities.

To further the dissemination of Project 88's recommendations throughout the policy community, the Kennedy School co-sponsored with Senator Heinz and Senator Wirth a "Harvard University-Project 88 Conference" on June 13 and 14, 1989, in Washington, D.C. The Conference brought together leaders from Congress, the Administration, private industry, the environmental community, and academia, to discuss incentive-based approaches to environmental protection and natural resource management.

This Summary of Proceedings provides an overview of the highlights of the two-day event. The Conference began with a dinner on June 13 at the Renwick Gallery. Featured speakers, whose edited comments are included, were: Thomas Lovejoy, Assistant Secretary for External Affairs at the Smithsonian Institution; Graham Allison, Dean of the Kennedy School; Senator Wirth; Senator Heinz; and Michael Boskin, Chairman of the President's Council of Economic Advisers.

¹Copies of the Project 88 report are available from the offices of Senators Wirth and Heinz, Russell Senate Office Building, Washington, D.C. 20510, and from Professor Stavins at the Kennedy School.

The Conference's working sessions were held the following morning at the Dirksen Senate Office Building. After welcoming remarks by Dean Allison, Senator Heinz, and Senator Wirth; the national policy context of Project 88 was described by Roger Porter, Assistant to the President for Domestic and Economic Policy (on leave from the Kennedy School, where he is the IBM Professor of Government and Business).

Session #1, "Using Market Forces to Get More Environmental Protection," was introduced by Robert Stavins, who provided an overview of Project 88 and its policy recommendations. Following this, C. Boyden Gray, Counsel to the President, discussed the Administration's perspective of the potential role of economic-incentive environmental-protection policies. Frederic Krupp, Executive Director of the Environmental Defense Fund, responded from the perspective of the environmental community. The session concluded with an extensive round-table discussion among the Conference's forty-five participants, led by Joseph Kalt, Professor of Political Economy at the Kennedy School.

Session #2, "How Do We Get There From Here? The Practice and Politics of Market-Based Environmental Policies," opened with remarks by Senator Dale Bumpers of Arkansas. Next, William K. Reilly, Administrator of the U.S. Environmental Protection Agency, presented a detailed description of current environmental policy initiatives which utilize economic-incentive approaches, including the President's proposals for amending the Clean Air Act. Congressman Henry Waxman, Chairman of the House Health and Environment Subcommittee, responded with his concerns regarding the Administrations' proposals and described his own legislative initiatives, some of which also utilize market-oriented approaches. Session #2 concluded with a round-table discussion, again led by Professor Joseph Kalt.

After a brief question and answer period with invited observers, the Conference closed with summary comments by Senator Wirth and Senator Heinz and concluding comments by Dean Allison.

ACKNOWLEDGEMENTS

The Harvard/Project 88 Conference was made possible by a grant from the Richard King Mellon Foundation. The staffs of Senator Heinz and Senator Wirth -- Andrew McElwaine, Katherine Terman, Grant Oliphant, David Harwood, Russ Shay, Rosemary O'Donnell, Roxie Lopez, and Jim Spellman - provided valuable support. At the Kennedy School, Robert Stavins was conference director and Katie Whelan served as conference coordinator, working with Heather Campion, the School's Director of Public Liaison, and Steve Singer, Director of Press Relations. Additional support was provided by Charles Cicchetti, Florence Fisher, Henry Lee, and William Hogan of the School's Energy and Environmental Policy Center. The conference proceedings were edited by Sheri Bittenbender and Robert Stavins.

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HARVARD UNIVERSITY
John F. Kennedy School of Government
Project 88 Conference
Harnessing Market Forces to Protect Our Environment
Renwick Gallery
17th & Pennsylvania Avenue, NW
Washington, D.C.

Tuesday Evening, June 13, 1989

WELCOME

DR. THOMAS E. LOVEJOY:

Ladies and gentlemen, I'm delighted to welcome you to one of Washington's most lovely spaces, and one which dates to before the war between the states, on the occasion of this dinner celebrating Project 88 and harnessing market forces on behalf of the environment.

In many senses, we know all too well that today we are being called to an accounting. We are being forced to pay the price for economic activities that did not consider the environmental costs which inevitably have to be paid. In the words of a colleague in the Swedish Overseas Development Agency, one cannot negotiate with the environment. The bill eventually becomes due.

While we often think about the opportunity costs forgone when a particular bit of environmental destruction or degradation takes place, we need to think equally about opportunity costs that are foregone when species are lost or ecological processes are affected. We need to work on changing the rules so that market forces can work in the right direction.

I interestingly had a very personal example of this come home to me within the last week. The Virginia Electric Power Company is rather reluctant to build additional generating capacity. They would prefer to work out a deal with the average homeowner to briefly cut off the power to their hot water heater in moments of peak demand because the hot water heater normally sits there all day long keeping the water at a very high temperature at a very high energy cost.

I think that is what this dinner is about, and what this conference is about tomorrow, and indeed what Project 88 is about: how we live on this planet and how environment and economics intersect. If on the one hand we think about the power that economic and market forces have shown in environmental destruction, we should realize that the power of market forces can be both for good as well as for ill, and that the potential of market forces to work in the right direction can be deeply significant.

Therefore, I am delighted to welcome you here on behalf of the Smithsonian and to thank the Renwick for hosting us this evening, and to introduce Dean Graham Allison of the Kennedy School to conduct the rest of the program. Thank you.

GRAHAM ALLISON:

Let me officially welcome you on behalf of Harvard's John F. Kennedy School of Government and our partners in this venture, Senator Heinz and Senator Wirth. The program tonight is not extensive, but rather some brief remarks to set the framework for the discussion tomorrow. I think everybody here is familiar with what Project 88 is about and with its core ideas. I want to say how pleased the Kennedy School is to be a full partner in this exercise and how much Rob Stavins, who's been the Project Coordinator from the School, and the other folks at the School and other academics from around the country have enjoyed working in tandem with Senators Wirth and Heinz in a project that provides a good model of what we would hope would be the kind of cooperation between the academy and the political environment that should be encouraged and promoted. We'll find out more about that tomorrow.

I also want to say a word of thanks and appreciation to the people here from the Bush Administration and to President Bush for both the timing and the content of his recent remarks related to the Clean Air Act. In fact as I was reading the White House release just tonight, I noticed this billing. It says, -- this is the President yesterday-- "We've worked with academics and innovative thinkers from every quarter who have laid the groundwork for this approach. I have no pride of authorship," the President says. "Let me commend Project 88 and groups like the Environmental Defense Fund for bringing creative solutions to long standing problems, for not only breaking the mold but helping to build a new one." So we are much appreciative for that, and now let me turn to Tim Wirth, who will make a few remarks and then Senator Heinz. Tim.

REMARKS

SENATOR TIMOTHY WIRTH:

Graham, thank you very much. Tom and the Smithsonian and Harvard, we deeply appreciate your hosting us and supporting this effort. At the inauguration in January, around about a third of the way through the address President Bush turned to the Congress and talked about the fact that this country was built upon partnerships and that what we had to do was strengthen those partnerships, which sometimes have been lacking. That is an

extraordinarily important theme for us all and a theme that is the spirit of what brings us all together tonight and tomorrow morning. Foremost, in Project 88, the partnership is between good economics and good environmental policy. In terms of the sponsorship of the program, we see a partnership between Republicans and Democrats: John Heinz and I have worked together on this and any number of programs. In a situation like this, I think two plus two equals five. A partnership of government and academia is one that has been invaluable throughout the history of the Republic. Obviously, a partnership between Congress and the Administration was reflected in that very good start that was made yesterday in the President's announcement of clean air legislation.

I want to say a special thanks as well for another partnership, that of John and me with Rob Stavins, which has represented enormous amounts of time trying to make all of this work: flying back and forth to Boston, reading drafts, and spending the usual frantic time.

I want also to highlight another encouraging development that's on the way, and that's the work of the Council of Environmental Quality. We're absolutely delighted, Mike [Deland], that you are with us tonight and are taking on the CEQ job. We're very, very pleased to have you there. I trust that John will shepherd the process through the Senate at very high speed. We'll be helping in every way we can, and congratulations.

A final note of thanks to those who made Project 88 work financially: the Rockefeller Family and Associates, George Taber with the Richard King Mellon Foundation, Bob Craig with the Keystone Center in Colorado, and Elena Nightingale on behalf of David Hamburg and the Carnegie Corporation. So to all of you in the spirit of partnership and help: thank you very much for being here. We look forward to a terrific day tomorrow.

SENATOR JOHN HEINZ:

Timothy, I think you thanked everybody in the place and you gave the whole store away. May I just say that we're delighted to have this kind of turnout for Project 88. It's a great tribute to the Smithsonian for having something that compares rather favorably with the digs across the street, I think, at 1600 Pennsylvania Avenue. Tom and the rest, we thank you for this marvelous hospitality. Tim has already thanked the R. K. Mellon Foundation. It needs to be pointed out that while we had four sponsors of Project 88, every thing you eat, all the words that you will hear or utter today and tomorrow, are under the unique sponsorship of the R. K. Mellon Foundation, which beat everybody to the punch when it came to underwriting this event. They have partnered with the Kennedy School magnificently: they give the money, the Kennedy School spends it. This is a process in the Senate that we're getting used to too.

The program tomorrow I think is remarkable. It represents a lot of work by Rob Stavins and Graham Allison to have brought such a fine collection of thoughtful people together. I anticipate that, in addition to being thoughtful, there will be the necessary conflict of ideas. As John F. Kennedy said, the one thing that you do get, when you get a lot of bright people together is disagreement. This conference would be a failure if there were no sparks, if there were no disagreement. I suspect we will not be disappointed in that regard.

I have no argument with what Tim said about our hiring Rob Stavins, which was one of the most fortuitous events ever to befall Project 88. With our overworked staffs, if we had all said, "Oh, yes, and in addition to all the things you're doing in the election year of 1988 while we are out gallivanting for our respective candidates -- and, at least in my case, for myself -- is just put this little seventy-six page study together in your spare time..." well, we would have all been without staffs. It has been said that there have been two really major watershed events with the environmental consciousness of our country. The first was when Teddy Roosevelt, who had traveled widely, realized that a tremendous part of our national heritage was threatened. He began to build a national consciousness and started the first national program -- the national parks -- to preserve a vital part of America as it was being found and discovered and also being threatened with degradation. For sixty years, that was the main thrust of environmentalism in this country.

