

FORUM

Bush and Kerry: Competing Visions for U.S. Energy Policy

JUNE 24, 2004 *

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WELCOME

Neil Numark: Good morning. I'm Neil Numark of Numark Associates and board member of the Sustainable Energy Institute (SEI). As many of you know, SEI is an independent, non-partisan educational institute interested in technological solutions to a cleaner energy future. And as a non-partisan energy group, we thought: what better role could we play in this election year than to bring together senior representatives of President Bush and Senator Kerry for an exchange of views and visions on energy options. David Garman and David Hayes are different kinds of

* Note from the Editor-in-Chief: The following text is an edited transcript of a Forum held at Georgetown University Law Center on June 24, 2004. I would like to thank Paloma Sarria of the Sustainable Energy Institute and Kristen Hite, one of our Symposium directors, for their efforts both in organizing this important election year discussion and editing the text for publication.

representatives of the two candidates. Secretary Garman participates as an official representative of the Bush administration. He is not affiliated with Bush/Cheney '04 and does not speak on behalf of the campaign. In contrast, David Hayes, a previous government official, as Deputy Secretary of Interior under President Clinton, participates today on behalf of the Kerry campaign. But they are both Davids; there are no Goliaths here this morning, and hopefully you've left your slingshots at home. In fact, we hope to have a serious and constructive exchange of ideas today and perhaps can reach some common ground for moving forward with improving national energy policy and achieving a cleaner energy future regardless of who wins in November.

And I'm now pleased to introduce our very able moderator, Ira Flatow, who will in turn introduce the speakers and panelists. National Public Radio science correspondent and award winning journalist Ira Flatow is the executive producer and host of *Talk of the Nation: Science Friday*. He has hosted popular science shows on TV and radio for 35 years. As NPR science correspondent from 1971 to 1986 Flatow covered science, health, technology, and the environment. His career has taken him to the Kennedy Space Center, Three Mile Island, and the South Pole. In one memorable NPR report, Flatow took former *All Things Considered* host Susan Stamberg into a closet to crunch Wint-O-Green Lifesavers in the dark and prove that they do indeed spark when crunched. His early reporting on the drug PCP was cited in congressional investigations into angel dust. Flatow's numerous TV credits include six years as host and writer for the Emmy award-winning *Newton's Apple* on PBS, science reporter for *CBS This Morning* and cable's CNBC. He has talked science on many TV talk shows including *Merv Griffin*, *Today*, *Charlie Rose* and *Oprah*. He most recently hosted a four-part PBS series entitled *Big Ideas* and his most recent book, *They All Laughed*, tells the stories behind some of the world's most important inventions. He is president of *TalkingScience*, a non-profit organization exploring new and better ways of bringing science news to the public. Ira.

Ira Flatow: Thank you very much for those words. I feel like I'm at my own funeral when I hear those kind things being spoken. I'm going to lay out the ground rules for our, shall we call it a debate, a frank exchange of views or something like that. But before I do that I have a little bit of housekeeping to take care of: the coin flip. We have to do the coin flip about who is going to be speaking first, so if you'd like to call it, here's heads, like they do it in the Super Bowl and I'll throw it up and you call it in the air.

It is one without a state on it so it didn't go blue or red either way. It is heads, so you will have the opportunity to make your presentation first. And this is how the format will go: each of our panelists will make a presentation, each will get ten minutes to speak, and at the end we'll have

a rebuttal. So, we'll have the first speaker for ten minutes, the second speaker ten minutes, and then each will have two minutes for rebuttal. And then we'll have a Q & A session with our journalists we've invited to participate, and we're waiting for one to show up. I'll introduce the ones who are here now.

Sitting on my left is John J. Fialka, a member of the *Wall Street Journal's* Washington Bureau and author of three books: *War by Other Means*, the first documented study of economic espionage in America; *Hotel Horrors*, a first-hand account of battles between press and the military during the Gulf War; and a third book, *Sisters, Catholic Nuns and the Making of America*, published in January by St. Martin's Press. He has a degree from Georgetown University Law Center, class of '65, and also a Columbia University graduate degree in the School of Journalism. During his newspaper career he has won several major awards for investigative journalism including the Raymond Clapper and the National Headliners awards. Thank you for being with us here today.

Elizabeth Shogren is a national correspondent for the *L.A. Times*. She covers environmental issues for the *L.A. Times* in the Washington bureau. Her previous national beats include the White House, Congress, social policy, money and politics, and presidential campaigns. Before joining the Washington bureau in 1993 she covered the break-up of the Soviet Union for the *L.A. Times* from its Moscow bureau starting in 1990. And prior to that, she worked as a freelance reporter based in Moscow starting in 1988, covered the fall of the Berlin Wall and the peaceful revolution of Prague in 1989, and has written for a variety of newspapers and magazines. We're waiting for Juliet Eilperin to show up. I think she'll be here. Due to the construction outside it is a little bit tough finding the building, so we'll wait for her to get here, and I'll introduce her then.

Our format calls for ten minutes for our speakers to present their positions and tell us what they would like to talk about. Winner of the coin toss and first up will be our first representative, David Hayes. David Hayes is currently a partner in the law firm of Latham and Watkins. He has been serving as an energy and environmental advisor for the Kerry campaign for more than a year. Mr. Hayes was a Deputy Secretary of the Interior for the second term of the Clinton administration. As Deputy Secretary, Mr. Hayes had authority over oil and gas drilling activities on federal lands as well as operational responsibility overall of the Interior Department's Bureaus, including the Bureau of Land Management, the Bureau of Reclamation, the Bureau of Indian Affairs, the Minerals Management Service, the National Park Service and the United States Geological Service and the Fish and Wildlife Service. David Hayes.

DAVID HAYES : PRESENTATION

David Hayes: Thank you very much Ira, and I would also like to thank the Sustainable Energy Institute for putting on this forum and providing this opportunity for what I hope will be an interesting and engaging exchange of views. I'm here representing John Kerry and his campaign for President. You're hearing a lot about John Kerry in terms of energy because John Kerry is talking about energy on most of his campaign stops. He feels very strongly about it and there are several reasons for it. In a nutshell, John Kerry believes that in order to have a strong, viable, and economically sound America, we need a supply of affordable, clean, and secure energy. Under the Bush administration, John Kerry believes we've been heading in the wrong direction and that we've become more dependent than ever on Middle East oil, with most of it coming from the most volatile area of the Middle East, the Persian Gulf. That dependence is putting America at risk both in terms of economic security and national security.

