DEPARTMENT OF THE TREASURY

PRESIDENT'S ECONOMIC RECOVERY ADVISORY BOARD

MAY 20, 2009 MEETING

The meeting was convened at the White House pursuant to notice at 9:38 a.m. (EDT).

WHITE HOUSE ATTENDEES

Barack Obama, President of the United States
Valerie Jarrett, Senior Advisor and Assistant to the President
Lawrence Summers, Director, National Economic Council
Christina Romer, Chair, Council of Economic Advisors
Carol Browner, Assistant to the President
Austan Goolsbee, Staff Director and Chief Economist
Jen Psaki, Deputy Press Secretary
Adam Hitchcock, Office of the Chief of Staff
Ian Bassin, White House Counsel's Office

ADVISORY BOARD MEMBERS PRESENT:

Paul Volcker, Chairman
William Donaldson, Former Chairman, SEC
Roger W. Ferguson, Jr., President & CEO, TIAA-CREF
Robert Wolf, Chairman & CEO, UBS Group Americas
David F. Swensen, Chief Investment Officer, Yale University
Mark T. Gallogly, Founder & Managing Partner, Centerbridge Partners L.P.
Penny Pritzker, Chairman & Founder, Pritzker Realty Group
John Doerr, Partner, Kleiner, Perkins, Caufield & Byers
Jeff Immelt, Chairman and CEO, GE
James W. Owens, Chairman and CEO, Caterpillar Inc.
Monica C. Lozano, Publisher & Chief Executive Officer, La Opinion
Charles E. Phillips, Jr., President, Oracle Corporation
Anna Burger, Secretary-Treasurer, SEIU
Richard L. Trumka, Secretary-Treasurer, AFL-CIO
Martin Feldstein, George F. Baker Professor of Economics, Harvard University

Laura D'Andrea Tyson, Dean, Haas School of Business at the University of California at Berkeley

DEPARTMENT OF THE TREASURY STAFF PRESENT:

Bernard J. Knight, Jr., Acting General Counsel
Shira Minton, Deputy Assistant General Counsel, Ethics
Michelle Greene, Designated Federal Official

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The President's Economic Recovery Advisory Board convened for its first meeting at 9:38 a.m. on May 20, 2009 in the Roosevelt Room of the White House. In accordance with provisions of the Federal Advisory Committee Act, Public Law 92-463, and Federal Committee Management Regulations, 41 C.F.R. 102-3, the meeting was open to the public via Internet webcast.

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MR. GOOLSBEE: Our official meeting will begin. First we need to adopt officially our bylaws.

(Bylaws are adopted.)

We have adopted the bylaws. Second, we need to officially create sub-groups that will do preparatory work, research and advance materials that will come to the full board for consideration. I would like to move -- or does someone like to move that we create a housing group, a financial markets and regulations group, a retirement and savings group, a tax and tax reform group, an energy group, and a job creation and industry of the future group? So moved.

(Groups adopted.)

The third thing that we were going to do is, as many of you know, John has drafted a letter that he would like us to consider putting our stamp on and saying we agree with this letter about energy policy, jobs, cap and trade, that we thought we'd take. I thought we would discuss this. If we agree with what's in it we can vote now and we can give it to the President as an official thing. If we have problems with it, we can --

or want to do further edits, there's no pressure to put that forward if we don't want to. But why don't we open just with -- John, give us a little overview of the document.

MR. DOERR: Thank you very much. It's timely for this body to take a position should we choose to do so, and I recommend that we do, on this question of climate legislation, the economy and the economy writ large. And that's what this paper sets out to do. To get to the punch line, it would say that our group endorses a market-based cap and trade system to efficiently deal, flexibly deal with the challenge of greenhouse gas production. And of course, there's other elements to this issue -- America's energy independence, dependence on foreign oil.

And importantly, this paper talks to a point that's not been made well, which is the future implications of America leading or not leading in these new industries.

I've benefitted from conversations with many of you, having worked over time to try to incorporate that input. In doing so, this letter grew to 10-some pages, and so I brought it back down to hopefully 4 pages on which we can agree.

So we talk about greenhouse gases, why to cap them and why to do something about this right now. We talk about getting an economically sound policy so that it's global, and talks of global solution, global agreement. We spend a fair amount of time going into the costs of these policies -- I want to come back to that -- dealing with the transition from coal and innovating working on getting coal to be more efficient, cleaner coal, some would say. And we also touch on some complementary policies, which we'll come back to, working more effectively with the nation's utilities; working to make our buildings, cars, and trucks as energy efficient as possible -- we saw action just yesterday on that from the administration -- and investing more in R&D and what Jeff Immelt likes to call -- I love this phrase -- "the billion-dollar base load deployments," which the federal government really needs to support.

I'd like to say a word more about costs and cost modeling before we open this up for a discussion. And the key points are on the second page of this document under the Chapter E, "Offsetting the costs of carbon pricing." The phrase that's getting a lot of attention, the sentence is that current estimates range from a few hundred dollars per capita to over $1,000 per capita. And Chairman Volcker took me to task on this before the meeting started.

We do not want PERAB to get into the modeling wars. I suggest we stay away from that. The lower estimate comes from the EPA and is very similar also to a more sophisticated MIT study of the Waxman-Markey legislation. The number of over $1,000 per capita comes from a Congressional Budget Office study and, more recently, testimony from the chair of that group. But it's really a comparison, unfortunately, of apples and oranges. The smaller apples in the beginning assume that the revenues from such a system get recycled into the economy. The oranges, which are the CBO assumption, just say the cost would be this. It's as if we collected the money and then burned it and didn't try to measure the recycling of that. But these estimates are out there nonetheless.

I think the important point -- the important point I would like to --

(Cross-talk)

MR. DOERR: The sentence that attempts to capture this is that current estimates range from a few hundred dollars per capita --

Q I think it says less than $100, but there are no numbers --

Q It's page three, it's the last paragraph --

Q Current estimates range from less than $100 per capita to over $1,000 per capita.

Q It's page three.

Q Page three, yes. That was confusing to people, that's right. It's page three.

MR. DOERR: Forgive me. I think, wherever we come out on these numbers, including them, providing more detail about them, there's an important point and a sentence I suggest we add, and this, again, comes from a suggestion of Paul Volcker -- and that would be to say that none of the models account for two very important factors, and those are the benefits of reducing emissions and the cost of doing nothing. And with that, I'll open us open for discussion on any part of the paper.

MR. GOOLSBEE: And let me just say for anyone watching on the Web, we will post this document up on our Web site because it's a publicly available -- it will be a publicly available thing so anybody who wants to look at that can check it for themselves.

MR. OWENS: John, I have a question about the $100 to $1,000 -- it seems to me, if there's going to be a meaningful change in consumer behavior, that seems like a pretty small range of numbers. And in terms of economic efficiency, there are a lot of ways you can put that money back into the economy, but we're trying to drive a significant change in consumer behavior and a substitution of other energy sources. That just strikes me as a pretty small number -- even $1,000. And less than $100 would be inconsequential. I don't think it would change any behavior.

So I think it's important we be transparent with the public. We're looking for a significant change with this policy.

MR. DOERR: A response to that is that the change that we're looking for is less in consumer behavior than it is in industrial behavior, which aggregates all of these consumer costs. So this sort of a change would have a large impact on producers and generators of electricity, not so much on an individual household.

MR. TRUMKA: The first time I got to see this was this morning at 9:00 a.m. and it went out late last night and I wasn't in my office at 9:30 p.m.; I left at 9:00 p.m. (Laughter.) So I didn't get it, so I really -- while I think we'd probably be in agreement with most of this, I really think we need to do business a little differently and not vote on something we haven't had a chance to actually think about, because this is a very important subject.

I think there are a couple of areas where, at the top of page two, I think it's fairly well in balance. It doesn't mention the contributions that labor contributed to this policy at all. And the other thing that gave me a little concern in the first cursory reading was the trap door. The trap door seemed very, very weak; that we ought to consider something if costs go amok and that could have a devastating effect on the economy. And I think it has to be a little stronger than just a suggestion.

MR. GOOLSBEE: Anna, did you want to say something?

MS. BURGER: I did. I wanted just to comment on -- I agree that we have to -- we need to figure out a way that we can actually engage in subcommittees that we're not part of. So obviously, I'm not part of the subcommittee on energy. And I think that there are larger debates going on on our planet about what we need to do.

There's a U.N. report that's called -- I think it's called a fair and just transition to a low carbon, green economy, that really does grapple with a number of issues, including cap and trade. But it also deals with a number of other issues in terms of R&D, responsibility of government, the need for workers to have a voice, a global long-term plan -- trying to figure the winners and the losers. Understand that this can be a great jobs creator -- it's going to end up changing jobs, creating jobs, having a huge displacement factor, and how do we plan for all of that?

So I think that we need a comprehensive approach. I would think that it would be helpful for the group to look at this report from the U.N. I think it's incredibly in-depth. It deals with some of these issues, but it puts them in the context of the greater transition. And it's called -- the President has called a just and fair transition. In other words, how do we actually think about it for the whole planet. So I would just recommend that we look at that, and take a little bit of time.

MR. GOOLSBEE: Martin.

MR. FELDSTEIN: I think John raised a very important point, which is new to me and contrary to what I had believed, and that is that you're not going to have to raise the cost to consumers in order to significantly reduce CO_2 and other greenhouse gases, because it would happen at the industry level and it wouldn't involve passing costs on to the consumers. At least, that's what I understood you to be saying.

MR. DOERR: That's not quite what I said. I think the impact will be larger on industry actors than it will be on individual consumers. But consumers will feel this, and there is a price.

MR. FELDSTEIN: The most recent MIT study said that the total cost increase for a Waxman-type reduction -- 20 percent reduction -- would be on the order of $1,500 per capita, in terms of the prices to consumers. So if that's not true, then we ought to know it, and if it is true, I think we ought to say.