Later, along came a person from Pennsylvania, named Rachel Carson, who in her book *The Silent Spring* awoke a new consciousness that ecological systems which we thought we could depend on, which we thought because God had made them would perpetuate themselves forever, were being stressed, poisoned and driven to destruction. Out of that awakening, that second awakening, grew an enormous productive amount of environmental initiative: The Clean Air Act; the Environmental Policy Act; The Clean Water Act -- many great environmental initiatives.

When Tom Lovejoy said that we're here today to celebrate Project 88, I really have to say that it's not so much Project 88 that we are taking cognizance of, but the development and recognition of yet a new wave, another idea, and that is that market forces, which drive so many parts of our existence -- not just the economy but our very behavior as individuals from day to day -- these market forces have for the first time been given a pre-eminent position and enlisted into the need, the great need to harness their forces in protecting the environment. Traditionally, it has so often been the marketplace that was the greatest enemy of environmental protection. In part this may have been because our traditional strategies were often top down, command-and-control; they imposed costs that were rather unwelcome and sometimes unnecessarily high. Today, the power of the marketplace is far too important either to be an enemy or to be left on the sidelines. That is why Tim and I have been so

pleased to sponsor this accumulation of ideas -- seventy-six pages, thirty-six specific recommendations aimed at thirteen of what we think are the most pressing environmental problems -- which brings those market forces constructively, positively to bear. It is our hope that by doing so, and as I think the President's proposal on Monday proved, that we can and will break what has been a drought. A drought caused by a logjam way up the river. A logjam perhaps of ignorance, perhaps of resistance due to what are perceived to be unaffordably high costs. A logjam that has, we believe, not only been broken by the President's proposals of yesterday, but which we believe can transform responsible environmental protection into a river of nourishment for our land, our air, our water, indeed our very planet. So with those thoughts, I thank all of you for being here.

I would not, however, want to depart without taking advantage of the privilege of being here to introduce the third speaker this evening, who we are very privileged to have. Mike Boskin, the chairman of the President's Council of Economic Advisers, who -- even though he is an economist -- appreciates the need to harness market forces. Mike Boskin was voted the most inspiring teacher at Stanford. He is an economist with a tremendous background and a body of intelligible scholarship that is impressive. During the last six months, it seems everybody has been predicting that the end was at hand every month since January, but the economy is still on a stable course thanks to some very careful steering by this Administration. The President of the United States and this country are very fortunate indeed to have a man of Mike's ability and qualifications chairing the Council of Economic Advisers. So would you all join me in welcoming Mike Boskin.

DR. MICHAEL BOSKIN:

Thanks for that gracious introduction, Jack. The timing of this event couldn't have been better. We released our Clean Air proposals yesterday and I'll say a word or two about them. I must say that about this time last year in the midst of the Presidential campaign I didn't imagine that a few months into the Bush administration that I'd be thanking the Kennedy School for its intellectual contributions. But Graham, I think you guys are just terrific. I want to commend you not only for exporting Dick Thornburgh, but for Project 88. I've long admired Senator Heinz and Senator Wirth. It's been a pleasure to work with them on the environment. We've only just begun, and we have a long way to go.

I first got to know Senator Heinz on another set of topics - social security and the economic problems of the elderly - in which he has been a leader for some time in the Senate, and he and Teresa are friends of my wife and I; and Tim is almost family since he got his graduate degree at Stanford; and his son was a student of mine so I'm delighted above and beyond what would normally be the pleasure I would take in making these remarks, that two

such important and influential Senators I consider to be personal friends are in the forefront of environmental reform. I hope that we'll be able to work together and go forward from here. So, once again I think we all should commend Senator Heinz and Senator Wirth.

I have some Administration colleagues here who worked much harder than I did on all this, and if I don't get them all, I apologize, but in particular I'd like to recognize Boyden Gray, Bob Grady, Bob Hahn, and Nancy Maloley.

Project 88 and all the people who have worked so hard on it for so long have made a tremendous intellectual contribution. You have, as Senator Heinz said, this magnificent seventy-six page document, and I won't quote but I'll paraphrase from the preamble of Senator Heinz and Senator Wirth. They said that we can harness the power of individuals' daily decisions in response to market forces to reconcile economic growth and concerns about the environment.

That's an exciting prospect. It's an exciting prospect to an economist, an exciting prospect to anybody who's concerned about our environment on the one hand and concerned about our economy continuing to prosper on the other. Too long have we been in a situation where environmentalists and the business community have been at loggerheads. We believe we have an opportunity to break that logjam, and one of the most important keys to doing so is to recognize that by harnessing the power of the marketplace -- by making sure that when we set standards, we can achieve them with some flexibility and at minimum cost -- that we have tremendous opportunity to take some bold, new, imaginative initiatives that have worked in other contexts. We have many other markets besides those in emissions trading that work every day and work well. Hopefully we can borrow from successes in other areas to deal with our serious environmental problems in a way that minimizes economic disruption and the cost to society, the cost to utility users, the cost to productivity and so on.

As part of my message, I want to send a clarion call to each of you, not just your conference tomorrow, but to go out therefrom and work with the Congress and the Administration in making sure that we get a sensible Clean Air bill that contains many of the features that you have worked so hard to bring to the public's attention.

You know they say in life that timing is everything. It's clear that the organizers of this conference had that old maxim in mind. First of all, they managed to schedule the conference the day after the Administration announced its Clean Air proposal, and secondly, two of the themes that are stressed in Project 88, timing and flexibility, are themes that we have spent a great deal of time on in developing our own Administration proposals.

There's a prominent political scientist at Harvard, Steven Kelman, who did a survey several years ago. He asked a group of people working on Capitol Hill and various Congressmen how they felt about economic incentive approaches for environmental control. In particular, emissions taxes, a word that's not currently in my vocabulary. Kelman found that lots of Democrats didn't like these economic approaches, while many Republicans thought that they were rather clever. What he also found, however, was that the overwhelming majority of people surveyed, could not explain how or why these systems worked - even those who thought these approaches were very promising were ignorant of them.

This raises a serious problem: getting these ideas on the table - advancing these approaches in the Administration's Clean Air bill - may not be enough to get them into legislation and to make them work. We have a massive selling campaign, on the one hand, and a massive education campaign on the other - not just to get this legislation passed, but to make it work.

Fortunately, I think, times have changed in Washington, and Project 88 has been in the vanguard of making those times change. As we reach out to deal with the environmental challenges that lie ahead, we have to pay special attention to how market approaches can help stimulate innovative technology, not stifle innovative technology. These approaches can save vast sums over traditional command-and-control approaches; and simultaneously make tremendous improvements in our environmental quality. I know it sounds too good to be true. I also know I'm preaching to the choir of Project 88, but it's not too good to be true. Let me give you a few facts. Many of you may be aware of them. Some of you may not be. The Environmental Protection Agency has already implemented an emissions trading scheme for conventional air pollutants that has promoted environmental quality while saving over ten billion dollars. The Agency has also implemented a similar program for phasing the lead out of gasoline that is estimated to have saved over two hundred million dollars annually, while reducing airborne lead significantly.

We need to build on these successes of the Environmental Protection Agency and of various administrations. That brings me conveniently to the President's program and the President's proposals. One of the key elements the President stressed -- as a matter of fact, the very first principal he enunciated in announcing his Clean Air proposals -- was to harness the power of the marketplace. Thus, in implementing an acid rain program that will cut sulphur emissions by ten million tons annually by the end of the century, the President's proposal calls for maximal flexibility for the utilities and industries involved. Instead of demanding that the utilities, for example, use scrubbers on specific power plants, the Administration's proposal allows these firms to choose from a vast array of technologies, including natural gas, cleaner coal and innovative clean coal technologies. We are no longer targeting a very small number of the dirtiest plants, some of which have become dirty rather inadvertently because we had very rigid, difficult standards for new sources

which meant that the old sources, which were very dirty, became more valuable -- another economic lesson that we had to learn. Rather than focusing on a handful of the dirtiest plants, we've spread this to one hundred and seven plants, and we're allowing full intrastate and intrautility trading in emissions reductions. We're also allowing full trading of SO_x for NO_x.

This emissions trading scheme, we estimate, will reduce the cost relative to the traditional command-and-control approach substantially, by up to one half. I can assure you that the acceptance of doing something serious about acid rain when the cost is considerably less -- perhaps a half, perhaps slightly more -- will be far greater than it would be with traditional command-and-control approaches. Now it is vital that we take this message not just to your conference tomorrow and not just to Capitol Hill, but to the Midwest where most of these plants are - to the utilities. And to the people that are affected. So I hope that you all will take Project 88 and the completion of your report as a start of a great and important initiative, not the end of one.

Let me go on to the philosophy that was embedded in the Administration plan to substantially reduce urban air pollution, because we carried over some of these same themes. Many people were surprised at this. While the President has specified a variety of measures for controlling smog, including tailpipe standards and volatility controls, the President yesterday directed the Environmental Protection Agency "to develop rules like those we're employing on acid rain, to allow auto and fuel companies to meet the standard in the most cost-effective way." For example, we will be developing rules and regulations to allow fuel pooling and vehicle emissions trading, so auto manufacturers will have the opportunity to use alternative technologies in deciding how to meet various performance standards, and the same for refiners.

Let me just say that these approaches are very exciting. They're probably not so novel to the people that worked so hard on Project 88, but don't underestimate the difficulty of the task ahead. I can assure you, having worked many hours assisting the people that did the real work -- my colleagues in the room -- that it's not an easy sell. There are people who are used to old fashioned command-and-control regulation. There are also those in the environmental movement who are very hostile to some of these ideas as well as some members of the business community who want no environmental protection at all and are unwilling to pitch in and accept the challenge the President has laid out to develop various new technologies, cleaner fuels and so on -- all these are going to be tough to beat. They're going to be up on Capitol Hill lobbying. They're going to try to change the legislation. They're going to take a lot of convincing. And so I hope that every single person in this room will assist Senator Heinz, Senator Wirth, and the Administration and our colleagues in the House of Representatives in trying to get a Clean Air Bill passed within the next few months; people have used six to nine months as a time frame. Let's hope we can get serious legislation passed, rules and

regulations out there, an education program in place that harnesses the power of the marketplace and gives us the opportunity to have our economy prosper while our ecology and our environment do likewise.