From a national security perspective, it's painfully obvious that relying on oil from this volatile region is not sound national security policy. The huge transfers of wealth that we are sending to the Middle East—U.S. \$20 billion each year is being spent by Americans on oil from the Persian Gulf—makes us dangerously dependent upon that region, and in the past, some of that money has been used to finance terrorism back against the United States. As John Kerry said as recently as Monday in Denver, under his administration, no man or woman in uniform will be put in harm's way because the U.S. needs to protect its interest in foreign-based oil supplies.

From an economic perspective as well, John Kerry feels strongly that our reliance on imported oil is bad for our country. We've all seen the price spikes at the pumps as we've filled up over the last several months in particular. The 30% increase in gasoline prices through the Bush administration is hurting the American consumer. The average American is paying U.S. \$300 more a year on gasoline for their cars and trucks, taking about 60% of their tax cut back from them. The costs to the economy are multiplied. Farmers are paying more than a billion dollars more for their gas supplies, truck drivers U.S. \$6 billion, airlines U.S. \$7 billion. The ripple effect through the economy is very, very harmful. John Kerry recognizes that this is a serious problem and that it's only going to get worse. Looking out toward the future, we're entering now a global economy with increasing competition for these same oil supplies that we are having to import and having to pay more for. The Chinese economy, for example, is revving up. If you compare the first quarter oil requirements in China for 2004 versus 2003, up 20% and they are buying

cars like crazy. We have new competitors for this global commodity, most of which is coming from the Persian Gulf.

We're also recognizing a new factor in terms of the long-term reliance that we have on oil and a fossil fuel economy—the negative environmental impact associated with our energy economy. John Kerry worries about climate change. We'll be talking about that some today and just as importantly, on the immediate health effects that are becoming more documented everyday associated with some of the burning of our fossil fuels. What would John Kerry do about this? He has a serious plan to tackle this fundamental problem of an energy economy that is too oriented toward insecure, expensive foreign oil. He wants energy independence and, again, he talks about it at every stop. What would that be? Is there a silver bullet? What's the strategy? John Kerry has a very sophisticated long-term strategy that doesn't rely on gimmicks. It relies on investments, on using the know-how in America, on leadership and commitment.

First, he would focus on traditional energy supplies, certainly not abandon them. He recognizes, for example, that we rely and will continue to rely heavily on coal in the United States. We need to make that coal investment work for America through continued investment in clean coal technologies. We need to also continue our investment in natural gas resources, particularly because we rely so much on the North American market for natural gas. He has proposed a partnership with Mexico and Canada to coordinate the finding and delivery of natural gas supplies. He has proposed and strongly supported, I should say, strongly supported the construction of a natural gas pipeline to free up the thirty plus trillion cubic feet of natural gas that are available on the North Slope awaiting a transportation system. He is serious about continuing to use our resources where it makes sense in terms of oil and gas supplies in the central and western Gulf and throughout the United States, where we've had traditional oil and gas drilling.

I'll say, and we'll talk more about this, that John Kerry also recognizes, however, that there are some places that we should not drill. And we should recognize that with only three percent of the globe's oil supply, for example, it is a foolish policy to drain America first, to push the envelope to try to drill for example in the Arctic National Wildlife Refuge, when the impact on our economy is going to be minimal, the long-term impact on our legacy significant, and most importantly it misses the point. We've got to change the debate away from suggesting that we can drill our way to energy independence by domestic supplies—we simply can't.

Secondly, John Kerry believes that we do need to develop new supplies of energy in the United States by unleashing our technological know-how through investments and incentives and having meaningful

targets. Where is that energy going to come from? It's going to come from wind, from solar, from biomass, bio-refining, hydrogen. Yes, we're going to hear a lot from Mr. Garman on that subject because the Bush administration is funding some of that work. John Kerry will do more. He will not only fund that work from annual appropriations; he will dedicate U.S. \$2 billion a year from the stream of money that is currently coming into the treasury from royalty payments for oil and gas development, put that in a dedicated energy and conservation trust fund that will be spent and available. This is U.S. \$20 billion over ten years to put some real financial muscle behind energizing the renewables industry that we have to promote in a more meaningful way than we are here in the United States today.

In addition to the dedicated funding, John Kerry thinks we need a renewable portfolio standard that will require that 20% of our electricity by 2020 come from these sources. The Bush administration has not supported a renewal portfolio standard. They are not willing to go that extra mile to make the investment and change needed to change the dynamic.

Third, John Kerry wants to make our energy supplies go farther, be more efficient. The Bush administration is very supply side oriented as I'll talk about further. One of their first acts was trying to roll back the efficiency standard for air-conditioning. Just a week or two ago the courts finally resolved that debate, and the Bush administration has caved, and we're going to have much more efficient air-conditioners here in the United States. That is illustrative of the Bush administration laissez-faire approach to pushing energy efficiency in the United States. John Kerry, throughout his career, has talked about the need to have a more efficient transportation fleet, that's cars and trucks and across the board. He wants to have the federal government show the way.

Fourth, investing in our infrastructure here in the United States, particularly when it comes to electricity. We had a horribly damaging blackout last year. The path is clear as to what we should do. We need to give the Federal Energy Regulatory Commission the tools to encourage investment, to have real reliability in our electricity system. John Kerry wants to go there. And finally, John Kerry believes that we need to pay attention to the environmental impacts of energy, that we should no longer try to separate these worlds. Instead recognize that providing cleaner more sustainable energy is our path to success, and that means yes, we look at climate change. We do not attempt to sweep it under the rug. We design a future energy for America that addresses the imperative for dealing with climate change, while also recognizing that Americans in cities today are suffering from power-generated pollution that also needs to be addressed. He has a clear plan. It's well thought out. It's backed by money. It's backed by standards and it's backed by leadership.

You will please note as you watch John Kerry on the campaign trail that this is one of his four major issues. Am I running out of time, Ira? I will stop there. I'm sure we will have lots of opportunity to talk more. I very much appreciate the opportunity to be here with you today to share John Kerry's vision for an energy future.