MR. DOERR: Is that a total gross, or net?

MR. FELDSTEIN: It's gross. It's gross. So the government -- it's like saying if you raise income tax rates, you will raise so much revenue, and then of course there are many things you can do with it. You can give it back in distribution, you can spend it on various things. But I think, like any other tax, we ought to disclose what the increased cost to the consumer is. It is a form of indirect taxation.

MR. GALLOGLY: What period of time is -- I seem to remember it's in 2020.

MR. FELDSTEIN: It's in 2020 for a 20-percent reduction in CO_2 relative to the 2005 level, and it's an annual amount.

MR. GOOLSBEE: In fairness, my understanding -- I'm not an expert -- is that the MIT model is one extreme. That's where the larger numbers come from. And there are other models of the same thing that are substantially lower. But that is where -- so one area are the issues raised by Rich that should we say more about safety valves, stuff like that; issues that Anna raises about other source material and things that -- do we want to expand the scope. I thought, from talking with John, I thought the nature of your letter, John, was that it was going to be sort of a narrow -- more narrow thing that maybe most folks could agree on. And then a third is, do we want to engage change or otherwise deal with this expression of what costs might exist.

MR. FELDSTEIN: Presumably, this document, when it's public, will be judged by whether the advice this committee is giving to the President is giving him the information he needs in making the decision about whether to go forward, supporting cap and trade. So if we leave out this set of numbers, whether it's a high number or a range, I think we're leaving out the most important --

MR. GOOLSBEE: Okay, let me say two things. We haven't let it out, obviously. Right now it is stated in the document. We have to figure out how to state it, but right now it isn't left out at all.

Two, we are not the President's only source of information, obviously. If we wanted to make a one-sentence statement, "We think X is great," we could do that. You know, the President can look up whatever he wants.

Now, we -- I am going to propose that we put off voting on this document, unless there's a strong sentiment to proceed, because I think we've got two or three issues that now that we actually have formal sub-groups, it might be worth considering in the sub-group and to put to the whole board. So I don't think we need a vote on that, because we're not doing -- we're not doing anything.

But, Penny, did you want to --

MS. PRITZKER: No, I just wanted to ask a process question, which is, I think Anna raises an important question, and Rich, as well. What is the process of going from a sub-group to the larger group? And how does one who's not expert in an area get up to speed on the issues so that -- just how do we intend to do that?

MR. GOOLSBEE: Okay, so I would say here two -- I will say two to three things, and Robert and Roger, I'm sorry, I know you have comments, but we're going to run out of time.

The way it will usually work is the sub-group will do preparatory work and will do research and will get the things that they will put to the board. Anyone is allowed to be a part of -- as deeply or as narrowly as they want -- that research and that sub-group work.

It will then go to the board, usually in the form of some document where we can have a debate. But once we get to that higher level, the kind of preparatory work will have been done. So it was probably less -- I mean, certainly we can ask, and hopefully we will have more time before things happen. But if you say, what were the basis of these decisions, or I read this; what were the background materials -- we can get that to you. But I think usually the way it will work is it will come to the full board and we'll just have a discussion about it, have a debate about it.

MS. BURGER: Another process question? One quick one. Just because, I mean, there is a sense of urgency, and I understand wanting to move this forward because now is the time to act. So is there a process that, when we end this meeting, that we can actually do this before the next meeting so it's not --

MR. GOOLSBEE: Yes, we will certainly do that. There will be a process of doing that. We can circulate the documents, put them on the Web site, et cetera. So we will certainly -- it's not -- we're not going to just have 30 minutes and then at our next quarterly meeting we --

MS. LOZANO: I was just going to say, it's safe to say that this board I think wants to move forward with developing a policy that we can get a consensus on.

MR. GOOLSBEE: Okay. Laura, do you want --

MS. TYSON: Yes, I just have a really basic process question, and that is, does this mean that every single thing is going to be agreed to by every single member?

MR. GOOLSBEE: It doesn't have -- our bylaws, which you all voted unanimously, say that we require a two-thirds vote.

MS. TYSON: Okay, so it is doing two-thirds.

MR. GOOLSBEE: That is the standard. So when two-thirds of you say, no, we want to vote this right now, we can do this.

MS. TYSON: Can you do something like -- and you know this very well -- I mean, the President sometimes gets options memos. There may very well be here, I believe on this issue, probably disagreement in the room. We're not going to resolve it.

MR. GOOLSBEE: As a matter strictly of process -- and these are our last 15 seconds, Adam is giving us -- we don't have to present only things that we all agree on. We can present, here is a subject we all think is important, and here are three different views out of the -- we can do anything we want. And our task on taxes, for example, we're explicitly being asked not to give explicit opinions but instead to present a lot of options.

MR. DOERR: So let me suggest what I'll do is mail this letter to all the board members and ask you within 48 hours to reply with any comments -- do the best that I can, as the author of this, to put together a document we might all agree on, lay out some dissenting opinions, but drive for a greater than two-thirds vote by our body in the coming week.

MR. FERGUSON: John, will you also add some of the economic issues, or is it up to us to add those? I think, as I read it, we can do a bit more than the --

MR. GOOLSBEE: We'll see what -- let's hold that.

(Meeting breaks while waiting for the President to arrive.)

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THE PRESIDENT: Everybody please have a seat. I apologize we're starting late. It's Rahm's fault. Where's Rahm? (Laughter.)

Q Still late. (Laughter.)

THE PRESIDENT: Right, exactly. It is good to see all of you again. I know that many of you have been busy working with Paul and others on some of the financial issues that we continue to confront in the economy. We're pleased that we've seen some progress, that there is some return to normalcy in certain aspects of the financial markets. We think that that will be helpful overall.

But obviously one of the things that I've been concerned about since I took office is looking beyond the immediate crisis in front of us to find out what is a sustainable economic model post-bubble and bust. How do we create sound fundamentals on issues like education, on health care, and the topic that we're going to discuss today, energy, as well as all the innovation that's required around these various areas, so that moving forward we don't find ourselves in a unsustainable economic model?

And we have seen this week some fairly extraordinary steps being taken around energy, which are promising. Yesterday I stood out in the Rose Garden and announced that the automakers, the unions, state and local officials, as well as the federal government, were coming up with a uniform national fuel efficiency standard that will provide certainty to the automakers and take a real bite out of our level of oil dependence and over time reduce our dependency on foreign oil.

At the same time, you've got an energy committee in the House of Representatives which is making more progress than we would have ever expected around the issue of greenhouse gases and carbon pollution.

So you're seeing industry, labor, and government working together more cooperatively, in a better spirit, than we've seen in a very long time. But this is a huge, complicated, difficult issue. I know that sometimes the slogans about clean energy and green energy may be a little more forward-leaning than the realities of the numbers of jobs that are currently being produced or the technologies that are currently available.

So one of the roles that I thought we could play today is to try to flesh out a little bit what can we get done; where are immediate opportunities that we should be taking advantage of; what are some major challenges; how realistic are some of our projections around clean energy, and how much of them are dependent on technological breakthroughs that we don't yet foresee; and how does this affect those who are not in the energy sectors but have, nevertheless, a significant interest in how this will affect overall economic growth.

So I wanted to start with John Doerr, who's done as much work on this as anybody as a venture capitalist, but somebody who sort of digs in and gets his hands dirty on these issues and understands the technology behind a lot of these questions.

John, why don't you share with us sort of more broadly how you're thinking about some of these issues?

MR. DOERR: Well, thank you for making energy, and energy and climate such a priority. It's today's discussion and it's very important to everybody on the board. There's agreement in our group that energy touches everybody's lives, every activity in the country. And so it's very important for us to get this right.

I put together a paper based on input from some members of this board. We're going to discuss it further today and this week and now. It's focused on the economic consequences, whether we act or do not act, for America. And it speaks to jobs. And it also talks about something that we haven't heard much about today, and that is how getting this right can have a large effect on the America's worldwide economic leadership, and if we get it wrong, we're going to stay where we are today, which is not really in the race.

You've taken a position, the administration has taken a position, squarely in favor of a market-based system to deal with the costs of carbon and climate, the so-called cap and trade position that my sense, from conversations not -- of our group is that we favor that, though there are some differing opinions.

We think it's very important to act now, that there's an issue with carbon emissions that we're behind where we want to be, behind other nations in the world in dealing with this. Also, if we act now and send very clear signals to our business community and the nation then we can get investment now that will create jobs now, as this kind of a regime or system develops.

We think that putting a price on carbon is the most important thing we can do, but it's not the only policy that should be adopted. Getting more work in research and development funding -- that's an area that's been neglected -- is an important thing to do. And the Department of Energy, as part of the stimulus bill, and others, is moving in that direction.

We think enlisting our utilities nationwide, make them allies in getting more energy efficiency, is a very important step -- and we've got more work to do there.

And, finally, making sure that our cars and our buildings are the most efficient in the world -- the action that was taken yesterday -- is very important to a comprehensive solution to this climate crisis we're dealing with.

I want to close with my views, on an optimistic note, and that is that we are seeing breakthroughs in the technology that not only can get us where we need to be, but that can make sure that America is the worldwide leader in developing the jobs and the businesses and the wealth from this industry as it was the case with the Internet.

THE PRESIDENT: Jeff, do you want to talk about this from a big manufacturing company that both uses energy, but also works on the technologies that might save energy usage?

MR. IMMELT: Mr. President, I think clean energy is the most exciting, fastest-growth industry of the 21st century. We've got about 70 energy-efficiency products, about $18 billion in revenue this year. We have 50,000 jobs between GE and our supply chain, lots of small- and medium-sized companies in this country and around the world.

Technology is out there to be had. I think we have to have a broad aspiration to lead in technology. It includes what I call big base-load technologies, like coal gasification and nuclear; real advancement in renewables; technologies that drive efficiency like the smart grid. And it's out there to be had. The leadership is out there to be had. This ought to be something that we aspire as a country to do.