Where do we go from here? The ball is just about to enter Congress's court. We're hopeful it will receive a warm reception, and I've just called on all of you to help. The President noted in the campaign that the time for study alone has passed. It's time to break the logjam. Again to quote President Bush from yesterday's speech: "For ten years, we've struggled to engage a united effort on behalf of clean air, and we're now on the edge of real change. Nineteen eighty nine could be recorded as the year when business leaders and environmental advocates began to work together, when environmental issues moved out of the courts, beyond conflict, into a new era of cooperation." With your help I think we can make that dream a reality, and I thank you all very much for your attention tonight.

GRAHAM ALLISON:

We appreciate your remarks very much, Mike. Let me say the evening concludes on that note and we are so pleased that you were able to be with us. In terms of the plans for tomorrow, we'll meet at eight o'clock sharp for breakfast in Dirksen 106. The program starts precisely at 9 a.m. It's going to be covered by C-SPAN and others, so if you're not there on time, you're in trouble. We'll see you tomorrow. Thank you very much.

HARVARD UNIVERSITY
JOHN F. KENNEDY SCHOOL OF GOVERNMENT
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Project 88 Conference

Harnessing Market Forces To Protect Our Environment

Washington, D.C.

Wednesday, June 14, 1989

Dirksen Senate Office Building, Room 106
1st & C Streets, NE
Washington, D.C.

- 8:00 a.m. Buffet Breakfast
- 9:00 a.m. Welcoming Remarks: Graham Allison, Dean, John F. Kennedy School of Government
Introductions: Senator John Heinz, Pennsylvania
Senator Timothy Wirth, Colorado
Context of Project 88: Roger Porter, Assistant to the President for Domestic & Economic Policy
- 9:30 a.m. Session #1: Using Market Forces to Get More Environmental Protection
Overview of Project 88: Robert Stavins, Assistant Professor of Public Policy, John F. Kennedy School of Government
Presentation: C. Boyden Gray, Executive Office of the President
Response: Frederic Krupp, Environmental Defense Fund
Discussion Leader: Joseph Kalt, Professor of Political Economy, John F. Kennedy School of Government
- 10:45 a.m. Coffee Break
- 11:00 a.m. Remarks: Senator Dale Bumpers, Arkansas
- 11:15 a.m. Session #2: How Do We Get There From Here? The Practice and Politics of Market-Based Environmental Policies
Presentation: William K. Reilly, U.S. Environmental Protection Agency
Response: Congressman Henry Waxman, California
Discussion Leader: Joseph Kalt, Professor of Political Economy, John F. Kennedy School of Government
- 12:30 p.m. Observer Questions & Responses
- 12:40 p.m. Summary Comments: Senator John Heinz, Pennsylvania
Senator Timothy Wirth, Colorado
- 12:55 p.m. Concluding Comments: Graham Allison, Dean, John F. Kennedy School of Government
- 1:00 p.m. Adjourn

HARVARD UNIVERSITY
John F. Kennedy School of Government
Project 88 Conference
Harnessing Market Forces to Protect Our Environment
Dirksen Senate Office Building, Room 106
1st & C Streets, NE
Washington, D.C.

Wednesday Morning, June 14, 1989

WELCOMING REMARKS, INTRODUCTIONS AND CONTEXT OF
PROJECT 88

GRAHAM ALLISON:

I'm Graham Allison, the Dean of Harvard's John F. Kennedy School of Government. I want to welcome you on behalf of the Kennedy School and the inspiration and partners in this venture, Senators Wirth and Heinz.

The core idea of this endeavor, Project 88, is easily stated. It is to make the market forces that produce wealth also work to protect our air and water and environment. In essence, as a non-specialist on this subject, I think of it as a version of environmental *perestroika*, a restructuring of the command and control system of regulation of the environment in favor of incentives and market forces. Not unlike the Soviet Union's economic *perestroika*, the slogan is much easier said than done. Indeed, both slogans remind me of the commercial: sounds great but often less filling. The question that we're going to debate and discuss here today is whether the idea can be made palatable, even nourishing, in trying to deal with environmental issues.

The ideas and recommendations in Project 88 are already having some impact here in Washington and in the discussion of these issues around the country. The people gathered here today will continue that discussion. But as I mentioned last night, I want to applaud the folks in the Bush administration and specifically President Bush on the timing, the content, and the generosity of his speech on this subject on Monday. The program he lays out is ambitious; the means are in fact revolutionary. Let me quote two lines from the speech on Monday. He says "We've worked with academics and innovative thinkers from every quarter who have laid the groundwork for this approach. I have no pride of authorship," the President says, "let me commend Project 88 and groups like the Environmental Defense Fund for bringing creative solutions to longstanding problems, for not only breaking the mold, but helping to build a new one." Well, that's the challenge for today.

Harvard's John F. Kennedy School of Government is proud to be a partner in this effort. I think the reason why we were chosen by the two senators has a lot to do with the fact that we have an Energy and Environmental Policy Center which has for more than a decade been pursuing issues of energy and the environment and the intersection of those two. Folks like Rob Stavins -- who's been the project coordinator of this effort -- Henry Lee, Florence Fisher, and others have been pursuing a number of environmental issues, including, most recently, global warming. So we are pleased to be able to bring together folks from the academy with people from the political world to see if we can learn from each other. We look forward to doing so today.

The two inspirations for Project 88 and the co-chairmen, as I've already mentioned, are Senators John Heinz and Tim Wirth. Both of them you know here in this group, so let me introduce them only briefly. Senator Heinz is Pennsylvania's senior senator. He has been involved in environmental issues over seventeen years in the Congress, including work on legislation establishing Superfund, the Leaking Underground Storage Tank Trust Fund, and the Clean Water Act. He's the co-author of the Pennsylvania Wilderness Act, and author of the legislation which established the Tinicum Marsh Wildlife Center. So first, Senator Heinz.

SENATOR JOHN HEINZ:

Graham, thank you very much. As I look around this room at both the group at the inside table and at the people around the inside table, this strikes me as the most impressive group of policy-makers from government, environmental advocates from all over the country, the most important business groups and business men, and among ourselves on the Hill, you will be hearing and seeing--we all get in at different times--some of the most critical legislators in Washington, D.C.

It is a remarkable marriage with these forces all coming together, thanks to the generosity and hospitality of the Kennedy School that Graham heads with such skill, and we are delighted that you are all here. It is of course made possible by the people who underwrote Project 88, the Carnegie Corporation, the R.K. Mellon Foundation, the Rockefeller Brothers Fund and Keystone Madison Associates. They were the sponsors that made it possible to find and pay for a staff director like Rob Stavins, for him to get his group of wonderful people together, and it made it possible for us to publish Project 88. We thank all of those people for their help. Of course the conference itself has been underwritten by one foundation, a Pittsburgh foundation, of which I'm obviously very proud, the R. K. Mellon Foundation, represented here today by Mason Walsh and George Taber, who are right behind me.

If there's one thing I hope that comes out of today, it is a debate, a debate about where we go from here. When Tim Wirth and I -- stimulated

very substantially by Wren Wirth and Teresa Heinz -- decided last spring to become active in trying to bring this project to fruition, we did not know who was going to be President of the United States. I suspect Tim may not have been on my side. We did feel that it was important to make an effort, starting back then, to involve both candidates and the nation in the debate on where we go on the environment. There'd been a ten year logjam, as President Bush pointed out quite correctly on Monday in his remarks, and there are many other areas where we are still jammed up. We all hope for and expect progress on the Clean Air initiatives. It won't necessarily be easy. There may be some rough edges, but there are plenty of other issues. We identify some thirteen issues in this report. Thirty-six recommendations specifically, and we know that not all of them are perfect, but we do know that all the issues are important, both for the environment and for the economy, and that they have to be handled right.

I hope, therefore, that out of this group of very bright and talented people that in addition to the clash of ideas and points of view, without which no discussion could ever have any vitality, we will also begin to see where we can go from where we are, because the future very much demands it. At this point, I'd like to turn to my co-sponsor, Tim Wirth, who has done such a remarkable and fine job, unless Graham is going to introduce Tim as well.

GRAHAM ALLISON:

I don't think Tim needs much of an introduction, but let me say that as I think all of us in this room know, he's been a leading spokesman on conservation, public health and environmental issues, not only in his six terms in the House, but more recently in the Senate. He's a member of the Committee on Energy and Natural Resources and the author of major legislation addressing issues of global warming. So, Tim.

SENATOR TIMOTHY WIRTH:

Thank you, Graham. Senator Heinz and I along with Harvard want to welcome all of you. This should be a morning of fascinating discussion on a variety of what we hope are going to be new market oriented approaches to the environment. We are here as we all know to discuss this yellow book. I think Project 88 is now a title that has come to have a meaning of its own: a Project 88 approach to environmental problems means that in addition to using the conventional approaches of legislation and regulation, we should also use the powers of individual choice and business incentives to solve our pressing and accelerating environmental problems. John Heinz mentioned that this has been in the works for about a year. It goes back even further in terms of our thinking. Our families have together been deeply concerned and increasingly so about the accelerating environmental problems all around us: from

hazardous waste to clean air; from ocean dumping and water quality to ozone depletion; loss of wetlands; deforestation; and perhaps, the biggest issue of them all, global warming. It's very clear in looking at this catalogue of issues, that we need to think differently and smarter. How are we going to solve these problems? For example, in the area of clean air, as we have just seen in the President's clean air announcement, why don't we, in addition to setting a goal, let the marketplace, through tradeable permits, help us reach that goal? In the area of energy policy, why not let economic forces and analyses govern more decisions? A utility, for example, is allowed to build into the rate base the cost of building a new plant, why not allow that utility to build in conservation, if it achieves more energy services at less cost? We wouldn't think of limiting a coal producer to just the cost of getting the coal out of the ground. That coal producer also has to be allowed to charge for transportation and distribution. So certainly, as we analyze costs, costs to the consumer and to society should also reflect the full benefits and the liabilities of a given fuel.

In the West, Project 88 may have special reference. In the West, we have viewed natural resources often as something to be extracted and sent to someplace else, and I think now we are finding out that if we do a different kind of economic analysis of the lands, it may turn out that the economics of promoting recreation, tourism, hunting, fishing and rafting and so on, may turn out to return more to local communities, more to the states, and more to society overall than our traditional extractive industries.