Ira Flatow: I love cracking that whip. Our next speaker is going to be speaking as an official representative of the Bush administration to discuss the administration's energy policies, and he is David Garman. He is currently an Assistant Secretary of Energy and acting Under Secretary of Energy. As Acting Under Secretary, Mr. Garman has overall responsibility for the U.S. Department of Energy operations in energy, science, and the environment with an annual budget of U.S. \$14 billion. In his dual capacity as Assistant Energy Secretary, David Garman leads the Office of Energy Efficiency and Renewal Energy in Washington and six regional offices. And that office has a U.S. \$1.2 billion technology portfolio, and I'm told it's the largest energy research, development, demonstration and deployment portfolio of the Department of Energy. Assistant Secretary Garman was instrumental in the development of the freedom car cooperative, that's an automotive research partnership, and the President's hydrogen fuel initiative. David Garman.

DAVID GARMAN: PRESENTATION

David Garman: Thank you Ira, and if you haven't heard it enough, I guess I have to repeat that I'm not here representing the Bush/Cheney campaign but again am here in my capacity wearing both those hats, as acting Under Secretary and Assistant Secretary for Energy Efficiency and Renewal Energy. And I, for one, will confine my comments to the President's policies and promise you I'm not going to say a negative thing about John Kerry, about his proposals, or even about you, Dave; I'm not going to do that. And that's kind of the way I operate, because prior to working at the Department of Energy, I spent over twenty years in the U.S. Senate working for both Democrats and Republicans. To this day, I have good friends on both sides of the aisle. Most folks have a difficult time labeling me as a hardened political partisan, so I'm not coming at you today in a partisan mode, because frankly, the subject of this forum is just too important for that.

So let me thank SEI for hosting us, although, I will take issue with the forum's title, "Bush and Kerry: Competing Visions for a U.S. Energy Policy," because I don't believe the visions or the end state of the Bush and Kerry energy policies are inconsistent with one another at all. Having worked in the Bush administration for more than three years, I can tell you that the President's vision of our energy future is one where energy is clean, reliable, affordable, and sustainable over the long term—not just

here in America, but around the world. After John Kerry was elected to the Senate in 1984, I had occasion to observe him closely, worked closely with his staff, and in fact, was with him in Kyoto during the climate negotiations. And from what I know of these interactions, I think it's fair to assert that Senator Kerry also wants energy services that are clean, reliable, affordable, and sustainable for the long term. So, in other words, I don't think the visions with respect to energy and the environment held by President Bush and John Kerry are in conflict, and not only are their long-term visions remarkably similar, there is even agreement with respect to many of the specifics.

For example, President Bush supports the long-term development of hydrogen fuel cells as a means of reducing emissions as well as our dependence on foreign oil. So does Senator Kerry. President Bush is a huge supporter of wind power. Thus far in the Bush administration, wind generation capacity has more than doubled, almost tripled, thanks in large part to the President's proposal to extend the renewable energy production tax credit, and his signature on legislation was doing just that in 2002. Senator Kerry supported that too. President Bush supports a renewable fuel standard to increase ethanol production to 5 billion gallons by 2012. So does Senator Kerry. President Bush supports tax credits for the purchase of hybrid vehicles, so does Senator Kerry. President Bush supports clean coal and carbon sequestration technology development, so does Senator Kerry. President Bush supports the Alaskan natural gas pipeline, so does Senator Kerry. President Bush supports expanding our capacity to receive imports of natural gas through the development of liquified natural gas facilities, so does Senator Kerry. President Bush would like to regulate mercury emissions from coal plants, so would Senator Kerry. So there is great agreement here.

And, yes, there are differences. For example, President Bush has supported higher corporate average fuel economy standards for automobiles, so has Senator Kerry. The difference is that the President supports them using the established public rule-making process and Senator Kerry has supported them through using a legislative fiat or mandate. And, yes, President Bush does support oil and gas exploration in a tiny sliver of the non-wilderness portion of Alaska's Arctic National Wildlife Refuge, not far from the village of Kaktovik, close to its airport and all of the other existing developments that already exist in that corner of the refuge. In an area of 2000 acres, in a refuge of about nineteen million acres, we could, we believe, produce a million or so barrels of oil a day for many years to come, reducing our dependence on foreign oil, and helping to stem the flow of U.S. dollars and jobs overseas that results from our growing dependence on foreign oil.

Now what's interesting is that the recommendation in the President's national energy plan with respect to ANWR was just one recommendation

out of 105 recommendations that were contained in the plan. It surprises a lot of people to learn that there were fifty-four other recommendations in the President's plan having to do with energy efficiency and renewable energy. Fifty-four. And you didn't hear much about them because they didn't elicit the controversy the way that ANWR did. And you probably didn't know that the President's plan, as it was proposed in May 2001, proposed more than U.S. \$5.3 billion in tax incentives for solar, other renewables, and energy efficiency, and it didn't propose a single dollar in tax incentives for the oil and gas industry. In other words, the President's energy plan is really quite balanced with a majority of its recommendations pertaining to energy efficiency and renewable energy. Now, the frustrating thing for me is that with this level of agreement that we've got, there is a really a great deal we could accomplish in the energy and the environmental realm if we're willing to inject more policy and less politics into debates about energy and the environment. We're willing to compromise when necessary, because to make progress in Washington. . . I do worry when some of my friends in the environmental movement appear unwilling to compromise because it makes it difficult to make progress on environmental issues.

What's really misunderstood around the nation is that, owing to the leadership of President Bush and Energy Secretary Spencer Abraham, we really have put into place a long-term element of an energy policy that is somewhat insulated from the near-term controversies. And it may surprise you to learn that the need to deal with carbon emissions over the long-term is the unifying theme for that long-term energy strategy. Frankly, if we want to deal with carbon dioxide emissions in a serious way, we better get busy on carbon sequestration technology that will allow us to use the world's abundant reserves of coal without adding to the carbon dioxide burden of the atmosphere. And through a program known as FutureGen, that is exactly what we're doing. And if we're truly serious about carbon dioxide, then we better think about reopening the door to nuclear energy. I know that's controversial, but through programs known as Nuclear Power 2010 and Generation IV, we're doing that. And if we want to address those carbon emissions and criteria pollutants from transportation as well as decrease our dependence on foreign oil, we had better develop hydrogen that can complement electricity as the energy carriers for a low carbon energy system. And that is what the freedom car program and the President's hydrogen initiative are all about.