I think things that help that are actually a price for carbon and unleashing the technology that can be applied, as John, said, to energy. If you go back 50 years in this country, the amount that's been spent in energy R&D is dwarfed by health care, NASA, other places. I think if we can take the ingenuity and the innovation of the United States, apply it to this technical revolution that's going to be going on, give us certainty, give industries certainty around a price for carbon, or the rules of the world, I think we're going to be surprised by how many great jobs this creates.

I would say these 50,000 jobs in this brutal recession are the most robust jobs we have. We're shipping products around the world. We ship about 150 heavy-duty gas turbines. Three will go to the U.S.; 147 go to the rest of the world. So this is actually --

THE PRESIDENT: This is an area where we could develop a strong export market.

MR. IMMELT: I think we have to think about it that way, Mr. President. We've got to move on. Other countries around the world are doing the same things. And there's no reason why we should cede leadership to other people.

THE PRESIDENT: How far behind are we technologically, though, in countries, John?

MR. DOERR: I would say that innovation exists here. You know, Europe's 10-percent renewables were at 2 or 3 percent. Other nations of the world, like China, Finland, France, are building nuclear power. We haven't started yet. We're doing the first whole-gas gasification plan in 25 years in Indiana. So the brains exist in this country. I think what we have to use is our domain to really build cost positions and competitiveness that can be globally competitive. But they're the types of products, Mr. President, that we can build great export industries around.

THE PRESIDENT: Rich, I know from a labor perspective, one of the biggest concerns you guys have is the decline in manufacturing.

MR. TRUMKA: Absolutely.

THE PRESIDENT: And we've actually got a task force that's working up some ideas about stabilizing and then growing our manufacturing base. This is one area where we're seeing some potential. I'm wondering if you just wanted to touch on sort of how the AFL-CIO is thinking about clean energy and its potential for creating solid middle-class jobs.

MR. TRUMKA: I think I can probably echo everything John said and what Jeff said. We see it as a tremendous, tremendous potential for us to lead. Our members are going back and being retrained to do weatherization, all sorts of green things to save energy, a whole type of new training to get them up to speed on the skills that they need.

The problems that we're talking about, I think we are disadvantaged a little bit. We're disadvantaged by the tax code that your administration started looking at. We're disadvantaged in some ways by the trade agreements that your administration has already started looking at. And we look at -- with greening right now, we think a couple of things, a couple of trap doors would actually -- should actually look at.

One is we really think that this has to run on two tracks. Not only do we think it has to be done in this country, but simultaneously has to be done internationally. Elsewise the jobs that we create we could ultimately lose because we're disadvantaged internationally if we don't. People who -- when the Kyoto Treaty was adopted, or at least asked to be adopted, everybody said we're disadvantaged by it, and so there was a lot of opposition.

The other thing is we think that all of this needs strict monitoring so that while you're monitoring you can tell if we're on course or not, and if we're not, we have to have language that is a trap door so that the economy doesn't get derailed by surprise along the way.

Our members are excited. We've already started creating the training programs and the jobs. They're already starting to help green the country, and we think it's a win-win-win for this country and for the people of this country. And we applaud your leadership in the area.

THE PRESIDENT: I want to open it up -- Martin, I'd be interested in your views on this. I mean, this is one of those areas where you can have some pretty fierce economic debates around the efficacy of a cap and trade versus a carbon tax; whether the government getting involved in this area helps significantly sparking a clean-energy revolution, or whether this is going to happen due to innovation in the private sector without government catalyzing it.

So to the extent that there's any skepticism in the room and you're always good for that -- (laughter) -- I wanted to make sure that that got put on the table and that we had a realistic conversation about some of these policies.

MR. FELDSTEIN: Well, I think a cap and trade or carbon tax would undoubtedly stimulate conservation and green technology. I don't think there's any doubt about that. I think about two aspects of this. One is the impact on consumers. There's a range of estimates, but the Markey-Waxman kind of reduction, a 20 percent reduction from what the current levels of CO2, the estimates run from $400 per capita increased cost to about $1,500 -- about three-quarters of the EPA is the low end and an MIT technical study is the high end. About three-quarters of that is extra revenue that would go to the government.

What's clear is you have to raise the price to consumers to get them to cut back. Three-quarters of that would be revenue to the government that could be given back or could be used to support spending programs. The other quarter are real costs to put in place this new technology. So I think it's very important, in thinking about this, to recognize the magnitude of that cost increase and the distribution.

The other point is about whether you auction or give away some of these permits. The price has to go up by the same amount. The cost to the consumer has to go up by the same amount, whether you auction it off or you give it way. So I have a hard time understanding the giveaway strategy, because it seems to me that just says we'll take some of the money that would otherwise be collected by the government, that revenue, and give it to some of the firms that win this lottery to get some of these --

THE PRESIDENT: Well, as you know, during the campaign, my original proposal was a 100-percent auction so that you didn't have the potential for political considerations or gaming of the system. The way I think that the Waxman-Markey bill is trying to address this is you've got regional differences that have to be accommodated -- some of it has to do with how do you, if not hold the consumers harmless, then assure that the rebates or the allocations that are awarded are leveling out the cost to consumers.

So it ends up not being as arbitrary as I think it might seem in the abstract. In the particulars, there are just some regions in the country, particularly in the Midwest and the South, where their options for ramping up energy efficiencies quickly are very different from California or some of the Northeast cities. And so you want them to make adjustments. On the other hand, if the adjustments are too onerous, too quick, not only is it brutal on those states, which are already having trouble, but politically it ends up being --

MR. FELDSTEIN: So this is for regulated electricity, basically?

THE PRESIDENT: Mostly around the electricity issue.

MR. FELDSTEIN: Because for gasoline and other products --

THE PRESIDENT: For gasoline that makes less sense. Now, I haven't seen all the details of the bill yet. Carol, you may end up having a better sense. Larry, do you want to chime in on this one?

MR. SUMMERS: Having been taught by you when I was a student, I understood very well the --

THE PRESIDENT: Marty really doesn't like to admit to that. (Laughter.)

MR. FELDSTEIN: I take great pride in my students -- Larry high on that list.

MR. SUMMERS: I think the broad agreement that people in the business community discuss and so forth was the one the President articulated, which was the essence that the giveaways were to come in situations in which regulated utilities were primary examples where you were going to be plenty able to pass on the price -- there's a little bit of stuff that has the character of our companies and the international competition. And there isn't something parallel to that in the world.

So at least the principle was you don't get to pass it on and get the windfall. But a situation where it's not going to passed on, then it's natural for there to be a compensation. You might disagree at some point on the application of the principle, but that is -- the sort of economic principle if you would that we're trying to assume. And I think that's a logical --

MS. BROWNER: I think what Mr. Waxman has done to date in the bill -- it's still in markup, things are still changing -- is about 35 percent of the allowances that would otherwise have been auctioned are during a transition period given to the electric utilities, as the President said, to offset the impacts on consumers. Another 15 percent have been reserved for trade sensitive - trade-intensive industries ,recognizing that because of the global nature of their competition there are some transition issues.

And then some smaller amounts have been given to other sectors -- there's this very clear understanding that these transitions are going to be an important way of helping industry find the kind of new technologies, the innovations that will allow us to ultimately drive down the cost.

THE PRESIDENT: Jim, you've got some thoughts as a big manufacturer that operates internationally. You probably see some of these as opportunities, but I know you may see some risk as well, so I'm putting you in a competitive disadvantage.

MR. OWENS: You surprised me. I guess Caterpillar is the third-largest producer of things that make kilowatts over GE and Siemens; we make small ones, but -- and we're a big exporter also for the U.S. In fact, combined heat and power applications of both small turbines and small gen sets are big sellers in -- actually more outside the United States than inside, partly because of the way we regulate emissions site-specific, as opposed to looking at combined emissions and energy efficiency. So there are some things here that we could do to help our country be more competitive using the technologies that are out there.

I agree with Jeff. I think we have the technology, we have the smarts here, and the product technologies, the economic incents of what's needed. And that's why I think of us in industry support a clarity around a carbon price, because that's going to drive a lot of innovation and a lot of efficiency and will get with the program of reducing carbon emissions.

Our concern and one of the things we've been very engaged with the U.S. cap initiative discussing is, we need to approach this in an international context. I think if we move unilaterally as the United States with a significant cap and trade program that drives up the cost of carbon here significantly, and our international competitors, the countries don't move with us, it's going to create competitive problems for the core -- let's call it the base industries -- steel, aluminum, cement -- the core feeder stock, if you will, for the manufacturing industry in this country.

But I think if we take that leadership role, as you've articulated it, and go to Copenhagen with that in hand as showing our commitment to move forward, I think there's a good chance that we'll find the Indians and the Chinese, for example, the two largest emerging markets -- and big growth markets, by the way, for U.S. exports -- likely to want to work with us. And I think there's more opportunity for collaboration on the international scale than some people are giving us credit for here.

THE PRESIDENT: That's what we've been seeing.

MR. OWENS: I think it's out there.

THE PRESIDENT: I want to bring maybe some of the finance guys, because you crunch the numbers, you're looking for opportunities where it makes sense to invest, where it doesn't. Mark, how is this looking from a investor perspective, from a --

MR. GALLOGLY: Well, one way to think about it is to start and say, what's the size of the opportunity? And we produce about 1,000 gigawatts of energy -- of electricity in the United States. And so we've got -- we're at 1,000, we're going to grow 1 or 2 percent, something like that, a year, so by 2020, we're somewhere around 1,200. So that 200 increment -- of that 1,000, by the way, 800 of it, of the 1,000, 800 is based on -- produces carbon emissions.

So if we're growing another 200, and we're trying to get to 20 percent, one way to think about it is, all of the new stuff has to be in alternatives. That's one way to -- and it's about 20 gigawatts a year. That's a lot of money, that's a lot of capital required to produce 20 gigawatts.