As John Heinz and I will be introducing in legislation this afternoon, why not look at the possibility of encouraging recycling with toxic and hazardous materials. These are examples of the kinds of things that Project 88 suggests, and that we are going to be examining today.

This is a partnership. President Bush in his inaugural address charged us all to return to that wonderfully American theme of partnerships. The idea of partnership is as old as the country, running all the way back to building the canals and the railroads across the country, the state and land grant university program and so on, and the idea of partnership is as new as Project 88. We see that sort of partnership here between Republicans and Democrats, the Congress and the Administration, between academia (involving Harvard and so many other institutions) and nongovernmental institutions such as EDF and others that are represented here, and of all of these with the private sector. These partnerships will be absolutely crucial as we move into addressing these major environmental issues, without them we are not going to be able to make the kind of progress that the urgency of the times suggests that we need. We're not going to be able to solve our problems unless we enlist -- creatively, carefully, and tightly -- the private sector.

I want to make a special note of thanks to Rob Stavins. John and I put him on an absolutely impossible schedule, and it was met. We made our final decision to go with the project in late spring, hired Rob in mid-June, and we

had this project out in a pretty good draft form in October and in final form in November. That's remarkable for government or for academics, and even more remarkable if you put government and academics together. Rob, you've really done a superb job and we thank you.

I'd like to make a special note of thanks to our own staffs: Andrew McElwaine and Grant Oliphant of Senator Heinz's staff and Russ Shay and David Harwood of my own, who were pressed into service in this impossible task.

John mentioned our funding sources and once again we thank them. I'd just like to single out a few individuals: Bob Craig from the Keystone Center; Wade Green from the Rockefeller Family and Associates. John mentioned George Taber from the Mellon Foundation, and finally Dr. Elena Nightingale from Carnegie. I think all of them are here and they deserve special thanks, not just from us, but also from the American public.

As a closing note, I hope that this is a week of firsts. A week of firsts in terms of the Clean Air legislation that we saw Monday, and a week of firsts in terms of the precedents being set by this conference. This is a very promising time, a very exciting time, and we thank all of you for being with us and for contributing so much. Thank you very much, Graham.

GRAHAM ALLISON:

Thank you, Tim. For general introductions and the context of Project 88, we're pleased to have with us this morning, Roger Porter, the White House Economic and Domestic Policy Adviser. I think of Roger as a faculty member at the Kennedy School on leave, where he usually serves as the IBM Professor of Government and Business. His previous posts in government have included Director of the White House Office of Policy Development; Executive Secretary of the Economic Policy Council; and Executive Secretary of the Cabinet Council on Economic Affairs, going back to the Ford Administration. So, welcome Roger and we're glad to hear from you.

ROGER B. PORTER:

Thank you very much, Graham. It's good to see many familiar and friendly faces here this morning. This is both a time for celebration and a time for hard work. The timing of this conference couldn't be more fortuitous. I understand that last evening you heard from Michael Boskin, who outlined a good deal about the specifics of the Administration's proposals. I will try to be brief in my remarks so we can stay on schedule.

I was asked to provide a context both for this project and for the thrust of the Administration's approach to the environment. In doing so I will focus briefly on three things. First, on Monday and again yesterday in Wyoming and Nebraska, the President noted that we are now on the edge of real change. Both the Administration and the Congress have demonstrated a desire to break the decade-long stalemate that has existed on clean air legislation. In the process of developing the President's proposals, we held a large number of meetings, over a dozen meetings with members of Congress. We had over a score of meetings at the senior level within the Administration, and large numbers of meetings with nongovernmental groups. One of the things that impressed me in these meetings was the common ground that existed as opposed to the differences. I had expected to see more differences and less in the way of common ground. I was greatly encouraged to see a widespread commitment to making a major step toward meeting our environmental objectives. In the meetings that we held both with members of the business community and the environmental community and with members of the House and the Senate, Republicans and Democrats alike -- all shared a common concern that what we do as a nation be done in the most cost-effective and economically efficient way.

You noted, Graham, in your opening remarks, that in the President's address on Monday, he singled out two bodies, the Environmental Defense Fund and Project 88, for special commendation. He noted that the Administration certainly had no monopoly on good ideas and no pride of authorship, but that we were encouraged by the work that has been done by Project 88 and others, to bring a set of ideas to a better understanding throughout the political system.

Secondly, I have a theory that there are different kinds of issues that find their way onto the national agenda. Some are what I like to think of as electoral mandate issues. Ronald Reagan's 1981 tax cuts are an illustration of someone making a campaign pledge and then asserting to the political system that the people voted for me and this is what they voted for. I happen to think that electoral mandate issues are few and far between and generally have a very short half-life.

There are another set of issues which one might call crisis issues. Things get so bad that people are willing to step up and do difficult things because they are convinced that failing to act will lead to a significant deterioration of the underlying situation. But there is a third, and I think, intellectually, most interesting set of issues, which I like to call maturing issues. These are issues that have been around for a long time, which have been the subject of numerous Congressional hearings, seminars, conferences and academic papers. The environment is such an issue. With such issues, the nation moves incrementally, carefully, deliberately and patiently toward a resolution. The key for policy entrepreneurs and political officials, in my view, is to sense when there is a gestation period for one of these maturing issues. I happen to

believe that clean air is one of those maturing issues, and that the gestation period is now. The work of Project 88 and the new focus on economic efficiency have had a crucial influence on both the development of the Administration's proposals and on the climate in which they have been received.

The third and last idea that I want to share is the idea that as we work toward the environmental goals, for which I have pleasantly discovered such widespread support, we do so at a time when there is intense anxiety on the part of lots of Americans about our competitive position in the world. Americans are concerned, and rightly so, about what our future holds with respect to our capacity to compete in global markets. This concern has fostered an increased emphasis on accomplishing our social and environmental objectives in a way that is economically efficient. If you look at the proposals that the President advanced -- we had long internal discussions within the administration -- there are a number of elements that draw heavily from the principles that have been outlined in Project 88. A major question is how we can best achieve the sulphur dioxide and nitrogen oxide reductions called for in the President's proposals dealing with acid rain. As you're aware, the President called for a ten million ton reduction in SO₂ and a two million ton reduction in nitrogen oxide.

There was a lot of debate about how the burden of achieving these reductions was going to be distributed. We have had a stalemate in the Congress over a number of years on this question. In the President's proposal, however, those who viewed the importance of relying on the market held sway. The President proposed maximum flexibility in obtaining these reductions by allowing utilities to trade required reductions. In the first phase, these trades would be among utility plants within a state and within a utility system, and in the second phase trades would be permitted across state lines as well. He also proposed a flexible trading system with respect to reductions of SO_x and NO_x. The analyses that were done for us by the Council of Economic Advisors, OMB, and the Environmental Protection Agency show that by achieving these reductions in this way, we will not only be able to accomplish fully the goal of reducing acid rain, but will be able to do so in a substantially less costly and more economically efficient way.

We also had long discussions on ozone non-attainment. This is not only an interesting but a very complicated issue. It is one of those issues in which the first impulse of many is to reach for what one might consider command-and-control measures. There is certainly much that is attractive to command-and-control measures with respect to their ease of administration. However, after reviewing this issue very carefully, the President directed the Environmental Protection Agency to develop rules and regulations which will allow companies maximum flexibility in achieving the pollution reductions called for in his plan. Specifically, EPA will issue regulations to allow automobile manufacturers to engage in emissions trading and will allow refiners to engage

in fuel pooling to the maximum extent feasible. We are convinced that these measures will enable us to achieve our environmental objectives and bring every city in the country into full attainment and that this will be done in a way that is both responsible and economically efficient.

On behalf of those of my colleagues and myself who spent a lot of hours discussing this topic internally, we want to tip our hat and give our thanks to Project 88 for your leadership in helping to put forward a set of ideas that we are convinced are a set of ideas whose time has come. Thank you very much.

SESSION #1:
USING MARKET FORCES TO GET MORE ENVIRONMENTAL
PROTECTION

GRAHAM ALLISON:

Thank you very much, Roger. I think we're exactly on time, and I thank again Senators Heinz and Wirth and Roger for putting us in context. Today, we want to take the ideas of Project 88 and see if we can struggle with them a bit. As both Senators mentioned last night, if we only are a choir singing a song together, we're not likely to learn very much and not likely to be that effective. We are interested in differences of opinion as well as agreement today. We're going to do this in two sessions, the first of which is entitled, "Using Market Forces to Get More Environmental Protection." Following that, we'll take a coffee break and then turn to Session Two, entitled, "How Do We Get From Here to There?"

For an overview of Project 88, let me now call on Rob Stavins, an assistant professor of Public Policy at the John F. Kennedy School of Government, who served as the staff director and coordinator of Project 88. Rob has also been a staff economist at the University of California's Giannini Foundation and at the Environmental Defense Fund, as well as a consultant to the Public Interest Economics Foundation, the Natural Resources Defense Council, the Environmental Engineering Division of TRW, Inc., and the U.S. Department of the Interior. Rob.

ROBERT STAVINS:

Thank you, Graham. What I would like to do is to provide a very brief overview of Project 88, and I'd like to provide that overview on behalf of the fifty people who contributed to the effort in one way or another: people that contributed their ideas, that reviewed manuscripts, and that served on the staff.

In the twenty years or so since Earth Day, a host of environmental laws and regulations have been enacted, and substantial gains have been made in environmental protection. In many spheres, the environment is much cleaner than it was before. The U.S. and the world at large, however, continue to face numerous environmental threats, both some ongoing problems which have not been adequately dealt with, and also some newly recognized problems.

In many instances, while we don't have a tremendous amount of trouble identifying what our environmental goals ought to be, we have rather more trouble designing effective mechanisms to achieve those stated goals. It was with this in mind that Senator Wirth and Senator Heinz initiated Project 88 as an effort to identify innovative approaches to solving major environmental and

natural resource problems. The final report of Project 88, as many of you know, has in it 36 different recommendations for 13 distinct environmental and natural resource management issues. I'm certainly not going to list those, but at I would like to do is just to describe a few of them very briefly to you.