In addition to all these things, we want to improve the performance of our renewable energy R&D program and the deployment of renewable energy technologies, and we've done that as well, although not at the expense of everything else, as some would have us do. These are all long-term plays focused on reducing carbon dioxide emissions. And this approach is, in my mind, so much more tangible than the approach

embodied in the Kyoto treaty, which is, for so many of the nations that have ratified it, little more than a statement of political aspiration. Many, indeed most, of the industrial nations signing up to the Kyoto treaty are not going to meet their greenhouse gas emissions target. And kudos, I think, to the President are in order for resisting the temptation for signing up to a treaty with near-term obligations that we can't meet, because doing so would only undermine the rule of law, and it would delay ultimate progress on the issue itself. So expect straight talk from us about energy. Energy is such a serious fundamental issue that is so important to our well being and our economy that we should, for the good of the nation, elevate it above politics. Thanks.

Ira Flatow: Our format calls for two minutes of rebuttal from each speaker, and we will throw it open to the panel and then eventually to questions from the audience. David Hayes, your two minutes.

DAVID HAYES: REBUTTAL

David Hayes: Thank you very much, Ira. I'll be brief in my rebuttal. I do think there are serious differences in approach between the Bush administration and John Kerry. And it's obviously in the administration's interest to blur those lines. One of the main points I made originally was that the Bush administration is very supply side oriented, and in my view and in John Kerry's view, is not oriented enough toward creating a new economy based on new fuels, a new order that deals with many of the environmental issues that I talked about first up. Two weeks ago President Bush was in Denver. He talked about the need to increase our oil and gas drilling here in the United States. Last week, [Department of the Interior] Secretary Gail Norton had a briefing at the National Press Club. She spent an enormous amount of time talking about oil drilling in the Arctic National Wildlife Refuge. We obviously have a disagreement in point of view about whether it makes sense to spend so much time talking about increased oil and gas drilling in the United States, on the one hand in terms of the contribution it will make to solving our energy problem, which is small, and number two, we have a difference of opinion about how seriously you take environmental issues into account when dealing with that issue. There are stark differences.

But I would like to get away from the supply side for the one minute remaining and focus on the fact that in order to really change the dynamic, in this country, of our energy supply and use, we're going to have to get serious dedicated funds, and I hope we'll have the chance to talk more about that in the Q&A, and John Kerry wants to do that. He has a bold proposal that goes far beyond what the Bush administration has put in budgets or proposals to the United States Congress. And number two, he's willing to tackle the tough issues and put serious goals and targets in front

of the American people. That means a renewable portfolio standard, that means more efficient cars, more efficient appliances. That means pushing America and unleashing the know-how and technology, and creating jobs that will come from the question of that kind of a challenge, and getting the debate away from whether we're going to drill for oil in the Arctic National Wildlife Refuge. Thank you.

Ira Flatow: Rebuttal, David Garman.

DAVID GARMAN: REBUTTAL

David Garman: As I said, there is not a whole lot to rebut because there is a lot to agree on, and I look forward to the day when we can work together to solve some of these very significant problems that confront us. But I do want to point out two things, because in a forum such as this, it's very easy to think the answer to this problem is, "let's just spend more money on it." We would love to spend more money on energy efficiency, renewable energy of course, but in the real world those are public dollars that compete against other public dollars that are vying for trying to cure cancer, providing for homeland defense, national security, and in the real budget debates, these trade-offs have to be made. We don't have to make those trade-offs here in this room today, and it's easy to say, "well, we're just going to spend more money." As you hear candidates claim they are going to spend more money on certain problems, think about letting the past guide your thinking.

In the energy efficiency budget, I'll just make two points. Number one, in the last three years of the Bush administration, more money has been both requested and appropriated for energy efficiency activities than was requested and appropriated in the last three years of the prior administration. So there is a record of performance that you can use to evaluate these claims that more money will be spent. Number two, our current spending pathway is, we believe, forward looking. More money is spent in the Department of Energy on energy efficiency and renewable energy than is spent on fossil energy and nuclear energy combined. Now, yes, we do talk about adding to supply, and that's the pragmatism and realism that we think we have to keep in mind. The new technologies we're developing are not going to be here tomorrow, so we have to think about how do we keep the bridge technologies—the energy supply—moving until we can reach these new technologies that we all talk about. Thank you.

Ira Flatow: Okay. Now I'm going to move to our panelist discussion, our journalists on my left, I've already introduced two out of three of those panelists. I want to introduce our last panelist, Juliet Eilperin of *The Washington Post*. She's a native Washingtonian and a graduate magna cum laude from Princeton in 1992 with a degree in Politics and Latin

American Studies. She's spent a year covering politics and economics as a Luce Scholar in Seoul, Korea. In March 1998, she joined the *Post* as its House of Representatives reporter, delving into impeachment as well as conflicts between the GOP House leadership and President Clinton. This spring, she shifted to the environment, covering air pollution, the Endangered Species Act and natural gas exploration. So we're going to questioning from each panelist, and you can begin, Juliet, with your first question.

JULIET EILPERIN: QUESTION - MERCURY STANDARD

Juliet Eilperin: There's been a lot of attention and public comment generated by the mercury standards that the Bush administration is considering. And one thing, obviously for Mr. Garman, I would be interested if you could talk about, first of all, the impact of that public comment on the administration, which has been extended by three months and has more public comments than any other EPA rule-making, I understand, and why you think it makes sense to take the Bush administration approach, which obviously has been countered by Democrats and environmental groups, who have pushed for more stringent mercury control earlier in the process.

David Garman: Sure, and let's say a word about mercury. Right now there is no federal cap on emissions from mercury. Right now power plants are free to emit mercury and, in fact, we emit about forty-eight tons a year of mercury. What the administration has proposed is again for the first time a 69% decrease in mercury emissions, lowering that 48 tons to 26 tons by 2010 and 15 tons by 2018. Now some, of course—and this is understandable and part of the process—are saying we need to do more, and we understand that. We have public comments to understand where the science is, what is the cost effective reduction that can be made as quickly as possible, what's the best way to approach that, and that process is unfolding. But I think it's important, for some who are saying, "no, we need 90 % emissions reductions, and we need them by 2007," or whatever the date is, we need to remain mindful that while we argue about this, there is still no emissions reduction cap in place today. So this is one of those areas where I think we need to work together with perhaps a little less volume and a little more collaboration, get a mercury standard in place so that we can start realizing the real health and human benefits that will result from that standard.

Ira Flatow: David Hayes, rebuttal.