At the same time, we're in the middle of a credit crisis, and the big project financers have been UBS, Banque National Paris, RBS, all of the big European and Asian banks, all of them pulled out of the market. So there's a natural disconnect between the amount of capital needed and the size of really big, big facilities, things that Jeff is talking about.

And I think one thing we need to consider -- it's a little bit built into the Waxman proposal -- is whether there's a role to attract private capital into those buildings -- into that building initiative and have some role for federal government, because, as something that Marty is really focused on, I think appropriately, it drives down the cost. And the question is what's the incremental cost to the consumer; what's the likelihood politically this is going to work?

And if you can drive the cost down by having a more favorable capital structure, which has real risk from investors but has a lower cost of aggregate capital, then you're going to increase the likelihood you actually -- which is what your first question was -- realistically hit these numbers, because you're going to start building 20 a year soon, really soon, if you're going to make this goal work.

The second thing I think that could really impact this is whether you have a national standard or not. I know the administration supports a national standard, a national energy standard for alternatives. There's a real -- there's been real success on a state by state basis, but many states, as you pointed out earlier, don't have alternatives, don't have the ability to produce alternatives. In the Southeast there's not a lot of -- if you're in the Southeast, not a lot of winds, not a lot of real sun power, so you're not going to see much alternative generation there.

And energy moves across states -- and so you've got to figure out a way, just as you're thinking through emissions for auto on a national basis, to think about a national standard for energy. I think if you did those two things, in addition to carbon, then you have a realistic likelihood of achieving the goals. If you don't have those three coming together, I think the likelihood is less -- materially less.

THE PRESIDENT: Roger?

MR. FERGUSON: Mr. President, thank you. I would like to point out three things, again coming from finance. First, I think a number of people would say that once you think about not just the cost, but also the benefit, and there's a general view I think among the economics profession that there's a net benefit of taking active efforts now to mitigate climate change, CO_2 emissions, and this would be one element of it.

Secondly, that we think about this from the standpoint of another part of finance, which is insurance. The insurance industry and reinsurance industry has seen insurance losses going up quite dramatically as a result of changing weather patterns -- that kind of thing. So I think you would find a number of parts of the financial services sector that would broadly be supportive it because they think it's good economic policy as well as social policy.

I think a third, again thinking about it from the standpoint of the insurance industry and other parts of the financial services sector, cap and trade has a number of appeals to it. One is that it is certainly market based. Secondly, setting a cap gives you a broad direction of where you're headed. And third, to pick up a point that's come up a few times, I think broadly if you think about this as an international problem, cap and trade, as you've already observed, may have the advantages of being something that can be applied successfully across a number of political jurisdictions. And so, looking at the industry I represent broadly, which is finance and insurance, I think you'd find many people supporting these directions.

THE PRESIDENT: One of the things that when our energy team gets together we talk about is that the lowest hanging fruit, the area where technology is already available, is on the efficiency side. We don't need breakthroughs as much as we just need the proper incentives to take advantage of that.

And so I wanted to maybe just talk about that for a minute. And I'd be interested, Penny, from a real estate perspective, because buildings, it turns out, alongside cars, is the area where there is just enormous waste. On the other hand, the real estate industry as a whole, residential and commercial, are obviously under -- feeling enormous pressure right now.

And so the question is whether there is an appetite for retrofitting old buildings, dealing with energy efficiency in what is already a difficult economic environment. Are there some additional things that we need to do if in fact we're going to move in that direction?

MS. PRITZKER: Mr. President, you're exactly right. The real estate industry is a large contributor to the production of emissions, and so something that we need to take into account and to address this issue. I think given the stress that the commercial real estate industry is under, as well as the residential and housing market, I think we're going to need incentives to motivate people to be able to find the capital; it's very difficult to access capital for such retrofitting.

And so I think there potentially needs to be some kind of incentive plan that might encourage activity now -- job creation comes with that -- at a time when the industry probably doesn't have the money or potentially the will -- and I don't think there's an aversion, or the industry is certainly not against this; it's a question of is it realistic to get it done right now.

I think incentives are enormously -- I think you could put a lot of people to work doing this, because it's not only for the residential but also large commercial buildings. There's enormous work to be done.

THE PRESIDENT: Carol, do you want to talk to us briefly about some of the steps that we're already taking on the efficiency front and are there questions for this group that we're still puzzling over?

MS. BROWNER: Well, on the efficiency front, I think many of you are aware that the President's Recovery Act did include about $6 billion for weatherization, and that program is getting up and operating. We're seeing job creation across the country; very positive.

To Penny's point, the states also are now starting to receive their block grants, and some of that money could be made available in terms of some of the commercial real estate and kind of efficiency investments in commercial real estate.

Waxman-Markey does include a renewables and efficiency standard. What they've done is they've blended it together; right now it's a total of 20 percent renewables, up to 8 percent can come from efficiencies at least -- so you could get 12 percent renewables and 8 percent efficiency. I think it's a carefully crafted provision to the bill. We'll see where it goes. And we look forward to that.

One of the things we've been interested in is, are there other such efficiency -- yesterday, the President exercised his executive authority in pressing his national car standards to an historic level of reduction. Are there things we could do on the efficiency side? We understand there are other things you all are aware of where we have some executive authority that the President could exercise --

THE PRESIDENT: John, did you want to comment on this?

MR. DOERR: There's two thoughts. And I think the most powerful one would be somehow to use your bully pulpit to get the nation's utilities to be rewarded just as much or more from saving electrons as they're now rewarded for producing electrons.

THE PRESIDENT: California utilities have done some interesting work on that.

MR. DOERR: The California experience with this has been terrific.

THE PRESIDENT: Would you describe that real quickly in case people aren't familiar with it.

MR. DOERR: This program is called decoupling. And we know that our utilities right now are rewarded based on the return on their investment. So if we can get them to invest, to reduce the demand for electricity -- they're powerful, powerful engines in our economy. They have a 100-percent market share. They touch every building, every consumer. They know how much energy everyone uses. They have very, very large cash flows, and they have very low cost to capital.

And let me connect that dot with the jobs opportunity. If you through your authority or your influence or through further incentives, more than the $6 billion in the stimulus bill -- said to each state, tell you what, if you adopt this decoupling, if you'll reward these utilities for saving electrons, and if so, I'll give you some federal incentive, with a small amount of federal money you'll change their policies forever.

And the beauty of the utilities is they're publicly accountable and they can very rapidly employ across our nation a million out-of-work construction workers to go insulate homes, for example. And once we're insulating our homes and our offices, we're no longer taking American wealth and tossing it into the air by trying to heat the atmosphere -- is a really dumb idea. That money instead goes into the economy and creates jobs, and people buy services, as opposed to trying to heat or cool the great outdoors.

So using these incentives to change the rules of the road, and particularly of those for utilities, I think Carol would agree has enormous impact. We've done a little. We can do a lot more. We can do it quickly, and they can create a lot of jobs.

THE PRESIDENT: Let me bring in some of the folks who I haven't had the chance to hear from -- Robert, any thoughts on this from a banking perspective?

MR. WOLF: Well, I would just say that we're contemplating here a market-based solution on cap and trade. And I would just say we have seen in the over the counter and exchange trade in markets that we have to make sure that there are disciplined regulatory reforms; that we understand the disclosure requirements; that it's globally coordinated. I mean, we don't want to redo the OTC derivative problem we just came out of, or the credit crisis.

So I would just say that, since we are going to use market-based discipline, we should be very thoughtful before we decide what exchange we don't want, who can be the market participants. We saw it during the energy crisis a year ago when the market went from 50 to 150, that when you take a small asset class and you make it investable, as an invested asset class and a tradable asset class, you have a lot of volatility and you may have inflation that shouldn't happen.

So I would just say we have to be -- I think we should fast-forward it because of the importance, but I do think we should make sure that we understand what we're going to be trading and who are the participants, because, as we know from the industry I'm in, once we see something that's an openly traded free market, we will have many more participants than we thought. And I think we have to be very careful on it, therefore. And I know that we're going to add that to some of the language in something we're going to be sending you soon.

THE PRESIDENT: That's important.

Larry, we've been talking about how we -- the mechanisms to avoid some of the problems that Robert was discussing.

MR. SUMMERS: Absolutely, yes. We've been working very much to have the right kind of framework in so that the markets function in the right -- function in the right way, yes.

THE PRESIDENT: David, have you got anything to add on this?

MR. SWENSON: I think the discussion really underscores the importance of having healthy financial markets. And we're talking about the big project finance opportunities and the fact that the big money is not there, but it's true on the other end of the spectrum, too. A number of our venture capitalists, including John Doerr and his partners at Kleiner Perkins, are involved in clean tech investing. And in the venture capital world, it's unusual because it's far more capital intensive than a lot of the other activities that they pursue. But the fact that the IBM markets are dead or in remission or wherever they are -- the fact that they're not functioning really has a direct impact on the venture capital end of the spectrum, as well. So the sooner we heal these markets, the better for our energy policies.

MR. IMMELT: There are some ideas around the stimulus, around an energy bank, to get back to Mark's point earlier, that I think business would invest side by side. I think that's the way to accelerate some of these projects, is to get the financing for big projects going forward. And I think not in a stimulus way, in terms of just purely government, but taking an energy "bank" and allowing private business to invest side by side on these projects, whether it's smart grid or wind power or any of those. I think that could be a stimulative impact to get that going. I know some of those discussions have been going on with the Department of Energy.

And then beyond that, just ramping up the ex-im to get behind some of these products as we globalize. I think that's another tool that we've got to get things going faster.

THE PRESIDENT: Right.

Monica, do you want to talk about this from a small business perspective? Are you seeing an interest among small businesses on the energy front? I've seen some small businesses that are starting to take advantage of some of the retrofitting and weatherization opportunities.