First, let me say that, as you also know, most of the recommended measures enlist marketplace forces. They enlist these marketplace forces either to deter pollution or to encourage rational use of our natural resources. Three examples of this are the following. The report recommends a system of tradeable acid rain reduction credits for reducing emissions of sulphur dioxide and oxides of nitrogen as a cost-effective means to reducing and controlling acid rain. Another example is the report's recommendation for a deposit refund system to reduce hazardous waste pollution, especially in the case of containerized hazardous waste. This program would be much like those many states have already employed to reduce litter from beverage containers: the so-called bottle bills which are indeed deposit refund systems. One third and final example, from the natural resources area, is that the report recommends freeing up markets to permit voluntary exchanges of water rights. This would allow us to meet future demands for water throughout the country without having to build new dams and reservoirs which are environmentally disruptive and exceedingly and increasingly costly.

Why this emphasis on marketplace forces? Well, the answer is purely practical. The emphasis has been on market forces because selective use, and I emphasize selective, selective use of economic incentive approaches can enable us to achieve increased environmental protection at the least cost to society at large. Therefore, we want to discontinue what has unfortunately developed into an essentially adversarial relationship between the forces of environmental quality on the one hand the forces of economic well-being on the other. We want, instead, to harness the market for the protection of the environment.

Now this is hardly the first time that such market-based environmental protection ideas have been put forward. Indeed, for at least 30 years, economists and others, including a significant number of people both around this table and sitting elsewhere in this room, have recommended just such approaches. But just as consistently through most of that thirty years, their advice has been largely ignored by critical policy-makers. Why has that been the case? One reason is that the very notion of a free market in the environment has long been anathema to environmentalists, because environmentalists correctly view economic activity as one of the principle causes of environmental pollution in the first place. There is, however, a tremendous and an extremely important difference between, on the one hand, allowing imperfect forces of the market to continue to degrade the environment, and, on the other hand, harnessing the power of our decentralized market economy in the cause of least-cost environmental protection.

Cost-effective approaches to environmental protection will mean substantial changes in the nature of government regulation, but by no means whatsoever do they mean the abandonment of the government's essential role in environmental protection. For example, under a tradeable permit program for the control of acid rain, the Federal government, and the EPA in particular, would clearly continue to have critical monitoring and enforcement responsibilities and might also have new roles such as insuring the liquidity of a secondary market in those tradeable permits. This is in contrast, however, to the current role in many conventional anti-pollution policies and programs in which the government is placed in a position of having to make judgments regarding the suitability of specific control technologies for extremely diverse sources of emissions throughout the country.

In other words, this is by no means a call for a free market in the environment. There was, as you know, no endorsement in Project 88, for example, of using benefit-cost analysis as a unique criterion for setting environmental goals and standards. Cost-effective environmental protection does not involve evaluating environmental amenities in dollar terms. Instead, once tough environmental goals are set, mechanisms can be employed to achieve those goals, mechanisms which take advantage of marketplace forces to give us the protection we want and to give us that protection at the least possible cost.

Finally, economic incentive approaches are not appropriate for all environmental problems. Whereas a tradeable permit mechanism, again for example, is certainly appropriate for a pollution problem such as acid rain where we're concerned about aggregate emissions of the pollutant into the environment, in contrast, localized threats, such as those posed by toxic air pollutants, could be effectively controlled with best-available-technology requirements or other conventional command-and-control methods.

The key, then, is to choose the right policy for each job. Policies which work, most importantly; policies which are cost effective; and policies which are practical and implementable. In concluding, then, I must repeat what Mike Boskin said last night: that this was really the easy part, producing the Project 88 report. The most difficult part and the real challenge that remains for all of you and for this morning's discussion is to take these concepts as beginnings and to translate them into some real policies.

GRAHAM ALLISON:

Thank you, Rob. Now for a presentation on the subject from the Executive Office of the President, we're glad to have with us Boyden Gray. He's Counsel to the President. In the Reagan Administration, he served as the Counsel to the Presidential Task Force on Regulatory Relief and was Counsel to the Vice President.

C. BOYDEN GRAY:

Thank you. There's been a good discussion and presentation of the concepts involved here and since many of the people around the audience are more responsible for thinking these ideas through than I am, I don't know that I can help much on the theoretical side. What I'd like to do is to provide a couple of examples of how this will help us as we try to reduce the levels of pollution in three categories that the President set forth yesterday.

Free markets are supposed to be an efficient ways of allocating resources. This is one of the principles behind Project 88. Instead of bureaucrats and politicians doing the allocating, the market will be making some of the decisions. Using a market system permits you to do two things. First, it permits the approaches to solving pollution to capture their full economic benefit, and it also ensures that things that hurt the environment can be costed out at their full cost to the public. I think economists talk about this in terms of internalizing externalities or some such thing. It means allowing a recognition of the full costs of certain products and the full benefits of certain other products. This in turn will increase competition for improving the environment. I've often privately expressed disappointment that there isn't really a large venture capital industry for environmental cleanup. I believe that this is largely because we have been addicted for so long to command-and-control, a game in which the private entrepreneur cannot play.

The President called on the private sector to utilize its creativity and I think this is what Project 88 will unleash. Let me give you a couple of examples. On acid rain, the beauty of what Project 88 has spawned and what the President has proposed is that natural gas co-firing, absorbent injection technologies, and other alternatives to conventional scrubbers will all be allowed to compete for a place in the business of reducing pollution. The President's proposal also permits flexible solutions such as trading NO_x for SO_x . I think we will see a lot of very good reductions from options such as this and from new competing technologies.

Now, let me give some examples for non-attainment. We're hoping to do in the non-attainment area what we're going to do in the acid rain proposal, that is, to embody certain free market concepts. We're still struggling with the details. That's going to take some months to do. It would be nice if we could develop, for example, some system of understanding relationships between NO_x and VOC trades. We don't know how much smog benefit we could get by creating a market for NO_x and VOC trading, but that's something we ought to try to do, although it isn't something we know exactly how to do yet because of the modeling.

With regard to fuel pooling, let me make a few remarks about this. There's been some misunderstanding about the President's call for a million

alternative fuel vehicles by the year 1997. We want to try to get there through a very flexible system that calls for a targeting of the fuel components that help cause the smog. A fuel pooling program which permitted the trading of these components might make it entirely possible to create a market and incentives and technologies to produce a clean fuel that would make the need to go to an alternative fuel vehicle unnecessary in the long run. We won't know until we create markets so that we can have these things priced out. In the end, when we add in all of the environmental pluses and minuses of these various components, I think we may see a very different picture emerge. You would have the market providing the benefit for air toxics rather than some fingerpointing that says you must do this or you must do that. We don't know; only the market can tell us.

Again, these are three examples that I hope are useful examples of what I think can come out of this idea that Project 88 has spawned. Thank you.

GRAHAM ALLISON:

Thank you very much. For some comment on this presentation, let me turn to Fred Krupp, who's the Executive Director of the Environmental Defense Fund and a member of the boards of the League of Conservation Voters, Resources for the Future, and the Connecticut Fund for the Environment. Fred has extensive experience in environmental law, including his own legal practice, and teaching positions at the University of Michigan and Yale. Fred.

FREDERIC KRUPP:

Thank you. I want to start by saying that the Environmental Defense Fund has been very deeply honored by the President to have been credited for its help on the Clean Air Act, and that we're very deeply grateful to you, Boyden Gray, for, during the transition period, inviting the Environmental Defense Fund to suggest ideas on the Clean Air Act, a program on acid rain in particular. That was a sea change that was from the last administration, which would not talk to environmentalists. Now we have a President, who has not only invited us in to speak directly with him, but who has requested the ideas of the environmental community, and who has even now adopted an idea from the environmental community. We're very grateful and perhaps it's useful just to spend a moment saying that there are some important antecedents to our work and to Project 88. I think I'd be remiss if I didn't mention that back in 1971, EDF had the good fortune to hire Tom Graff out in our California office. Tom's work on California utilities and his decision that the second professional in the EDF office in California should be an economist, Zack Willey, raised many eyebrows back then, but both have certainly borne fruit over the years, not only on EDF's utility work, but also on our water-marketing

work. Of course, two seats to my right is Professor Dick Stewart from the Harvard Law School, and it was Professor Stewart who put together, in 1987, a conference at Columbia which also laid some of the groundwork for Project 88.

But most of all, these two years, 1988 and 1989, have been revolutionary for public understanding of environmental problems. These are years in which we've come to understand that humankind has punched a hole in the heavens: the ozone hole. We've come to understand, through Senator Wirth's hearings last summer and Jim Hanson's testimony there, that the greenhouse effect, which we had hoped was science fiction, now looks like scientific reality. It's particularly gratifying that Senator Wirth and Senator Heinz have played a leadership role way ahead of the curve in bringing the new environmental awakening to the forefront. It's good to think that this time, through the good work of these senators, Senator Wirth and Senator Heinz, and of the President's staff and of the President, instead of just mouthing empty rhetoric and sounding of the alarms, we will be able to implement some common sense solutions to get the problems solved.

Let me say that when the Senators suggested that a bipartisan approach to environmental problems could be forged around the notion of economic incentives, EDF was happy to cooperate. When Boyden Gray asked for EDF's ideas on acid rain, we were happy to cooperate and, in fact, Dan Dudek, an economist working in our New York headquarters, and Joe Goffman, a lawyer working here in Washington, have done little else since December but cooperate around the clock and come up with suggestions for the Administration to consider.

I think it's important to understand, in reaction to Boyden's presentation and some of the other words that have been said here, that the reason environmentalists and environmental groups like the Environmental Defense Fund want to advance these ideas is very simple: we believe that the most powerful and the most forceful way to achieve the ambitious goals that we must achieve is through harnessing the marketplace, building economic incentives into the system. Quite simply, just as a car can get more miles to the gallon if it's efficient, environmental policy can get more pollution cleanup for every dollar we spend, if it's targeted, directed, and focused.

The Administration deserves credit for other things as well, and I should make clear that these concepts go far beyond acid rain and far beyond the Environmental Defense Fund. Through the good leadership of Peter Berle at the Audubon Society on the Two Forks issue, it was recognized that a dam had been proposed in Colorado that was twice as expensive as necessary to get the water to the people in Colorado. As a result, those facts have been reviewed, and through Bill Reilly and the Administration's leadership, proceedings have been initiated to reconsider the decision to build the dam, and, hopefully, to veto the permit.

