

Mr. Gruenspecht: But let's take the next 12 or so minutes and get your questions in front of this group of distinguished panelists. First question, I guess for both panelists, supposing that the U.S. eventually adopts the carbon price, how should it respond to countries like China that are unlikely to adopt a carbon price for many years? Anybody can jump or hide.

Professor Nordhaus: I will just say that I was not assigned to talk about carbon, but I think actually quite a bit about carbon. I think some of the points that were just made about the relative advantage of carbon tax and cap and trade are extremely important. I have advocated with increasing intensity the carbon tax over the last decade or so. One place where I think people haven't appreciated the importance of carbon tax is in the international arena. A carbon tax is actually a very friendly regime for countries to join. If we look at it not from the point of view of how are we going to get it through the Congress, but how are we going to get it through, say, 20 legislatures of important countries? The point becomes clear.

If you are a country thinking of joining a Kyoto-Protocol type plan, ask yourself which of the following sounds friendlier? You are a country like Mexico or Argentina or Brazil or maybe China or India. In one case, you are going to sit down and you are going to be assigned an emissions reduction. You don't know how big it is because it is not written into the agreement. All you know is the bigger your emission reduction is, the more the other people on the other side of the table have to lessen their emission reduction. You also know there are

some pretty heavy people on the other side of the table. So it sounds like if I were a Mexico or an Argentina, I would probably not want to join that club. On the other hand, if you think of a carbon tax, it is actually much simpler. All you have to do is say; the domestic price of carbon emissions has to be up to some internationally agreed upon standard, 10-20-30 dollars per ton of CO₂, whatever it is. And then you can join the club. So I think one of the things that is insufficiently appreciated is how very unfriendly the current regime is for countries that are not in the plan. And that is one of the reasons I think we should add a tax provision or a tax component to a new Kyoto protocol so the countries can join by simply agreeing to have their domestic prices up to some minimal level.

Mr. Gruenspecht: I have another question. I guess I will direct this to Mr. John Rowe. Why do you think a cap in trade policy will yield a superior outcome to carbon pricing than a carbon tax?

Mr. Rowe: I don't. I agree with Professor Nordhaus. A carbon tax is better and more efficient. The reason most of us talk about cap and trade systems is a sense that the tax still does not have sufficient political support. But I agree with Bill entirely.

Mr. Gruenspecht: Okay. I guess - these questions were pretty interesting. Are you concerned that Congress is not the proper venue to construct something as intricate as a carbon market. For example, last minute amendments, less focus on whether the system actually works. It said this is directed at you, Mr. Rowe.

Mr. Rowe: Well, on that question, you have to go back to Winston Churchill's great line that democracy is a very poor system of government, just better than all the others. Congress is hard-pressed to develop something as subtle as a carbon market and the best it can hope to do is frame it and put the CO₂ price into it. But Congress is the law-making body that we have. But again, this goes back to Bill Nordhaus's point. Congress is better at levying taxes than it is at designing intricate markets.

Mr. Gruenspecht: Bill, would you like to have a word?

Professor Nordhaus: Once a generation, we have to behave like grownups. And this might be the time where we would say that this is an important problem. We need to devise a system that is workable, that we know how it will work, that it will work not only domestically but internationally. If I had to say, I would say this is the issue where I think people should just swallow, say we have to be grownups, whatever system we have is going to be a price-raising scheme, whether we call it a tax or a cap and trade, whether it is auctioned or not auctioned. I think the main thing about a tax system is that it is a system we know. The international cap and trade program has never been tried. There is no example of a system for an environmental problem or other problem where we have a functioning international cap in trade system. And if that doesn't make someone who is concerned about climate change nervous, it should.

Mr. Gruenspecht: Well, here is a question back on oil markets. How do you think education and understanding of oil markets and oil itself can be improved? I guess that would be Bill.

Professor Nordhaus: Well, there is no substitution for education. An educated electorate, an educated group of people in the Executive Branch and the Legislative Branch, so all I can say is let's go to college. Let's take physics. Let's take economics. Let's study regulation. And then we will have people like our distinguished Acting Administrator who will understand all these things extremely well.

Mr. Gruenspecht: I have had the bus backed over me so many times. (Laughter) But it was fun to go to college. I would love to go back. The next question is for Mr. Rowe. In your view, what are the benefits and risks to electricity decoupling?

Mr. Rowe: In my view, electricity decoupling is a useful tool, but no more than that in trying to get the incentives right for delivery companies to do the most efficient things for their customers. A more powerful tool, one that also exists in California and used to exist at least in New England, is to give them a profit incentive on their energy efficiency measures. But just for the rest of the audience, let me be clear what decoupling is. Normally a utility is given a rate for its delivery services based on an estimate of how much it will sell and a revenue requirement so that it can earn a fair return on capital. It is much more complicated than that, but that is part of it. What that means is if you can sell more kilowatt hours, you can make a little more money. Decoupling is a device to keep you revenue neutral. It separates your income from your sales. The risk in it is that it puts more and more of your charges on demand, which is not all a bad thing. But it can annoy the hell out of your customers.

Mr. Gruenspecht: Okay. One more for Mr. Rowe, or this could be for either, really. Do you envision a role for distributed energy in the future? Distributed energy.

Mr. Rowe: Well, of course. But right now, 98 percent of distributed energy is simply burning natural gas in a less efficient machine. It is not environmentally efficient. Now if solar becomes more economic and that is the place on the supply side where the productivity curve is steepest, then you may have a distributed energy source that is both low carbon and effective. That is where I think solar plays the biggest role, but I yield to the Secretary's physics.

Mr. Gruenspecht: Okay. Well, we are getting there in time. I think that this...I won't ask my questions. I think that in this session in Washington, I guess the game is to set low expectations and then exceed them. In this case I had very high expectations for this session, and they were exceeded. I thought that our speakers did a fabulous job. I think they also set the groundwork for the rest of the agenda for this conference. John Rowe talked about natural gas, for instance, and how it affects his planning. I think there is a panel that should have begun 3 minutes ago, 11:20 I think, on the future of natural gas. There is a lot of talk about the greenhouse gas emissions policy and what is next. That is another thing that is on the agenda tomorrow.

So I think our speakers have given us plenty of food for thought. Please join me in thanking our two remaining speakers. (Applause) And thank you all for your great questions. Secretary Chu will get the rest of his, and I look forward to the

rest of today and tomorrow morning. Thank you very much and we will reconvene at 11:20 for the breakout sessions. Thank you. (Jazz music).

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