MS. LOZANO: Just two things I would say. There are productive jobs, and a lot of the workers who have been displaced from manufacturing and construction find this and are where they see great opportunity. So we need to provide not just the retraining and the capacity building for those sorts of jobs; this is a gateway to middle-class work, and so as you've said, in fact, Mr. President, these jobs can cover a very wide gamut and small business is looking particularly at this area because of the great focus on it.

So, one, from the point of view of retraining and job creation that leads to middle-class work I think is very important. The other one of the incentives for small business is to begin to participate in the opportunities. Clearly there's a lot of incentive for large business; the financial markets are going to be working at it. Small business needs to feel that there's an opportunity for them to participate.

The stimulus package, a lot of the money has to go out in the next two years. There's a general feeling that if you don't have a capacity to partake you're going to be left behind, and so they're looking for partnerships between small and large business that can actually bring them to the table to access this opportunity.

So those would be the two things -- one is the job creation that leads to good middle-class work. And the second one is the incentive for small business to actually participate in partnership with the large businesses.

THE PRESIDENT: What I'd like to do, I think -- how much time do we have? I think we have probably about 10 minutes -- 10, 15 minutes. What I'd like to do is broaden the conversation a little bit. I want to make sure that Charles, Anna, Laura -- I haven't heard from you guys, so feel free to -- Bill -- feel free to talk about energy.

But this -- Monica offers actually a pretty good segue. One of the things that we're wrestling with is how do we deal with job creation and employment. We expect that -- and I'm not making any predictions here, because this is being Web-streamed -- (laughter) -- we expect that there's going to be some stabilizing of the economy, that the contraction will end and begin -- the engines of the economy will start to turn again.

But as all of you know, employment is a lagging indicator. We have shed a huge number of jobs during this deleveraging period. And the concern that we have is, even in a stabilized situation, there is the prospect of higher unemployment for some time to come. And so I've been really pushing my economic team around the issue of job creation and, alongside the issue of job creation, being able to create career paths for people so that they're upgrading their jobs and upgrading their incomes, because one of the problems that we saw during the '90s, even with very low unemployment and robust job creation, what you weren't seeing was significant increases in real incomes.

So those are two areas that we're spending a lot of time thinking about. Clean energy is obviously a huge opportunity for job creation. We've talked about that, but if people want to broaden it to some other areas or give us suggestions of things we should be looking at that you haven't been seeing us look at or pay as much attention to, that would be helpful.

So, Charles, do you want to start?

MR. PHILLIPS: Sure. I'll talk to energy, because the technology industry, everything we make uses energy 24/7 and we need a lot of power. And I think what's changed in the last five years is, we used to design data centers with computers in them, and we did that based on where network access points were. And our customers over time would come to us and say, these things use too much power; the cost of energy is going up.

So what has changed now is they care about power. And so it's forced us to design products differently. So I think this is a great example of if the right incentives are in place that people will respond with innovation. So we design products now where computers share power supplies, for instance. We design chips differently. But the power needs of the technology industry -- because they'll rely on the products -- it's only going to increase because the chips are getting faster, they dissipate more heat, designing things closer together, they need more power. Same thing on storage; it's growing 15 percent a year. We keep the data longer because of compliance issues. You can't get rid of data anymore.

So this is going to be an issue for a long period of time to come, and it's becoming a constraint to the growing technology industry, because we are 100 percent power dependent. And so we're always looking for alternative sources. And so if we can go from 3 percent to 10 percent of some alternative sources of energy, that actually adds a lot of flexibility on how you can build a computer, how you build data centers.

But no one talked about this five years ago, and now every single conversation -- before people can decide where to build a data center, they want to know how they can get the power.

THE PRESIDENT: So it's not just my 10-year-old daughter, keeping her iPod plugged in and not taking it out of the socket. (Laughter.) That's just one small manifestation of the larger problem.

MR. PHILLIPS: Right, and ours have to stay on 24/7, so we consume a lot of power. And so if we can get alternative sources, I think it actually opens up roads for our industry.

THE PRESIDENT: That's interesting.

Anna.

MS. BURGER: So I think that it's pretty clear that moving to a low-carbon, green economy can create lots of jobs. Of course, whether they'll be good jobs or bad jobs is still the question. And I think what we do about it can have an impact.

I think it's also going to cause a huge transition. We'll be creating jobs, we'll be changing jobs, and some people will be losing jobs. And we need a plan for that transition.

I think that the Vice President's Task Force on the Middle Class, their first hearing in Philadelphia was about green energy and green jobs, actually had the same finding that our Change to Win federation report had, which are that we need to really think about how to make these jobs good jobs; otherwise they won't be.

There was a U.N. report that does the same basic thing that says we really need to think about how to transition this. Part of it is the whole idea that training -- and I think it's great that there's money in the Recovery Act for training, because we really need to figure out how to make sure that people in the communities can access training so it becomes a job entry point, a job transition point, and a movement into good jobs.

I also think that we need to really think about how to make sure that workers have a voice in the job. What we found -- what the Vice President found, what the U.N. and what we found was, generally speaking, the jobs that were good jobs in green energy were union jobs. Those that weren't were not. And there was lots of exploitation in workers that we can deal with in terms of how those jobs are structured, how the grants are provided, and what the government's role is.

And so as we move forward, I think that your leadership in bringing business and labor and government together to say, how do we collectively solve this, is exactly what we need to do here in our country, in partnership around the world, because whatever we do is going to have a rippling impact, but whatever they do is going to have an impact on us. And if we really can bring this real partnership together -- that is about what's good for workers, what's good for business, what's good for our government, and what's good for the future of our planet -- that it will force us to change our behavior and really have an impact short term and long term.

And so I just want to end with three quick examples and just on things that we can do now, in terms of real estate commercial properties. Now, when workers have a voice, they can actually have ideas about how they can do things better. So our local in New York and California now bargain in energy standards -- energy efficiency standards. They have a whole training program where they train their janitors and their engineers in terms of how to retrofit, how to save energy. And they actually set a goal in their contract about saving 20 percent of the energy in their buildings through a certain period of time.

They've now started a whole recycling, which they do not only for the buildings themselves, but also for their tenants, which is another way of doing that. The work that's been doing in California about the L.A. Ports -- because we all know that the air pollution from the ports and across our country is terrible. It's bad for the community. It's bad for our planet. It's bad for our kids with asthma. And it's bad for the truck drivers. And so how do we restructure that?

The partnership that's gone on between the environmental communities, the truck drivers with the Teamsters, and the broader community has really come up with a new model that will have energy-efficient trucks, which will be good for the workers, good for the community --

THE PRESIDENT: Energy-efficient trucks that aren't just sitting there idling.

MS. BURGER: So a change in the whole mechanism of how you do it is important. There's a school in Washington State I think now where the janitors came up with a program with the kids, where they just now ended up lowering the energy use, and recycling.

The laborers -- we're doing a program in New Jersey where they're really doing a training program that is recruiting from the communities. And so it's not leaving poor people behind. We really need to figure out as we create jobs, how do we have a pathway for people who are without jobs to give them an opportunity to step up, have a job with a real skill. And how we do that for the weatherization programs can have a long-term impact.

I think that there are lots of ways if people -- public workers can get together and talk a lot about what they could do to retrofit their buildings, to have better energy practices, to really think about greening. So I think that this partnership opportunity is here because you're leading it. And I think that if we all come together, we can actually move this forward.

THE PRESIDENT: Bill, any thoughts on some of the general questions that we've been asking? You have, obviously, experience in regulating big markets. We're looking at creating a market here. Robert raised some questions about the potential problems involved. I'd be interested in your views on that.

MR. DONALDSON: Obviously, there are some major changes that have to be made in the whole regulatory system and the way our markets operate. If I can divert from that a little bit, I think there's -- your use of the bully pulpit to convince people that the energy situation is going to be a focus of the government -- I think that can be used to stimulate the entrepreneurial desires of people out there. There are lots of small businessmen, venture capital-type people who will see -- if they're convinced it's a long-term program, will see opportunities to put businesses together.

So I'm focused on that great mass of small-business people out there who can divert what they're doing now into this area of -- I mean, the opportunity to go into the housing market and buy a defunct house and fix it up -- I think there's going to be businesses developed to do that.

So I'm looking from the bottom up. There's going to be plenty of stuff from the top down. But mainly, people have to be convinced that it's going to be an opportunity that's not going to go away -- it's going to be a focus for a long period of time.

MR. IMMELT: Just to add to what Bill said, Mr. President, I think not just on energy, but to take pride in being a productive technology manufacturing base -- I mean, you mentioned middle-class jobs; the best middle-class jobs we have in this country are manufacturing jobs.

And I think a long-term notion that we would go gently into a service economy that's been held over the last 30 years, I just think hasn't worked. And so I think that is another piece we have to work on. Rich and I don't agree on anything, fundamentally -- (laughter) -- right? I mean, we wake up in the morning disagreeing about everything there is to disagree on. But I think the one thing we agree on is that when you have -- we ought to create a sense of ownership and pride of a very productive high-tech manufacturing base in this country.

MR. FELDSTEIN: For those of us who work in the service industries, like education or health care, we don't want to knock that too much.

MR. IMMELT: No, no, no --

MR. FELDSTEIN: That's been the only thing that's provided jobs --

MR. IMMELT: I just think there's going to have to be some balance --

MR. WOLF: Jeff, one thing I think it's -- obviously growth in manufacturing is critical. But we should realize that finance, insurance, real estate -- which is called the acronym FIRE, unfortunately -- we've lost over half a million jobs in a year and a half. That's 10 percent of all jobs lost. So I know that we have to focus on the labor and the middle class and how to gain manufacturing, but we have been a growth and service industry for a decade -- that we've lost, as Laura said, you know, 10 percent-plus of our jobs. So I think you need that balance on both sides.