The ideas go beyond EDF in a few other ways. Through the leadership of George Frampton and Pete Emerson, the President and Senior Economist at the Wilderness Society, the facts about our country's below-cost timber sales have been laid bare, and that's very important. Further, under the leadership of Frank Boren, the Nature Conservancy has for a long, long time been in the business of using the private marketplace to preserve and protect what's good about the American landscape.

When you, Boyden, talk about the details and how the President's proposal is going to work, it encourages me to sound a few cautionary notes. I would say, first of all, one must understand the ultimate trade that's going on here. By the ultimate trade, I mean that the size of reductions that we need to get from these policies has got to be very large, and in return for giving that to those who care about the environment, those who help write environmental policies are eager to give flexibility to industry as part of the bargain.

Critical in this, though, is that we keep our eye on the target and set ambitious goals. That indeed is the most gratifying thing about the President's Clean Air Act proposal: that the goal he has set for acid rain is very ambitious. Critical to meeting that, however, will be continuous emissions monitoring, strict enforcement, and real liability. Monitors need to be on every smokestack emitting sulphur and operating around the clock. Enforcement needs to be automatic and the penalties need to be very high.

As we move toward legislative language and a proposal that will be passed by Capitol Hill, we cannot afford to have a provision that would allow fees in lieu of compliance. We cannot afford to have pollution charges. That is not acceptable. We need to have measures that mandate compliance. That's important if these tools are going to work. If these innovative tools are going to be available to help solve the greenhouse effect problem, the big overriding problem yet to be coped with, then we must absolutely guarantee the integrity of the tools and make sure there are no loopholes.

I know the Administration understands this completely and is in sync with this and I'm very, very pleased that the acid rain proposal in particular is built with integrity in mind and with an ambitious goal.

I would also say that there's a challenge here to industry. The President has extended an invitation to industry to embrace clean-up, to embrace the goals that we must for our society, strong goals, and to embrace cost-effective methods of achieving cleanup. There are some elements in industry on various sides of the issues that will have a stake in the status quo and sometimes even a stake in not doing the most efficient thing. However, I think it's very important that industry rise to this challenge, and embrace these ideas, because in the long run, the public is demanding that we clean up. We must clean up. We must preserve the ecosystem and our life support systems and the

American economy. The American consumers will be far better off if we do it in a sensible and efficient way.

SESSION #2:
HOW DO WE GET THERE FROM HERE?
THE PRACTICE AND POLITICS OF MARKET-BASED
ENVIRONMENTAL POLICIES

GRAHAM ALLISON:

We're very pleased to have Senator Dale Bumpers here to help us with the hinge and transition between the first session and the second. Senator Bumpers is the ranking Democrat on the Energy and Natural Resources Committee and Chairman of its Subcommittee on Parks and Public Lands. Dale has been a tireless supporter of measures to protect the environment, and was indeed chosen Legislator of the Year by the National Wildlife Federation in 1983. His legacy as a two-term governor of Arkansas includes considerable expansion of the state parks system, so we're pleased to have Dale Bumpers.

SENATOR DALE BUMPERS:

Thank you Dean Allison, and let me say first of all that I am not an expert in the field. My feelings about the environment are purely visceral, plus the fact that my wife hammers me from sunup to sundown on the subject. I know that when it comes to our concern for the environment, we're all preaching to the saved here. We all believe that the environment must be preserved. This morning as I began to prepare notes for this presentation, I looked at the material sent by Project 88. It looked like the Encyclopedia Britannica and I had about ten minutes to look at it. So, let me just say that I'm like Liz Taylor's seventh husband: I know what I'm supposed to do, but I don't know how to make it interesting.

That's the way we are about the environment. We know that it has to be preserved. But nobody's quite sure how we're going to do it. I recently spoke at UCLA at a lecture series on the environment and somebody said, "Well, why have we not addressed environmental problems on a crash basis?" And I said, "It's very simple. Money. Money is the problem." And we all have to admit no matter how pure and elitist our thoughts may be on the environment, Bill Reilly's chore is very, very difficult. Because when you consider the economic dislocation that can go with our various solutions, the number of jobs that can be lost, for example, we have trade-offs.

So now Senator Heinz and Senator Wirth, both of whom ought to be commended, as well as Dr. Stavins of the JFK School, for their work on this, I am in the position of one who doesn't think that either one of these ought to be exclusive. I think the thrust of Project 88 is appropriate, but it's certainly not exclusive, even in the area of emissions standards by utility companies,

where the suggestion's been that we sell emission permits; I'm not averse to that idea, but I'm not a cheerleader for it either. I'm not one who thinks that everything has gone wrong in the past sixteen years in our efforts to deal with the environment. For example, when I first came to the Senate, we were considering the Energy Policy and Conservation Act, and General Motors was still insisting that people wouldn't buy those funny looking little cars coming off the dock in San Francisco for very long.

The truth of the matter was that we were also told that demand for gasoline was inelastic. Economists were saying it didn't make any difference how high the price went, the demand would remain the same. Well, we found that after the embargo, when prices started soaring, that demand was not inelastic. People began to want the smaller automobiles. Scoop Jackson and I, along with two or three other people in the Senate, had to run over the automobile industry with hobnail boots to get CAFE standards.

All of you know, of course, that the automobile industry had to improve their fleet mileage standards. They came squealing like a pig under a gate and said, "You're going to put us out of business. You're going to put all these people out of jobs." There was a case where big bad old government saved the automobile industry from itself. If we had not imposed the CAFE standards in 1976, they would have continued to make gas guzzlers, and at that time there weren't even any voluntary restraints on the sale of Japanese automobiles in this country. Detroit really would have become a ghost town. We not only saved them from themselves, but we also did a magnificent job, in my opinion, of taking lead out of gasoline. We got more miles per gallon at the same time. That two-edged sword has improved the quality of the air as far as lead is concerned immeasurably.

A fifty cent gasoline tax would be devastating on the people of my state, but every penny we put on gasoline raises close to a billion dollars. You also could get fleet mileage averages up without mandating them, because if gasoline prices were fifty cents higher than they are right now, everybody would be demanding the highest mileage car they could get. You could get tremendous environmental benefits from it. As a politician coming from a state that's just about number one in the per capita consumption of gasoline, I'd have a very tough time voting for it. But when you consider how ominous the greenhouse effect is, when you consider how ominous all of our environmental problems are, it would be very difficult to vote against this proposal, if it were properly presented.

My staff and I talked a few minutes this morning about President Bush's proposal, for example, to sell a million automobiles a year by 1999 that use renewable energy, so-called clean fuel, clean emission automobiles. I think that's doable, but getting any of these things done as long as people can still drive up to the tank and fill their automobiles, is going to require both carrots

and sticks. I have a tendency to come down on the side of the stick. Even so, I think carrots serve a purpose.

I came here today to just simply say that my heart's in the right place and I admire Project 88 for coming up with some exciting concepts. I'm not sure they're going to work. I just need more time to think about this. I think some of the ideas are good, but I still have the tendency to come down on the stick side because I feel more secure that it will be done then. Thank you, Graham.

GRAHAM ALLISON:

Thank you very much, Senator Bumpers. William Reilly, the Administrator of the Environmental Protection Agency, is our next speaker. I think most of you know about Bill Reilly's background. Prior to becoming the EPA Administrator, he served as President of the World Wildlife Fund, the U.S. Conservation Foundation, and was Chairman of the Natural Resources Council of America, as well as Executive Director of the Task Force on Land Use and Urban Growth. A *Wall Street Journal* article yesterday pitted EPA Administrator David against the Goliath of a former faculty member of the Kennedy School, Dick Darman, in the arguments that led to the President's bill, which we have been applauding. So we're very pleased to have the person here who's going to be dealing specifically with the topic of this second session, not only today but every day after we leave this Project 88 Conference, namely, how do we get from here to there.

WILLIAM REILLY:

Thank you Dean Allison. Sitting here and looking at that flag up there -- the Harvard flag with "Veritas" emblazoned across it so dramatically -- I can't help but imagine that Project 88 must be Harvard's answer to boutique liberalism. I can recall just about a year ago, I think, when Senators Wirth and Heinz telephoned me. I was at the offices of The Conservation Foundation and I was told first that Senator Heinz was on the line, and then, as I was walking toward my office, somebody said that Senator Wirth was also calling. Although I'd like to think that I am reasonably well connected in Washington, it is rare that I get simultaneous calls from two Senators. I went into my room wondering which to take, and then they said, "No, no, they are on the same line, the same call."

I think the spirit that they infused into this project by going out and making those calls and engaging the various institutions and people in this country who have experience with these issues goes a long way toward explaining the influence of the project, the quality of it, and the point at which we've arrived today.

We received a letter, I understand, not long after the report was out, or not long after I took office at EPA, requesting our formal views on it. EPA's a big organization; I can't say I saw that letter, and we delayed in responding to it. But we responded to it, or actually the President responded for us, just about 48 hours ago when he announced his Clean Air Act proposal. I think you should be pleased with the response that he gave you.

I was asked on the MacNeil/Lehrer show the other evening whether or not this proposal was designed to be our opening gambit: to set the sights so high so that we would help a reluctant Congress to break its paralysis and perhaps propose something less ambitious than what the President proposed, but nevertheless to pass some legislation. I want to say in the company of everybody here that that is not the case. The President very much hopes to get all that is in that bill, ambitious though it is. Congressman Waxman will particularly want to be reassured on that point, I think.

I do thank you very much for inviting me here today. I think that, as many people say, timing is everything. If timing is in fact everything, Project 88 is really extraordinary. Coming at this time in the form that it has, it's likely to prove a major force in changing United States environmental policy. The timing was especially good because it coincided with an upwelling of concern on the part of the American people about their environment. Current public opinion polls indicate that interest in the environment and support for environmental measures on the part of the people of the United States is significantly higher even than it was in 1969 and 1970, when the first great wave of environmental concern surged.

The timing was, of course, also auspicious because it coincided with the election of a President who very firmly believes in the urgency of addressing the nation's unmet environmental needs, and who also is a very strong believer in market forces. When the President discusses the environment, he very frequently speaks with particular reference to two elements of environmental protection. He emphasizes enforcement and market forces, and I think that is precisely the way that we should approach many of these questions. First, provide the structure, set clear goals and standards, and make sure they are aggressively, vigorously, and consistently enforced. And second, provide as much flexibility and encouragement and incentive to those who must respond to these laws so that they do so in the most cost-effective way.