David Hayes: I think the first thing to say is that we appreciate the fact that the mercury standard is not going to be set before November, and that John Kerry's administration will have an opportunity to make the final decision on the appropriate mercury standard. As you know, there

are strong feelings that the Bush administration is not taking a hard enough look at the technology that is available to reduce mercury. There is no question that we have a very, very serious problem with mercury deposition that is affecting fish, in particular, that are in our food chain. It is imperative that we be driven by the science and push hard to take this opportunity to take mercury out of our electric utilities. And to do so, I should say, in connection with strong reductions for nitrogen oxide, sulfur dioxide, and carbon. I think the fact that the Bush administration has continually avoided the carbon issue has complicated the question, because utilities are uncertain of how they can deal with all four pollutants at the same time. Instead, we're in a debate that is unfortunate, that is sort of segmented, where the mercury program is being looked at out of the context of at least one other significant pollutant, carbon, that also needs to be addressed and should be addressed simultaneously, as John Kerry has suggested.

Ira Flatow: David Garman, anything to add? No. Okay. Let's move on to John.

JOHN J. FIALKA: QUESTION – ENERGY PLANS

John Fialka: I have the same question for both gentlemen: When it comes to the supply side, we find ourselves going into a campaign with the highest gas prices, the highest gasoline prices, the highest coal prices and the highest uranium prices the market has ever seen. Now, Mr. Garman, your candidate saw some of these problems early on in 2000 and put together an energy plan which is still languishing in Congress for a variety of reasons. Mr. Hayes, you have an ambitious plan as well, but if the powers of incumbency are what I think they are in this town, if your candidate is elected, he will inherit a Congress that is probably as polarized, as pork-oriented, and as distracted as this Congress has been. So you both have a plan, how do you implement it?

Ira Flatow: David Garman, do you want to begin?

David Garman: Thanks, Ira. I said I wasn't going to say anything nasty about John Kerry. I'm not going to say anything nasty about the Congress either because of that very reason, John. And I think that is why it's important that we come together in this national conversation, outside of the political arena, about energy and help Americans understand that we are making value choices each and everyday. I think Americans have been sort of sold a bill of goods about energy that you can have cheap energy prices without environmental effect, and you can have it forever. And we are a responsive democracy, and it's the nature of responsive democracies that political figures tend to promise everything. But we do have a clash of values in this country, and most of the problem in passing an energy bill in Congress has centered on this clash of values. On the one

hand, we have a very strong environmental ethic in this country, and that is a good thing. We want cleaner air. We want cleaner water. We want improved health. We also want cheap energy services. People demand larger cars, larger homes. And helping folks to understand that we don't have to give up something, but we need to be smarter about our energy use, is something that is very important because, frankly, Congress is just a reflection of the population as a whole. And until we're doing a better job of communicating to the public as a whole about energy and some of the choices that confront us, we're going to have a difficult time convincing the Congress to do the same.

Ira Flatow: David Hayes.

David Hayes: John, your question is excellent. It's a very serious issue. I think there is a special opportunity for a new president to take this issue on and work with the Congress toward that end, primarily, I will say, for two reasons. One is, I think the American public, now perhaps more than at any time since the gas lines of the 70s, is tuned into this energy issue as a serious issue, because they are being reminded every day that their energy prices are going up and up and up. That provides the potential political dynamic that we haven't had in this country for awhile. The second aspect is when you have a new president, there is an opportunity for the president to create a limited agenda of top priority items that have tremendous opportunity to push forward. John Kerry has said this is one of his very top priorities. I think there is running room there, and in contrast, I think it would be very difficult for a re-elected George Bush to deal with this issue. To some extent he tried very hard—he and the Vice President tried very hard early on to put the spotlight on energy. I think many observers would express disappointment at the Cheney energy plan, both in how it was developed and the outcome. The energy legislation that is the result of that exercise is quite disappointing. I think most folks will agree on that. It doesn't have the kind of breakthrough themes that we're talking about today. The President is boxed in, to some extent, in terms of making real fundamental change in our energy policy. I think John Kerry has a unique opportunity if elected to break the dynamic.

Ira Flatow: Secretary Garman, any comment?

David Garman: I would only say that the legislation before the Congress now has a great deal of the breakthrough: it's got new language codifying the president's hydrogen fuel initiative, it has language codifying a tax cut for hybrid vehicles. It has an extension of the production tax credit for renewable energy. There are a lot of good things in the bill. And as is so often the case, the perfect is the enemy of the good. Nobody is absolutely totally satisfied with the bill before Congress. The President isn't. Some of his priorities are not in the bill. But in Washington, when you have an opportunity to get what you can, make the

progress you can and then move forward. I think it's an opportunity we should seize.

Ira Flatow: David Hayes, anything?

David Hayes: I just wanted to agree with David on one important point, that there are very many important provisions in the energy bill. I stipulate to that, agree to that, no question about it. There are also some very difficult provisions in that bill like the MTBE waiver, for example. But fundamentally, that bill is not addressing the landscape of issues we're talking about this morning. It does not supply, we think, the kind of secure funding going forward, like the trust fund that I talked about earlier, that John Kerry supports. It does not deal at all with the carbon issues in any meaningful way. There are some very important missing pieces. Today, what we're here to talk about really, and to your question, John, could John Kerry put on the table the good of the current energy bill, but add to it the sorts of elements that I have been talking about and have the chance to work in a bipartisan fashion with the Congress to make it happen? I think yes, and it's because the American public are tuned into this energy issue in a way that we haven't seen in some time.

Ira Flatow: Elizabeth Shogren, of the *L.A. Times*.

ELIZABETH SHOGREN: QUESTION – PORTFOLIO STANDARD

Elizabeth Shogren: This is a question for both of you, but I'll phrase it slightly differently for Mr. Hayes. Your candidate has a very ambitious portfolio standard in mind for the country. Could you describe what the strategy is for actually obtaining that standard, and which different sources would come in? For Mr. Garman, President Bush did sign a portfolio standard in Texas before he came into office and now he doesn't support one for the nation. Without one, is the progress towards developing these alternative energy sources quick enough, and if not, what more can be done, and why doesn't he support this national portfolio standard?

David Hayes: Elizabeth, you raise a good point. It's not enough to put a standard out there and not provide the tools to meet it. John Kerry's proposal is that we have 20 % of our electricity supplied by renewables by the year 2020. That's an ambitious goal. But it's a goal that mirrors some of the leading states' approach to renewables. California, Texas, and other states have been pushing in this regard. In essence, the federal government will work with those progressive states to help make as a national goal something that is appropriate and necessary if we're going to make this transition away from an oil-based economy. How to do it? I think the very fact of having that renewable standard requirement will provide, on the one hand, the type of certainty that can help promote the type of investment that is needed in these renewables. Renewables have been buffeted by the volatility in the markets associated with gas and oil.