MR. IMMELT: When I came to work for GE in 1982 --

MR. VOLCKER: Increase our productivity rating --

THE PRESIDENT: Well, I think the fact that some really good math whiz kids are going into engineering as opposed to derivatives is not a terrible thing.

MR. VOLCKER: -- more engineers --

THE PRESIDENT: But I think that there's no doubt that manufacturing is not going to return to the share of the economy that it was in the 1950s, regardless of what our policies are, just because our manufacturing is extraordinarily efficient compared to what it was.

On the other hand, what is true is that if we are going to at least have a larger element of exports, for example, as a proportion of our economy, which I think we're going to need -- we've had this idea that we can just be the consumers of everything and not -- and borrow and spend. And at some point, we've got to start selling something. Some of that is going to have to be top-notch products.

Some of it will be services and that helps our current economy as well. But if on energy, for example, we're just importing Spanish windmills or wind turbines, as opposed to some that are made here in the United States, that would be a shame, and I think we need to take advantage of that.

Penny, you wanted to jump in.

MS. PRITZKER: I just wanted to underscore something Anna said. We have some of the best innovation in terms of clean activities in our hotels coming from our employees and it's come from the bottom up. We challenged our employee base to come up with creative ideas of how to do cleaning without using chemicals, how to better recycle, how to use less.

And so I think there's a really interesting opportunity to use the bully pulpit and to highlight how the partnerships are working at the local level in some very major --

THE PRESIDENT: Telling some good stories, yes.

MS. PRITZKER: -- and to really celebrate that and raise the pride as to this is really an important endeavor in our country.

THE PRESIDENT: Good.

Laura, I wanted to get you in here and -- you're a wonderful generalist, as well as a specialist. One thing I was interested in is how this fits into what you're seeing internationally, because there is a concern voiced by Rich, but I suspect Jim and others are going to be concerned about it, we're moving in an area where, as Marty said, there are going to be some increased costs related to this. And if we don't see some concerted action on the other side, we're going to be placed at a disadvantage.

MS. TYSON: Well, I would tie it back to the beginning of the conversation. I think that it's really important to go to Copenhagen from a leadership position, because if we try to do something on our own, or if Europe tries to do something on its own, but we don't get emerging market buy-in, we will end up in a world where we're going to have carbon tariffs, compensating border, offsetting border, interventions in trade -- things which we would be much better off in terms of efficiency and getting a global outcome on carbon to get a global agreement.

So my first thing is let's really move towards that as a way to hold off a much worse situation where we don't have a global solution and we have a bunch of trading restrictions that intervene. So that would be my first point.

My second point, thinking about it in terms of a couple other trade policy areas, I think there has been -- someone raised already, it's been raised in the jobs group -- looking more at what we can do with ex-im as a way to promote our exports. It gets to the issue of the small- and medium-sized businesses in the following sense -- I mean, the truth about employment in the United States over the next decade is the same truth about employment in the last decade: It's primarily small- and medium-sized businesses, whether it's goods or services, and it is going to be primarily services.

It is not the case that -- so our jobs task force is going to have to look at high-wage strategies for services as well as for manufacturing. And I'm perfectly sympathetic, actually completely sympathetic with the view of building as much as we can, strengthening our manufacturing base. But that will be leaving the share of manufacturing probably steady, the share of manufacturing employment and total employment probably continuing down.

So I think we have to be realistic about the jobs and say, okay, we want to really build the strength of our manufacturing exports and our manufacturing sector, and that will create wonderful jobs throughout the economy. So Ex-Im Bank and what we do at Ex-Im Bank becomes an issue for manufacturing and exports.

But also, I think we have to be very careful. One of the things that I've concerned about, looking around the world, is a lot of countries -- most countries now who are our competitors are talking about the importance of green energy and green jobs, and some of them have a head start on us. And, you know, there are embedded in a lot of what they're doing, local content restrictions -- that is, in order to serve the green economy of the home country, you require local content provision of that service.

Now, some of this is local content by definition. I mean, utility is a local content, refurbishing a home is a local content. Where you buy a wind turbine is not local content. Do you make it so -- so I think we have to be very careful. There's a whole set of trade-related issues around the development of this green economy that we're going to have to keep track of.

The last thing I'll just say is that we are working with your -- we've just started to work with the manufacturing task force and we already, despite what I said about -- I'm not convinced we can have a significant change in the trajectory of manufacturing jobs, but I think we can do a tremendous amount to strengthen U.S. manufacturing as a sector and we will be working with that task force.

And one of the first things that came up, interestingly enough, is this issue of how you help the small- and medium-sized business sector, that I said is very important in manufacturing, access the programs and policies of the U.S. government. We are spending -- I mean, the stimulus bill is a massive investment by the government in the U.S. economy. It is much harder for small- and medium-sized businesses to access that support. And we need to think very carefully about, can we get that better? So that's going to be one of the focuses of the effort.

THE PRESIDENT: We're out of time. Jim, you want to jump in right quick; Mark, you want to jump in, and then Paul.

MR. OWENS: I'll be just very brief. One of the things, don't forget, is that small- and medium-sized companies are big suppliers of Jeff and myself. Roughly, for every job we have, there are three jobs at small- and medium-sized company suppliers feeding us. We exported, for example, last year $16 billion worth of product.

So a lot of our small- and medium-sized companies don't know they're exporters, but they're exporters. (Laughter.) And it's very important that we continue to look at global manufacturing competitiveness. And I think, as a country, if we're going to be a great country 20, 30 years from now, we've got to shift the paradigm a little bit here. We've got to save more and invest more and export more. We can't have the U.S. consumer have the huge deficits. You asked about what do we have to do structurally different going forward. That's one of the reset buttons we've got to hit. And that's a tough one. It's tough for political leaders to help bring about that change, and I think the business community has got to be part of helping the public understand. We've got to save more, invest more, and grow our international competitiveness as a key to our future success.

THE PRESIDENT: Mark.

MR. GALLOGLY: I was just going to add something to follow up on what Laura said. If you think about the competitive dynamic internationally for green, since other parts of the world are just growing their demand for energy just much faster than we are -- so China is high single digits, low double digits -- and because they have a centralized authority that can allow for, for example, a smart grid being put in place much faster than we can, those two things will naturally result in them developing better technologies faster, because their whole market actually has more demand. So we're fighting a fight that will require us to be more on our game than we have to be in a general sense because they have a natural, clear advantage, but governmentally and demand-wise.

THE PRESIDENT: Paul.

MR. VOLCKER: Well, I think we're seeing a remarkable degree of consensus in this group on this particular problem. I'm not going to add anything on the technical side, but let me just make two points on this issue.

It's going to take -- it's going to take a lot of investment over time. But one thing I'm sure of, we've got room for that investment. When this economy normalizes and the financial markets normalize, Jim is quite right, we're not going to live on consumption we've got to fill up that hole in consumption with investment, which will make us more internationally competitive. And I don't have any doubt that this is going to be a good thing in terms of supporting economic activity.

The only other point I'd make, any time this is discussed and the cost, there isn't enough emphasis, it seems to me, on the cost of what happens if we don't do anything. If any of these projections are halfway correct, it's going to cost amounts of money that makes this stuff we're talking about trivial. And I don't think that that's impressed enough upon -- I know it's got resistance so it's hard politically, but there it is.

THE PRESIDENT: I haven't found anything that was easy politically yet. (Laughter.)

MR. VOLCKER: We'll produce that at the next meeting.

MR. GOOLSBEE: I'm sure I speak for the whole group. We've been very excited. This has been a real unique opportunity I think for the government but also for us to get to know each other and to have this outside perspective.

Our ability to operate as an advisory committee does depend on coming up with things that are of interest to you and to top policy-makers. So if you ever have subjects, or Christy, Carol, Larry, if you guys ever have subjects you want to hear from us, if you convey them to our illustrious chairman or to me or to any of us, that helps us do our part.

THE PRESIDENT: You guys have done a terrific job. Obviously there have been a bunch of smaller groups that are working intensively with our economic team. They've got five or six things already on the plate. This has been extraordinarily helpful. I appreciate all of you coming in.

If you can keep your seats just for a moment, we're going to bring a pool spray in just to record who it is that was in the meeting, although we've had some press folks in here taking assiduous notes, I'm sure.

Go ahead.

(The press pool comes in.)

THE PRESIDENT: Hello, everybody. Well, you will have a record of everything that was said here, so we don't need to repeat it.

I just want to publicly thank this group, chaired by Paul Volcker, staffed by Austin Goolsbee. They are doing extraordinary work, separate and apart from meetings with me, on a whole range of issues. We talked about energy today, but they are helping to advise us in our approach to the financial regulations regulatory regime that we are looking to put before Congress this year. They are helping us in thinking about employment, manufacturing. There is a whole host of issues that this group is providing wonderful expertise for.

And interestingly enough, as Paul mentioned at the end of this discussion, there is impressive consensus -- not perfect consensus, but an impressive overlap of views about the importance of us getting out front on energy -- the enormous job-creation potential that exists; the requirements to create a more efficient energy system in order for us to remain competitive.

And I'm excited about the opportunity. We've seen some great progress this week. We're going to see more because of the contributions that are made around this table.

So thank you very much, everybody.

ADJOURNMENT

The first meeting of the President's Economic Recovery Advisory Board adjourned at 11:22 a.m. (EDT).

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.

Paul Volcker,
Chairman, President's Economic Recovery Advisory Board
Approved 8-14-2009
Michelle Greene,
Designated Federal Official

U.S. Department of Treasury
President's Economy Recovery Advisory Board

By-Laws and Operating Procedures

The following By-Laws and Operating Procedures (the "By-Laws") will govern the operations of the President's Economy Recovery Advisory Board (the "PERAB"), whose funding and administrative support will be provided by the Department of the Treasury (the "Department").