Just last Thursday in his speech to Ducks Unlimited, the President said that it's time to harness the power of the marketplace in the service of the environment. There was some suspicion that Senators Wirth and Heinz might have been moonlighting as speech writers for that speech, because the President went on to say: "I have no pride of authorship. Let me commend Project 88 and groups like the Environmental Defense Fund for bringing creative solutions to longstanding problems. For not only breaking the mold, but for helping build a new one." I wholeheartedly agree with that opinion.

The timing of Project 88 was very, very fortunate. It coincided with the President's resolve to submit a Clean Air Act proposal that could break a longstanding political stalemate in the United States. Furthermore, in large part because of your work, the President's Clean Air Act proposal could very well change the way we approach environmental policy in many other areas.

Market forces are incorporated most extensively in the acid rain section of the bill. We wanted to give utility managers maximum flexibility in hitting their environmental targets on the simple premise that setting environmental goals is society's business, but precisely how we get there and how those goals are achieved is best left to the utilities.

In the first phase, the bill sets an emission target, and then it gives utility managers the choice of how to get there. They can switch fuels or encourage conservation or install flue-gas controls or clean the coal or, as Senator Al Simpson remarked the other day when we briefed him on the President's proposal, send little men with mittens up the stacks to grab that sulphur before it comes out. All the bill says is that the sulphur has to be kept out of the atmosphere.

The bill also establishes an emissions marketing system that will help keep emissions down over the long term. Basically, managers are encouraged to internalize environmental cost while planning for future growth. And it's one aspect of the bill that I find especially exciting and even visionary. Instead of acting to cut pollution after we discover a problem, this bill says: Let's establish a market so environmental concerns are built right into long-range planning.

Market forces are also built into other parts of the President's Clean Air Act proposal. In the air toxics portion of the bill, the chemical industry is given incentives to do more than the law requires sooner than the law requires. We very much want the industry to develop controls that expand the bounds of what's now possible. We want the industry to think less about meeting requirements and more about minimizing pollution. In short, the law is designed to reward economic good sense and to encourage the development of cheaper, better pollution controls.

EPA has been experimenting with market forces for several years now. Our early efforts to encourage emissions trading are starting to show results. In brief, our emissions trading program allows plant managers to trade cheap controls for expensive controls. Such trades can lead to substantial cost savings while providing equivalent or possibly improved environmental results. Plant managers thus have a big incentive to use their creative and technical skills both to save money and to protect the environment. That's a two-for-the-price-of-one deal that I think is going to prove very hard to pass up. By 1988, EPA had approved or proposed over 50 emissions trades that could save industry hundreds of millions of dollars, and those savings may just be a fraction of what's possible. I suspect they are.

In 1982, the government accounting office projected that emissions trades could in some instances reduce pollution control costs by as much as 90% compared to traditional command-and-control, so it's no wonder that industry is excited by trading. When trades are done right, when emissions are reduced as much or even more than under command-and-control, then I am very much excited as well.

EPA has also used marketable permits very effectively in what has to be one of this nation's real environmental success stories: the control of lead in gasoline. Over the last decade we've cut lead emissions by cars and trucks more than 90%. Further, because the industry could trade their lead allowances, we got the cheapest lead out first. Using these trades, the refining industry is thought to have saved about two hundred and fifty million dollars.

Market incentives are also beginning to play a role in our international efforts to fight global pollution. This may prove to be one of the most effective uses of market forces, because one of the problems we have in dealing with international environmental problems is how to enforce international command-and-control regulations, even if we want to. That's why we're using a system of marketable permits, either based on fees or based on an auction, for controlling the manufacture of chlorofluorocarbons, the chief culprit in ozone depletion. In the United States, rights to produce and to consume CFCs are going to be apportioned among producers and importers, and we're going to allow firms to trade such rights to other firms in response to market conditions. We have great hope that the market forces unleashed thereby will prove to be of considerable assistance in eliminating the use of CFCs altogether by the end of the decade.

I am very enthusiastic about the prospects of an even wider use of market incentives to protect the environment. We know very well that environmental market incentives are more than a little suspect. To some they are still nothing more than a license to pollute. If you have enough money, the story goes, you can continue to dirty our air and our water. I was very memorably instructed in that concern when back in the late 1970s, I endorsed the bubble policy then proposed by the Environmental Protection Agency. I was one of the very few conservationists who did. I was in the company of some very distinguished economists at the time, but not of very many environmentalists. We at The Conservation Foundation later made a major commitment to bubble policy research that was directed by Rich Liroff, and I think it more than established the great advantages of going this route.

Industrial pollution has been a fact of life for a couple of hundred years now, and until 1970 there were virtually no industrial costs associated with it. That truly was a license to pollute. The market incentives we're talking about are something else. They tell industry: "The costs of pollution control are every bit as real as the cost of labor, transportation, materials, or anything else."

So think about them. Put your best skills to work trying to lower those costs. Try to lower them by redesigning processes or changing materials or installing new control equipment or maybe even thinking of a whole new approach that nobody's yet tried. If you succeed, you're going to save a lot of money." That's certainly not a license to pollute. It's a license to prosper in the broadest sense, meaning both good health and good fortune.

I think it's important to make clear that the structure of our laws, our standards, our goals, our enforcement, all the full panoply of fines and sanctions and penalties that is out there -- they remain intact. We want to make clear that we are building on, supplementing, strengthening our existing environmental protection structure, which has already achieved so much for this country, as Senator Bumpers recounted.

All of this is a roundabout way of saying that I very, very much appreciate the effort that you all have put into Project 88. I'd like to think that I had a little part in that. We did in fact cooperate with it at The Conservation Foundation -- Terry Davies played a considerable role in it -- and we all recognize from that involvement, and now from seeing this fine job, how indebted we are to Senators Heinz and Wirth for pushing the idea forward, and to Rob Stavins and his staff for bringing it to fruition. I'm particularly pleased to see that Fred Krupp is here today and was invited to participate. EDF has been a leading voice among environmentalists arguing for a strong role for market incentives. I was pleased to look around as the President acknowledged the important contribution of EDF in the East Room of the White House the other day, and to see that Fred had a wraparound smile. It was more than well-deserved.

All of you have worked very hard to put some flesh on an intriguing set of ideas, and I think it's our job now to help bring these ideas to life and to apply them as effectively as we can in as many ways as we can. I know that Senators Heinz and Wirth, together with Representatives Torres and Schneider, are going to be announcing a new bill that will use market incentives to encourage the recycling of used oil and other products. That's exactly the kind of creative approaches, creative thinking, that I think we need. I would invite the help of the experienced and able and authoritative people here in this room to work with us in the months ahead as we develop some of our specific regulations regarding fuel pooling and emissions trading. We will consult very widely on this, and very genuinely look to this community for guidance.

In short, we need to think about and debate new ways of controlling the pollution that has been the by-product of a buoyant economy. We need to use the same economic tools that have allowed our economy to grow and prosper in the first place. That force, that tool more than any other, could be the market force. I look forward to working with you to do that in the years

ahead. I do appreciate your having me and I compliment you once again. Thank you.

GRAHAM ALLISON:

Thank you Bill, we appreciate your being here and we appreciate even more the work you're about and will be continuing. We hope we can all be helpful in that cause. Our next speaker is Henry Waxman, Chairman of the Subcommittee on Health and Environment of the House Energy and Commerce Committee. Well-known for his expertise on environmental issues, Congressman Waxman's achievements include co-authorship of the Safe Drinking Water Act, action on the Radon Abatement Act, and the enactment of the Lead Containment Control Act, so we're very pleased to welcome Henry Waxman. Thank you.

CONGRESSMAN HENRY WAXMAN:

Thank you very much. I'm pleased to be here with you to talk about the Clean Air Act and the opportunity to use economic incentives to achieve pollution reduction.

As you know, I'm Chairman of the House Health and Environment Subcommittee, and we have jurisdiction over the Clean Air Act. Our focus is on ways to use market forces to clean the air, and in my remarks, which will be brief, I'll try to stick to that topic.

Our priority is protecting human health, protecting the environment from air pollution. People have a right to breathe unpolluted air. Ozone burns lung tissues. Carbon monoxide victimizes heart patients and threatens fetal development. Acid rain destroys lakes and forests. And the most defenseless among us, the very young, the very old, and the very sick, are the most vulnerable to the ill effects of poisonous air.

The question before us isn't whether to stop air pollution. With the President's announcement earlier this week, we now have a broad consensus among the national leadership in this country that we must clean up our skies. Rather the question is, how best to achieve the bipartisan objective of clean air.

It's in this area, the question of means as opposed to ends, that economic incentives and market forces have their greatest role. I favor the adoption of the most cost-effective means of pollution reduction possible, utilizing market forces where feasible. I do want to emphasize, however, that I favor economic-based controls only when we can be certain that the measures will not be used by industry to derail or to delay pollution reductions. This means that

requirements must be enforceable and capable of practical implementation. In the smog, acid rain, and air toxics bill that I have co-sponsored, we tried to bring economic forces to bear to lower costs. I'd like to discuss the approaches we've used in each area.

First of all, because smog control is the most expensive of all the air pollution issues, it is the most important area for innovative thinking about economic costs. Yet it is an area in which people tend to overlook the potential for market incentives and cost-effective approaches. I believe that the Administration's approach, announced on Monday, fails to seize some important cost-effective control opportunities.

Cars and trucks are a salient example. Smog reduction is like budget cutting. We've got a large air pollution deficit in this country. What we don't cut from one sector, we're going to have to cut from another. Our approach has been to target our pollution cuts toward the most cost-effective measures available. It's for this reason among others that I place so much emphasis on controlling emissions from cars and trucks.

Let me give you an example. The Administration's clean air proposal rejected the idea of extending the durability of smog controls on cars from 50,000 miles to 100,00 miles. That is economic nonsense. The Administration's own estimate is that extending the definition of "useful life" can get hydrocarbon reductions at the bargain-basement price of \$525 per ton. That's ten times cheaper than the \$5,000 per ton that it costs to control emissions from many industrial sources. It's thirty times cheaper than the \$15,000 to \$20,000 per ton figure that is the going rate for hydrocarbon reductions in Los Angeles.