They have been buffeted by question marks about the wind tax credit, which right now is non-existent because it's been stymied on the Hill. There is no certainty that we are going to have a policy that is going to have room and require room for those technologies. The other half of this is to supply the funding needed, in partnership with industry, to commercialize these areas, and that's where the energy and security trust fund comes in. And there are some very exciting opportunities. Dave knows about many of them; he is working with them as well – bio-refining, use of cellulosic fiber as a renewable energy source. This is no longer pie-in-the-sky stuff. We have affordable wind power already. We've got solar being applied around the world. We've got excitement in terms of the biomass area. We've got some challenges with hydrogen but a joint commitment to see what we can do there. There is a pathway here.

Ira Flatow: Secretary.

David Garman: You're right, Elizabeth. President Bush, when he was governor of Texas, did sign into law a renewable portfolio standard that Ryan Wiser, an expert on the subject at Lawrence Berkeley National Labs, calls the most successful renewable portfolios standard (RPS) in the country. And it makes sense to set renewable portfolios standards at the state level, and here is why. Number one, electricity is regulated at the state level, retail electricity. And thus it makes it easier to match the renewable portfolio standard with the situation that you face in that state, rather than fall victim to a kind of a one-size-fits-all RPS covering the nation. Each state can tailor a renewable portfolio standard that meets its needs. Number two, different states are endowed with different amounts of renewable energy resources. If you set a one-size-fits-all standard that applied to all states, you would create a situation where there would be a wealth transfer from states that do not have renewable energy to states that do.

Number three, states are free to set actually a much higher renewable portfolio standard than might be set at a national level. If you set a national level RPS it would probably be set at a least common denominator. Individual states that have renewable energy can actually go much further and achieve much more. And fourth, let me say this other thing: we're in this mindset where we go around apologizing to other nations in the world about our situation with respect to renewable energy, and I don't think we should do that any more. We in this country have 116 gigawatts of renewable electricity generation capacity, and that happens to be more than Germany, France, Sweden, Denmark, Italy, and Great Britain. This was recognized a couple of weeks ago in Bonn at the Renewable 2004 conference when Jürgen Trittin, the German environment minister, who is also a member of the Green Party, stood up at the closing plenary session and praised the United States for what we're doing in renewable energy, not only what we have deployed, but what we are

proposing to do in the international action plan emerging from that conference. So I think we have a tremendous record on renewable energy, and it's something we ought to be proud of. It's not something we should apologize about.

Ira Flatow: David, any rebuttal?

David Hayes: Only that there is a role for leadership at the federal level here on renewables; that a renewable portfolio standard is what is needed to energize the financial markets around the country, in our view, and to create the environment in connection with additional investments in technology to power us forward. Yes, yes, we've had some good success in terms of renewables, but it's still a drop in the bucket. That's why the states that are leading the charge are concerned about how they are going to get there. That was really your question, Elizabeth; can we get there? The question is in doubt, and unless there is more leadership on the federal level, I don't think we will get there, unless we change the discussion from where we're going to drill here in the United States to a more serious discussion about where we are going to invest in the new technologies of the future, and make that the subject of the National Press Club meetings, we're not going to get there.

Ira Flatow: Secretary, any last words?

David Garman: No.

Ira Flatow: Juliet, next question.

JULIET EILPERIN: QUESTION – CLIMATE CHANGE

Juliet Eilperin: Climate change has been one of the most difficult subjects, I think, for the public to grasp in terms of its import over the long term, and it's obviously been another fault line between the two parties. And I was wondering, Mr. Garman, if you could talk about specifically where the administration has moved on climate change—obviously, since opting out of Kyoto the administration has taken some steps on that—and why it's not endorsing some of the recommendations we're seeing recently coming from scientists? Just a few weeks ago there was another call for more drastic and immediate action on this question. And then obviously, Mr. Hayes, if you could talk about what again in the early days of a Kerry administration would we see in terms of international participation as well as steps here at home?

David Garman: Boy, that's a lot to talk about, and I'll try to refrain myself. First of all, the President has come out realizing that the Kyoto protocol, with a standard and a requirement that the U.S. reduce its emissions seven percent below 1990 levels by the 2010 budget period is, frankly, something that is not in our capability of doing. We can't meet that target, and a lot of other industrial nations have realized that they can't meet their targets either. And that's not a reason to panic because

you realize that climate change is a very long-term problem. Achieving stabilization of carbon dioxide levels in the atmosphere is something that we are wedded to, is something that we're obligated to achieve under the Framework Convention on Climate Change that was signed in Rio in 1992. It is a long-term issue, and the solution to this problem does not unfold over the next ten years; it unfolds over the next century. That is why the President's approach of saying, "let's slow our emissions of carbon dioxide, reducing our carbon intensity 18% by 2012." First, slow emissions, allow technology to develop such as FutureGen, freedom car, the next generation nuclear, renewables, all of these emissions-free technologies that can come into play, come into their own in the mid-part of the century and achieve drastic reductions in carbon dioxide levels that get us to a stabilization target later in the century. Even Kyoto proponents agree that Kyoto is merely the first step and that further emissions reductions have to happen later. Point one.

Point two. The fact that we have backed away from the Kyoto Protocol does not mean we've backed away from international cooperation and collaboration on climate change. Quite the opposite. We are of course still involved in the Framework Convention on Climate Change, if you will, the main. . . organizing climate change, but we're also doing some very unique things such as the international partnership for a hydrogen economy, where we have joined together fifteen nations in the European Union and some developing nations who are responsible for some 70 or 80 % of the global carbon emissions. We're working together for the first time on hydrogen fuel cell, hydrogen storage, and other technology collaborations, codes and standards that actually solve this problem. It's done outside the framework of Kyoto and the rubric and the controversy that all entails, but it provides this framework for cooperation where instead of arguing about the problem, we're going ahead and leaping forward in developing the solutions together. Same thing with something called the Carbon Sequestration Leadership Forum, another United States initiative where we are working with the nations of the world on these technologies that actually solve the problem. I guess the point is the fact that if you look back and honestly assess Kyoto, you say, we can't make that target, we can't in good conscience enter into that agreement. That doesn't mean we're walking away from the carbon problem or our obligation to stabilize greenhouse gas emissions in the atmosphere. Quite the opposite. We are working all the harder to begin to develop those transitional technologies that ultimately end up solving this problem.