Section I: Functions, Objective, Organization and Operation

The functions of the PERAB are advisory only. Its objective is to enhance the strength and competitiveness of the Nation's economy and the prosperity of the American people by ensuring the availability of information, analysis, and advice to the President as he formulates and implements his plans for economic recovery. In particular, the PERAB shall: (1) solicit and obtain information and ideas from across the country and from all sectors of our economy about the functioning of the economy, the condition of the financial and banking system, and the prosperity of the American people and of American industry; (2) provide advice and recommendations on the design, implementation, and evaluation of policies to promote the growth of the American economy, establish a stable and sound financial and banking system, create jobs, and improve the long-term prosperity of the American people; and (3) provide analysis and information with respect to the operations, regulations and healthy functioning of the economy and of the financial and banking system. The PERAB shall provide its advice and recommendations, analysis, and information directly to the President or his delegate. The President or his delegate may direct the PERAB to provide its analysis, information and advice and recommendations to the Chairman of the Board of Governors of the Federal Reserve System, to any agency with responsibilities related to the economy or financial markets, or to the National Economic Council.

The PERAB has been formed by the authority vested in the President of the United States by the Constitution and the laws of the United States of America. The Federal Advisory Committee Act 5 U.S.C. App. 2 §§ 1-16, as amended ("FACA"), governs the creation and operation of advisory committees. In the event of any inconsistencies between the By-Laws and FACA (including its implementing regulations), the PERAB will carry out its Charter in accordance with FACA (including its implementing regulations), as the same may be amended from time to time.

Section II: Members

The PERAB shall consist of not more than 17 members, who shall be appointed by the President, from among individuals not employed by the Federal Government. In selecting individuals for appointment to the PERAB, appropriate consideration will be given to individuals with backgrounds from various sectors of the economy. Each individual member of the PERAB will serve either as a representative of his or her industry, trade group, public interest group or other organization or group, or as a special government employee. The composition of the PERAB will reflect a diverse set of perspectives from across the country. The President shall designate a Chair from among the members. The Chair shall appoint a Staff Director, who shall supervise the staff of the PERAB. Each member of the PERAB will be appointed to serve a term of two years.

Section III: Meetings

(A) **In General**. The PERAB shall meet at such regular intervals as necessary to carry out its duties. The PERAB is expected to meet at least quarterly at the call of the Chair with the approval of the Designated Federal Officer (the "DFO"), or at the call of the DFO. An official PERAB meeting consists of a quorum of the Members (including the Chair) then serving on the PERAB. The DFO shall ensure compliance with the requirements of FACA and its implementing regulations. The Chair will preside at all meetings of the PERAB, unless the Secretary of the Treasury (Treasury) (or his designee) directs the DFO to preside in accordance with FACA. The presiding officer of the PERAB may specify the use of rules of parliamentary procedure consistent with the By-Laws. Subject to such reasonable guidelines and procedures as the presiding officer of the PERAB may adopt, Members may participate in a meeting by means of conference telephone or similar communications equipment if all Members can hear one another at the same time and members of the public entitled to hear them can do so.

(B) **Notice**. The Department will publish a notice of each meeting in the Federal Register at least 15 calendar days before the meeting, unless there are exceptional circumstances in which case the reason will be included in the Federal Register notice. The notice will include (1) the name of the Committee; (2) the time, date, place, and purpose of the meeting; (3) a summary of the agenda and/or the topics to be discussed; (4) a statement as to whether all or part of the meeting will be open to the public and, if any part is closed, a statement as to why, citing the specific statutory provision that serves as a basis for closure; and (6) the name and telephone number of the DFO or other Department official who may be contacted for additional information concerning the meeting.

(C) **Agenda**. The Chair of the PERAB will draft an agenda for each meeting of the PERAB sufficiently in advance of the meeting to permit a copy or summary of the agenda to be published with the notice of the meeting, if required. The Department staff will distribute the agenda to the members before each meeting and will make available copies of the agenda to members of the public attending the meeting. Items for the agenda may be submitted to the Chair by any Member of the PERAB or by any member of the public.

(D) **Quorum**. A quorum will consist of a simple majority of the Members (including the Chair) then serving on the PERAB.

(E) **Voting**. A Member must attend a PERAB meeting either in person or by telephone to cast a vote. When a decision or recommendation of the PERAB is required, the presiding officer will request a motion for a vote. Any Member may make a motion for a vote and vote. No second after a proper motion will be required to bring any issue or recommendation to a vote. PERAB action based on a vote requires a simple majority of the votes cast at a meeting at which there is a quorum, except that formal advice or recommendations to the President requires two-thirds of the votes cast at a meeting at which there is a quorum.

(F) **Open Meetings**. Unless otherwise determined in advance, all meetings of the PERAB will be open to the public either in person as space permits or via live webcast. Once an open meeting has begun, it may not be closed for any reason. If, during the course of an open meeting, matters inappropriate for public disclosure arise during discussion, the presiding officer will order such discussion to cease and will schedule the matter for closed session in accordance with FACA. All materials brought before, or presented to, the PERAB during an open meeting will be made available to the public for review during the meeting. All such materials also will be made available on the Department's web site as soon as practicable afterwards. The Chair of the PERAB, may decide in advance to exclude oral public statements during a meeting in which case the meeting notice published in the Federal Register will invite written statements as an alternative. Members of the public may submit written statements to the PERAB at any time.

(G) **Activities Not Subject to Notice and Open Meeting Requirements**. Consistent with FACA regulations, the following activities are excluded from the procedural requirements contained in Sections III(B) and III(F): (a) Preparatory work. Meetings of two or more PERAB Members or subcommittee members convened solely to gather information, conduct research, or analyze relevant issues and facts in preparation for a meeting of the PERAB, or to draft position papers for deliberation by the PERAB; and (b) Administrative work. Meetings of two or more PERAB Members or subcommittee members convened solely to discuss administrative matters of the PERAB or to receive administrative information from a Federal officer or agency.

(H) **Closed Meetings**. All or parts of meetings of the PERAB may be closed in limited circumstances in accordance with applicable law. Requests for closed meetings must be submitted by the DFO to the Secretary (or his designee) under FACA, generally at least 30 days in advance of the publication of the meeting notice in the Federal Register. The appropriate Department official must determine that closing the meeting is consistent with the provisions of the Government in the Sunshine Act. Consistent with Section III(B)(4), the notice of the PERAB meeting published in the Federal Register must include information on the closure.

(I) **Hearings**. The PERAB may hold hearings to receive testimony or oral comments, recommendations, and expressions of concern from the public. The PERAB may hold hearings at open meetings or in closed session in accordance with the standards in the By-laws for closing meetings to the public. The Chair of the PERAB may specify reasonable guidelines and procedures for conducting orderly hearings, such as requirements for submitting requests to testify and written testimony in advance and placing limitations on the number of persons who may testify and the duration of their testimony.

(J) **Minutes**. The DFO will prepare minutes of each meeting of the PERAB and submit them to the Chair of the PERAB for certification of their accuracy. The minutes must be certified by the Chair of the PERAB within 90 calendar days of the meeting to which they relate. The DFO will distribute copies of the certified minutes to each Member. Minutes of open or closed meetings will be made available to the public, subject to the withholding of matters about which public disclosure would be harmful to the interests of the Government, industry, or others, and which are exempt from disclosure under the Freedom of Information Act. The minutes will include a list of the persons who were present at the meeting, and a complete and accurate description of the matters discussed and the resolution, if any, made by the PERAB regarding such matters; and copies of all reports or other documents received, issued or approved by the PERAB at the meeting.

Section IV: Officials

(A) **Chair.** The Chair of the PERAB is appointed by the President and serves at the sole discretion of the President to perform the duties specified in the Charter and the By-Laws.

(B) **Staff Director.** The Chair of the PERAB shall appoint a Staff Director. The Chair of the PERAB will work with the Staff Director and the DFO to establish priorities, identify issues that should be addressed, determine the level and types of staff and financial support required, and serve as the focal point for the PERAB's membership.

(C) **Designated Federal Officer**. The DFO is designated by the Secretary (or his designee) and serves as the Department's agent for matters related to the PERAB's activities. Under FACA, the DFO must, among other things, approve or call all meetings of the PERAB, attend meetings, and adjourn meetings when he or she determines such adjournment is in the public interest. In addition, the DFO is responsible for providing adequate staff support to the PERAB, including staff to assist the Staff Director, DFO and the Chair of the PERAB in performance of the following administrative functions: (1) notifying Members of the time and place for each meeting; (2) maintaining the role; (3) preparing the minutes of all meetings of the PERAB and its subcommittees, as required by FACA; (4) attending to official correspondence; (5) maintaining official PERAB records, including subcommittee records, as required by law; (6) maintaining a website for the PERAB; (7) acting on behalf of the Department to collect, validate and pay all vouchers for pre-approved expenditures of the PERAB authorized by law; and (8) preparing and handling all reports (except those required by section 6 of FACA), including the annual report of the PERAB required to be submitted to the General Services Administration under the FACA regulations.

(D) **Support Staff**. The Secretary (or his designee) has determined, pursuant to the Executive Order, that staff from the Department's Office of Domestic Finance and other offices as necessary within the Department, will be available to the DFO to provide adequate staff support for the PERAB. The PERAB may, with the approval of the DFO, obtain such other staff or advisory or assistance services appropriate to the goals of the PERAB.

Section V: Subcommittees.

The PERAB, with the approval of the DFO, may establish such subcommittees as it deems necessary to support the PERAB's functions and may appoint Members to, and the Chairs of, any subcommittees so convened. The Chair of the PERAB will be an ex officio member of each subcommittee. Each subcommittee shall be established by means of a PERAB vote, which shall be recorded in writing, whether in the minutes of a meeting or otherwise. Only Members of the PERAB will have the right to vote and make a motion for a vote in a subcommittee. No subcommittee will have any authority to provide advice or recommendations (1) directly to the President or any other agency or officer of the Federal Government or (2) to be adopted by the PERAB without discussion or consideration at an open meeting of the PERAB. All activities of the subcommittees will be in compliance with FACA, as applicable.