Stationary sources are controlled under existing law under a technology-based approach. They're required to use reasonable available control technology to reduce emissions, or to meet the lowest available emission rates in the case of new sources. But they have little incentive to do more than that, even when they can do so cheaply. I think we can do better. I think we can use market-based ideas such as marketable permits or emission fees to give local stationary sources the incentives they need to reduce their emissions even more.

In the Waxman/Lewis Bill, we've done this. We direct EPA to develop model market-based plans such as systems of marketable permits or emission fees for use by states in controlling emissions from local sources. States would be free to adopt these measures at any time, but if a state were to fail to meet an emission reduction milestone, then the state would face a mandatory choice: either it could implement a system of market incentives consistent with the EPA guidelines to squeeze out its excess emissions, or it could bump up to a more rigorous level of control requirements.

At this point, I want to add a cautionary note about the Administration's proposal. Although we only have a very general description of the bill, the information available raises a number of serious issues regarding how its economic-based alternatives will work and whether they will interfere with the achievement of emission reductions. In this regard, I'm thinking less about the acid rain program than the requirement for motor vehicle controls. I'm wary of the Administration's proposal to allow car manufacturers to engage in emission trading. This could become a big source of delay because it would allow car companies to fight with EPA about the adequacy of alternative sets of emissions standards. It could also become a bureaucratic nightmare because it could result in hundreds of different emission standards. It could be very difficult to implement warranties, recalls, or inspection and maintenance programs. How does a 50,000 mile warranty work if each car has its own emission standard in the course of these trades?

I also want to comment momentarily about fuel trading. I support the concept when it can be made to work. In our carbon monoxide provisions we mandate the use of oxygenated fuels, allow a trading of oxygen credits so that the sales of fuels with more oxygen than required can be used to offset sales of fuels with less oxygen than required. This is a simple program that can be made to work.

On the other hand, I'm very skeptical about the Administration's suggestion about fuel trading. The included fuels -- gasoline, methanol, ethanol, compressed natural gas, and propane -- have very different emission characteristics and very different market niches. No one has suggested to me a way to work out an acceptable trading program given some of these wide differences.

In the area of acid rain, I believe that economic incentives can play a large role in stopping the pollutants that cause acid rain. The bill I support, the Sikorski/Conte Bill, is a freedom of choice bill that lets each state elect the best control strategy for the state. As a matter of policy, I think it would make sense for many states to use this freedom to opt for the lowest cost solutions, including marketable permit systems like the ones proposed by the Administration.

There is, I think, a good reason to prefer the Sikorski/Conte approach, which allows choice, to a system of mandatory marketable permits. There are other values besides money. Among them are protecting jobs and avoiding sudden and extreme economic dislocation. It doesn't make sense to deprive a state of the opportunity to make political choices about the control strategy that best meets its particular needs. Nor is such deprivation of choice consistent with our system of federalism. The Sikorski/Conte approach preserves traditional state prerogatives.

I should add, however, that I find the Administration's proposal to be an excellent starting place for discussion. The Administration's Clean Air proposal is strongest in the area of acid rain, and our differences are ones that I believe can be resolved.

Air toxics presents somewhat different issues than smog or acid rain. You can't allow a source to trade toluene reduction for dioxin reduction because dioxin is so much more potent than toluene. Nor can you safely allow source A to purchase emission reductions from source B, because source A might be located in a more populous area than Source B. Relative to smog or acid rain, these problems curtail the role of market forces in reducing toxic emissions.

Nevertheless, there is a vital role for economic incentives in controlling emissions of toxic pollutants. In the Leland/Molinari Bill, industrial sources are allowed to reduce emission of hazardous air pollutants within a facility in the most efficient manner. Under this system, after EPA sets the applicable emission standard, a source can decide for itself the best way to comply with the standard. It can trade emission reductions at one place in the facility against the increases elsewhere if it wishes so long as the final result is a net reduction in emissions and an improved level of health protection.

In essence, the bill puts a bubble over each facility and lets the facility owner decide the most cost effective means of obtaining the needed reductions within the bubble. In these ways, I believe we have used industry's natural cost consciousness to insure that reducing toxic air pollutants poses the least burden possible on regulated sources.

I want to close by commending the efforts of Senators Wirth and Heinz and others in this room. You've done much to elevate our awareness of market forces. I have worked with both Senators when they were in the House of Representatives and on the Energy and Commerce Committee. They have shown great leadership in trying to break the impasse.

I can't commend the President more for the rhetoric of his statement the other day. I felt like he took sections of my past speeches and read them. It shows that he recognizes, as we all must, that doing something about clean air, acid rain, and toxic air pollutants is a matter of highest national importance because it relates to the public health. I'm pleased that we have an administration willing to engage us on this issue, to work, to move the legislation forward, to try to accomplish something realistic and important.

Project 88 in holding this conference at this most propitious time -- and I wonder if you had advance notice of the President's speech -- can give us some suggestions of how to make all of our bills better. None of us would say that we've reached the absolute best. We've got to keep working to improve our mutual objectives. Thank you very much.

SUMMARY AND CONCLUDING COMMENTS

GRAHAM ALLISON:

For summary and concluding comments, let me turn first to Senator John Heinz.

SENATOR JOHN HEINZ:

Graham, first I think we all owe Joe Kalt a round of applause and appreciation for a job very well done. I think as a result of the participation by all those present and that skillful job by Joe and each of you, that we've had a marvelous discussion. I think it also focused largely, although not exclusively, on the President's Clean Air Act proposals. It should have. They are concrete. They're real. They're going to be moving through the legislative process, and it was a very appropriate focus, and a lot of people in this room have done a lot of work to bring them to this point, too.

But it also occurs to me that we have a lot more that we need to do with the concept of Project 88. It isn't, as I've listened today, only a concept. Obviously, it does embody the idea of employing market forces, but I would like to suggest that we need to make it a process as well. We've only begun to scratch the surface on issues like the public lands and Western water rights, on international environmental issues, such as global warming, on waste reduction issues, and on energy conservation issues.

All of this causes me to conclude that we really ought to have a follow-up Project 88 conference about a year from now. A year from now there'll be many more specific proposals on the table; we'll have had some practical political experience with the President's Clean Air proposal. Hopefully, they'll be well into the regulatory rulemaking process, we'll also have had a lot of experience with trying to figure out how tradeable permits really are viewed by the participants. It seems to me that if sponsors are interested and willing and if the participants are interested and willing, coming back here in approximately a year would be a very valuable means of keeping this process moving as well as the concept being kept vibrant and useful and alive.

So, to all of you who have brought it to this point, we thank you, and to those of you interested in carrying on with it, we express our hope that you will.

SENATOR TIMOTHY WIRTH:

I want to summarize a couple of my own thoughts. Very clearly what we're talking about here is not replacing all environmental programs -- as Bill Reilly so properly put it -- we're providing a framework for creating new ones. To set goals and standards and make sure they're rigorously enforced -- that's the public responsibility. To provide as much flexibility as possible in reaching them is what this conference and Project 88 are all about. It is a mix, a partnership that I spoke about last night and this morning and it's very important. Why? Again, the size and scope of the issues in front of us have dramatically escalated and certainly will continue to do so. The resources available, as we have discussed, are limited. We have to get better bang from the buck so to speak. It's absolutely imperative that we move away from the confrontation with the private sector that has characterized all too much of the history of the Clean Air Act, for example, and move to a much more cooperative approach with special focus perhaps on the externalities, the health care costs, and so on, that businesses clearly are being saddled with.

I want to comment briefly on just a couple of other issues that came up. There was discussion by Brent [Blackwelder] and George [Frampton] and others of the public lands. On an issue like this, let me be political if I might. I was asked last night if, in putting together Project 88, there came out of that any political risk for the authors. Political risk for Senator Heinz. Political risk for me. The answer to that is yes. If we're going to address the public lands, there is in that a political risk. And if you're going to ask us to take on political risk, I would ask the Administration to take on some of it as well.

A couple of other final notes: one of the areas that it is imperative for all of us to think about is the attention of the public to these issues. As the size and scope of the problems increase, it is absolutely imperative that we get increasing numbers of our publics over the want-to line, and there is a very big job to do working with the private sector on this, and with the media to obtain public attention for these issues. The Administration and the Congress can't do anything without the troops behind them. The more we get their attention and help, the better off we're going to be.

A final note: I think John is exactly right. We have talked about next steps in the process. As I view the thirteen issues in Project 88 and where we go from here, I find myself seeing this boiling down perhaps to three major themes. One is pollution prevention, which goes to the deposit issue, the toxic issues, and which is an area where there is an enormous amount of economic benefit all the way around in a variety of areas. That is one. A second is the public lands issues I've spoken to, which is just waiting to be worked on. Third is the overall energy and global warming issue which has many useful aspects that can be addressed rapidly with a pretty broad consensus.

If Senator Heinz and I can leave us all with some kind of a charge to think about as to where Project 88 goes from here, those three may well be the ones that we would set up in the lights as priorities: pollution prevention and toxics, public lands, and energy, that is, the international global warming issue.

To all of you, thank you again for being with us. And once more our thanks to Rob Stavins for a job extraordinarily well done, and to Harvard for being the umbrella for all of this and again, to our funders for helping us with this process. Thank you all very much.

GRAHAM ALLISON:

There's a story circulating in Moscow these days that was told to me by one of Gorbachev's key advisers about two women that are standing in the ever lengthening line at one of the stores. In this case, a food store. One turns to the other and says, "You know, Tanya, this is insane. Four years after *perestroika* and the lines are even longer and there's even less food when we get to the front of the line. Somebody should do something about this. Maybe someone should even shoot that guy, Gorbachev." She says, "Keep my place in line. I'm going over to the Kremlin." So about an hour later she comes back and her friend asks, "So quick. Did you do it?" She says, "The line over at the Kremlin, waiting to get Gorbachev - you wouldn't believe." That's a useful reminder for people thinking about an environmental *perestroika*, because the hard work comes after the good idea. Ninety-five percent of it lies in implementation, so there's lots left to be done. On behalf of the Harvard participants, and indeed if I can speak for the other participants and observers here, I want to single out for special thanks, Rob Stavins, Senators Heinz and Wirth, and the true inspirations of this: Teresa [Heinz] and Wren [Wirth] for congratulations. Thank you.

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