Ira Flatow: David Hayes.

David Hayes: If you are looking for contrasts between the Bush administration and John Kerry's approach on energy policy, you've hit a big fat bull's eye here as your question indicated. David has given a very

eloquent, I think, attempt to defend the Bush administration's approach to climate change. And I want to move on beyond that, but I can't help but say first that the President, when he was campaigning, promised to address carbon as part of his overall air policy. And you will recall that Administrator Whitman went on that promise and shortly thereafter had the rug pulled out from under her as the President reneged. He also early on asked the National Academy of Sciences to take a second look at the science behind climate change to see if in fact this was a serious problem. The National Academy of Sciences came back confirming that the vast majority of scientists conclude that man-made impact of global warming gases are causing significant changes in the Earth's climate and need to be addressed.

Thirdly, in an extremely disruptive way, the President withdrew the United States from the international negotiations dealing with Kyoto. We shouldn't be talking about the specific target. John Kerry has said, as well, that the original Kyoto target is probably not the right target today. But the United States is not engaged in a serious way today in international negotiations on climate change. And the United States is being hurt by that. Not only are we not addressing that issue, but as market trading systems now developed in Europe, as progressive companies look to see how they can invest well to take advantage of carbon credits, to buy credits in the third world, etc., we are being left behind. We are not part of that marketplace that is being developed; we are not part of that dialogue in any meaningful way. John Kerry, as soon as he becomes President, will re-engage in the international arena, will bring the United States back to the table as a full partner to talk through how best to deal with climate change in the United States and in the world on a coordinated basis. No more unilateralism when it comes to climate change.

Ira Flatow: Rebuttal?

David Garman: I just have to again reassert the fact that we have not withdrawn from the international stage in the discussions about climate. If we have, I wonder what I was doing in Milan during COP-9 [the ninth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change], because I was there, and we were engaged, and we're working very hard in the context of the Framework Convention on Climate Change. We are very careful not to try to intervene with the other parties as they are making discussions and decisions about how Kyoto rules will unfold because that would not be a proper role for us. But we're there. In COP-10 in Buenos Aires, we'll be there. In COP-11, we'll be there. And we will remain engaged, because as the President said — if you don't believe it, look it up on the White House website, February 14, 2002 if memory serves — quote, "climate is

serious, the climate problem is a serious problem and we're going to take serious steps to confront it." The President believes that and it's a fact.

David Hayes: David, I'm sure you were there, I'm sure you were there, I'm sure you were there, but the United States does not have credibility on the world stage right now in climate change because of the approach of this administration. We are there, but we are not driving the process, we are not helping to write the rules that are now being implemented as we speak in the European Union, as they set up their cap and trade program, as they figure out how that marketplace is going to work. David's and his colleagues' comments, I am sure, are treated with respect when they are heard, but the world is moving beyond the United States, and it shouldn't be. We are, as the United States, responsible for 25% of the greenhouse gases that are causing this issue. We should be in the leadership position. We should have the United States economy in the front of our minds and be helping to make sure that the international community takes approaches that work for the United States. We don't have credibility on the international stage today. And it's because of the approach this administration has taken.

Ira Flatow: Okay, John.

JOHN FIALKA : QUESTION – NUCLEAR ENERGY

John Fialka: When it comes to these energy discussions, nuclear energy is sort of like the proverbial elephant in the parlor. It's there and it's big, but some people don't want to talk about it. Mr. Hayes, I heard your whole opening discussion. I don't think you mentioned nuclear at all. Nuclear provides 20% of our electricity in this country. The sustainable energy that you talk about provides about 2%. If you are going to get rid of nuclear energy, your choices at the moment are imported liquid natural gas, liquefied natural gas, which increases our energy reliance on other countries, and produces CO₂, or you could go to coal, which produces mercury or CO₂. For Mr. Garman, we've had four years of a nuclear-friendly administration, and we have yet to see one utility come up and put down its money and say, "we want to build a new nuclear plant." Does leadership not work in this area?

Ira Flatow: David Hayes, would you go first?

David Hayes: John, it's a very good question. Let me make clear that John Kerry recognizes that nuclear energy is a very important component of our energy mix here in the United States. As you said, it supplies 20% of the electricity supplied every day to Americans. John Kerry has no intention to phase out nuclear power in this country. He recognizes that it is an important source of our power and he supports nuclear power. John Kerry also recognizes there are some serious issues with nuclear power, in particular, the waste issue. And he has spoken out about Yucca Mountain,

and his concern that the science issues are not driving the debate in terms of Yucca Mountain. He has grave misgivings about whether Yucca Mountain is the appropriate place for the final repository for essentially all nuclear waste generated in this country. He thinks it's not. That is an important debate, but that should not be translated into "John Kerry does not acknowledge or understand the importance of nuclear power." He will make no moves, as far as I can represent to you today, to diminish nuclear power in this country.

Ira Flatow: Another thing the candidates have in common is the "nuke-u-lar," so, yes, Secretary, go ahead.

David Garman: John makes the point, and it's an excellent one, that 71% of the emissions-free electricity in the United States is provided through nuclear power. And it is another kind of chilling data point to understand that just to maintain our current emissions-free percentage of electricity and meet the growing demands we're going to have over the next twenty years, we are going to have to both double renewables and increase nuclear power by 50%. That is what is estimated we would have to achieve. So nuclear clearly has to play a role in the future.

Now, what have we done during this administration on these intractable issues regarding nuclear waste? Well, we have finally for the first time in a decade, after a long hiatus, made the presidential determination that Yucca Mountain is the site, and Congress agreed, and that was not an easy thing to do. By the end of this year we will be filing a license application with the Nuclear Regulatory Commission to license that waste site.

We have also been in the process of entertaining, from different consortia, folks who are interested in building new nuclear power generation sites in the United States, and we have had strong expressions of interest from multiple consortia. The difficulty with nuclear is something akin to the difficulty with renewables. The fuel is relatively free or absolutely free, but the high up-front capital cost makes the investment very difficult, particularly when investor-owned utilities are looking quarter to quarter on impacts on earnings. The fact that you are going to lay out and obligate a billion dollars and not be able to get a return on that investment for 8 or 9 or 10 years into the future, we don't know, because we haven't tried the new licensing mechanism that is now in place, is something that Wall Street just has a difficult time doing. Renewables face the same problem—high upfront capital costs, but low, relatively low, operating costs. So, in some ways the emissions-free generation sources are kind of similar in this manner. But we've made tremendous progress, and not only are we looking to get new nuclear plants built in this country before 2010, we're thinking about that next generation of nuclear power plants that are both proliferation-resistant and

inherently safe, and we call that “Generation IV,” and we think it’s time to keep moving ahead on that as well.