Section VI: Records

All documents, reports and other materials prepared by or submitted to the PERAB constitute official government records and must be maintained and made publicly available in accordance with applicable law.

Section VII: Expenses

Expenses related to the operation of the PERAB that are authorized by law will be borne by the Department. Expenses of any kind must be approved in advance by the DFO.

Section VIII: Amendments

The By-Laws may be amended from time to time by the affirmative vote of a majority of the Members (including the Chair) then serving.

The President's Economic Recovery Advisory Board

PROPOSED MEMORANDUM FOR THE PERAB
FROM: John Doerr
DATE: May 20, 2009
SUBJECT: Energy, the Environment and Technology

Energy and the climate are complex global issues and there are many different views on how to manage them. We are a diverse group of advisors, but we agree on some important matters and wanted to convey them to you.

We believe that a successful, lasting economic recovery should include key energy and climate policies that accelerate innovation, reduce our CO_2 emissions and provide energy security. The foundations for such a sound energy policy are simple, widely accepted, and proven in different states across our country and different countries across the world. These are:

- Let the market determine the most efficient way to achieve emissions targets
- Set clear, consistent long-term signals for enhanced energy performance
- Stimulate innovation in new technology

Policy must resolve uncertainty to unleash innovation and investment to create jobs now and ensure America is the worldwide leader of the next great global industry: sustainable energy. We are not on that path today.

In short, we endorse putting a cap on carbon emissions. It alone cannot solve all our problems, and it must include other provisions to make it economically viable and to help smooth the transition. But it is the most important step in a coherent strategy for curtailing emissions.

I. GREENHOUSE GAS EMISSIONS: WHY CAP THEM AND WHY NOW?

A. Why a Cap and Trade System?

We need to do something about greenhouse gases. There is broad consensus among scientists that global warming is a threat and greenhouse gases exacerbate the problem. Today, the world emits CO_2 into the atmosphere without any economic consequences, and the United States is one of the largest emitters. A globally negotiated Cap and Trade system would help the world manage CO_2 emissions in a pragmatic and immediate way.

We need to be a market leader in the sustainable economy. A cap will create massive new markets for energy efficiency and renewable energy by setting a market-based price on carbon. For technology developers, it will signal a large, sustained market for lower carbon-emitting innovations. For utilities and project developers, a well-designed cap will accelerate deployment of lower emitting technologies. And for businesses and investors financing capital expenditures, a price on carbon will provide certainty for investment decisions made today that will impact tomorrow.

The business community is often incorrectly portrayed as universally opposing climate policy. We believe businesses want certainty, and many favor clear rules on managing carbon. 25 major corporations, including General Electric and Caterpillar, joined the United States Climate Action Partnership (USCAP) to support Cap and Trade policy. USCAP proposes an economy-wide cap-and-trade system that would reduce emissions by up to 20% by 2020 and 80% by 2050. Their proposal rightly includes domestic and international offsets and calls for a strategic offset and allowance reserve pool to smooth spikes in allowance prices.

Cap and Trade systems work. The Clean Air Act Amendments of 1990 established a cap and trade for sulfur pollution from power plants. The market found solutions at one tenth the projected price, and cut these pollutants by more than half. We believe Cap and Trade works better than alternatives, especially alternatives where several agencies share authority. The potential conflicts between agencies could slow progress to an important, results-oriented end point. To be successful, any climate change Cap and Trade system should provide clear boundaries for and direction to EPA and other agencies, so that all US government bodies act in concert. Regardless of the administering agency, the approach needs to recognize fundamental differences between the traditional regulation of local pollutants and the global, disperse nature and impact of greenhouse gas emissions.

B. Why Now?

We have already described the importance of the environmental impact of climate policy. It has an important competitive impact as well. If the U.S. fails to adopt an economy-wide carbon abatement program, we will continue to cede leadership in energy technology to other nations. The U.S. is now home to only two of the ten largest solar Photo-Voltaic producers in the world, two of the top ten wind turbine producers and one of the top ten advanced battery manufacturers. That is, only one-sixth of the top renewable energy manufacturers are based in the United States. To lose our advantage in technologies that were pioneered in the U.S. may cost us dearly if not reversed.

Sustainable technologies in solar, wind, electric vehicles, nuclear and other innovations will, in the view of many on our board, drive the future global economy. We can either invest in policies to build U.S. leadership in these new industries and jobs today, or we can continue with business as usual and buy windmills from Europe, batteries from Japan and solar panels from Asia.

The new green economy could be transformational for our country. Compare it to the internet. Fifteen years ago there was no web browser. There was no internet at your fingertips, no ecommerce, no search engines. Now, the internet has transformed our lives: how we learn and inform, how we entertain and communicate, how we buy and sell goods. Today, the internet economy is estimated at $1 trillion with 1.5 billion internet users worldwide—and growing.

The new green economy has greater potential. Energy is a large and growing global market with 4 billion users of electricity—and usage doubling in 25 years. It is perhaps the largest economic opportunity of the 21st century. With the right policies driving innovation and investment, America can retake the lead in energy technology and create millions of new green jobs and industries, preserve millions of indirect jobs and repower our economy.

II. CRAFTING AN ECONOMICALLY SOUND CARBON POLICY

A. Global Problems Require a Global Solution

Even if federal legislation is able to establish a Cap and Trade system that meets the above criteria, such legislation will require complementary and coordinated international action. Even the best Cap and Trade system will not prevent many industries from facing serious competitiveness concerns, particularly in developing nations, in the absence of international regulatory and policy collaboration.

It is clear that the rest of the world must also move to lower carbon-emitting energy if we want to reduce global emissions by meaningful levels. It is also clear that global leadership is building to define and craft a global policy solution. Indeed, we think it is imperative that the US take the lead in shaping global policy and that it do so in Copenhagen. We cannot convince China and India to lower emissions unless we are willing to do so ourselves. The United States, as an industrial powerhouse, uses more energy each year than India and China combined, but has only 12% of their combined population. With a population spread across North America, we emit more CO_2 from transportation than all of Europe, China and India combined. We must commit to a path to drive our CO_2 emissions down if we want to be on secure footing in Copenhagen to help lead the world towards a clean energy economy.

B. Offsetting the Costs of Carbon Pricing

Dramatic changes will come with a cost. Because a cap forces us to internalize the costs of our emissions, a carbon abatement policy will raise the prices of many goods and services that are central to our lifestyle. As Paul Krugman succinctly states, "A cap and trade system will raise the price of anything that directly or indirectly leads to the burning of fossil fuels. Electricity, in particular, would become more expensive, since so much generation takes place in coal-powered plants." By increasing prices for carbon-intensive goods and services, a carbon Cap and Trade should drive meaningful behavioral changes and should lead consumers to choose less carbon-intensive goods. At the same time, these price signals will increase the pace and trajectory of technological innovation for lowering carbon emitting energy and enhancing energy efficiency.

The level of these costs will depend on the structure of the system, the amount of innovation and, crucially, on the efficiency of recycling revenues from carbon emissions back into the economy, or, alternatively, the handling of the initial allocation of allowances. Current estimates for the cost from a substantial reduction in emissions range from less than one hundred dollars per capita in 2020 to over one thousand dollars per capita. There is uncertainty among the various complex models (although these models do not account for the benefits of reduced emissions). We think it is important to consider the distributional impact of energy policy and to provide direct relief to consumers so they are not bearing the full burden of the adjustment.

To offset these costs, regardless of the level, we believe firms should be able to purchase offsets—verified, credentialed, voluntary emissions reductions by domestic or international entities not covered by the cap. Offsets reduce the cost of a climate policy by encouraging firms who can reduce emissions at a low cost to do so and allowing them to sell extra allowances to those who face higher costs for emissions abatement. Policymakers can reduce cost uncertainty by letting firms bank allowances when reductions are relatively cheap, and use those allowances or borrow future ones when emissions reductions are relatively expensive.

Not acting also has costs, and those costs may far exceed the costs of our implementing a carbon abatement policy, even though many of those costs are not internalized in energy pricing today.

C. Smoothing the Coal Transition

We are not suggesting a wholesale, immediate rejection of all carbon-based technologies. Climate change policies need to be aligned with national energy policies, which in turn need to focus on energy security, domestic energy sources, and their availability and cost. To protect industries vulnerable to international competition—and the workers who depend on them—the Administration should consider measures to ensure that the burden of mitigating climate change does not render strategic American industries uncompetitive. A properly designed Cap and Trade program will include transition assistance funds for deploying lower carbon emitting technologies in heavily coal-dependent and energy-intensive economies.

Because coal constitutes roughly half of U.S. electricity generation, and an even larger portion of several emerging economies, including China (80%) and India (70%), coal will be with us for some considerable time, and we must build a lower carbon strategy for coal. We recommend the Administration maintain, and add to, its focus on Carbon Capture and Storage (CCS) technologies. CCS. The Economic Recovery Act includes at least $2.4 billion for CCS research, development and deployment. We advise the DOE also to focus on CCS, to ensure its emergence as a serious energy option. We also recommend joint programs on CCS with China and India, as their adoption of the technology will be crucial to reducing global emissions.

III. COMPLEMENTARY POLICIES TO CAP AND TRADE

A cap on carbon is the single most important energy and climate policy this nation could adopt. But it will be far stronger if it is accompanied by complementary policies. We do not have the space to go into detail on all of our various views on these matters but they include:

- making utilities an engine of economic recovery through a unified national smart grid and through strong efficiency and renewable energy programs;
- making our buildings, cars and trucks as energy efficient as any in the world;
- accelerating energy innovation through public, university and private sector R&D.

IV. SUMMARY

Mr. President, we urge you to support a market-based Cap and Trade system that is both economically sustainable and environmentally sound. We believe it can help propel our economy, enhance our energy security goals and help make America the worldwide leader in the next great global industry.