Ira Flatow: Any rebuttal? No. Next question, Elizabeth.

ELIZABETH SHOGREN: QUESTION – MANDATORY PROGRAMS

Elizabeth Shogren: When politicians decided we needed to clean up the emissions from power plants—whether it was sulfur dioxide or nitrogen oxide—there were decisions made to put mandatory caps or mandatory programs in place to reduce those emissions. We’ve talked a lot about global warming and the emissions that contribute to that problem today, but neither of you have talked about mandatory programs. I know the President said he would support one during the campaign and then backed away from it. Would he reconsider that in the future? And if not, why are greenhouse gases these magic gases that will disappear without mandatory programs? For you Mr. Hayes, would Senator Kerry commit to a mandatory program to restrict those emissions?

David Garman: Again, the President has said, yes, we’ll consider mandatory caps in the future. In the 2012 time frame, if the voluntary activities and the efforts to achieve our intensity targets are not successful, the President has said “yes.” Mandatory caps are definitely a possibility.

Elizabeth Shogren: When? In 2012?

David Garman: 2012 is what the President . . .

Elizabeth Shogren: To start or as a target? When it’s 2012 he won’t be president anymore. Is that what he means in 2012?

David Garman: Well, they may repeal the 25th Amendment.

Elizabeth Shogren: But is that what he is meaning by 2012?

David Garman: Yeah, he set out a plan where we reduce an intensity target and see how far we . . .

Elizabeth Shogren: But that means no, right?

David Garman: But please let me answer your question. He set out a plan to say we have until 2012 to meet an intensity target of 18% below business as usual. If we fail to meet that intensity target then we will have demonstrated that the voluntary action can’t do it and mandatory activities definitely need to be considered to achieve stabilization.

Ira Flatow: David Hayes.

David Hayes: Yes is the answer. John Kerry, and I apologize if I wasn’t clear before, believes that there should be a mandatory cap on carbon emissions, and he believes that it should be implemented in connection with the ongoing interest in establishing appropriate caps for the other major pollutants in the power industry—mercury, sulfur dioxide, and nitrogen oxide. In addition to the good sense that it makes from a climate change perspective, it makes great sense from a business perspective as well. The U.S. utility industry has no clue, except to know

that carbon constraints are coming, how they are going to manifest themselves and what they should be investing in the meantime. If that decision is delayed until 2012, at the same time the utilities are making billion dollar decisions in terms of control technology dealing with co-pollutants, that is not a good business model for the American ratepayer or for the health of the industry. It also provides a potentially devastating scenario where huge investments are made on control technology for conventional pollutants, but then within the relative blink of an eye, five or six years later, there is a look back and a “sorry, let’s do something else different” that has the potential to negatively impact the other investments that were made. It really makes no sense.

Ira Flatow: Secretary, rebuttal?

David Garman: No, other than to point out I think we’re a little myopically focused on the utilities. The carbon emissions problem is, of course, much larger than that, and one shouldn’t constrain the discussion about what utilities should do. You know, another issue should be what should we all do. I’m always amused when I see a Hollywood movie star driving their Toyota Prius, allaying their guilt, if you will, about consumptive life style, and then retiring to the 15,000 square foot mansion in Malibu. I’m thinking, “do people understand that buildings that we surround ourselves with and the homes that we live in actually are responsible for more energy use and greenhouse gas emissions than the cars that we drive?” In that sense it’s something that everybody has to take a role in trying to again not do without, not feel that they have to conserve energy as if they have to constrain the quality of life, but to use energy in a smarter fashion, and there are methods to do that. Maybe this is a good time to plug our web site, energysavers.gov, and the effort that we’ve undertaken with the Alliance to Save Energy to try to help communicate to Americans things they can do—no-cost and low-cost ways that they save money not only in their cars, but in their homes and offices.

David Hayes: I certainly agree with David that it’s more than a utility industry issue. Utilities are responsible for about two-thirds of the greenhouse gas emissions in the United States, so it’s a big chunk. It is more than that, and John Kerry is prepared to have a dialogue about carbon emissions in the rest of the economy as well. Many states are moving ahead in this regard. You know your paper’s home state of California is making a move in terms of carbon emissions associated with the automobile industry. Ten northeast states are setting up a trading system dealing with carbon. There is a complete vacuum of leadership on the federal level and as a result we’re getting a patchwork of ideas that are developing. It’s important to bring those together and to make sensible national policies that will be good for American business as well as good for the environment.

Ira Flatow: Okay, I think we may go to the audience questions now. We have about a half hour or so to go. I want to allow twenty minutes for audience questions and then ten minutes for a summary. We may have time for another question from the panelists. Elizabeth, go ahead.

ELIZABETH SHOGREN: QUESTION - CONSERVATION

Elizabeth Shogren: I'll ask about conservation, actually, because you made the point, Mr. Garman, about how you don't want people to do without, but you want them to keep consuming energy but in a smarter way. I think it's an interesting question to talk about, when there is a campaign going on. It seems what you're saying is that Americans should have big, big houses and big, big cars—we should just find better technology so that not as much energy is used for them. Is that what you mean to say, that people shouldn't think, "well maybe I don't need 15,000 square feet of house, but only 5,000 square feet of house?"

David Garman: Well, yes and no. I mean, this is America; people get to choose the kind of lifestyle they want to pursue. They should be aware of the implications for others, and they should also be aware of the choices that they can make. You have opportunities, if you are building a house, to make sure that certain things are done and that you do things with your builder—make sure the duct work is inside the building envelope, make sure that you make the right choices with respect to HVAC, go for Energy Star windows, Energy Star appliances. It doesn't mean you're doing without something, but it means that you are using energy in the smartest way that you can. We're trying to help consumers understand that this old, outdated image of energy conservation, which I guess is characterized by Jimmy Carter in a cardigan sweater huddling by the fireplace, is not what we're talking about. We're instead talking about using technology, understanding that a refrigerator you can buy today, an Energy Star refrigerator, uses a fourth of the energy of refrigerator models just ten years ago, and that these are choices that are available to Americans in their everyday lives. We want to help them understand that in doing that, not only will they be paying less for energy, but they will be doing something good for the environment as well.

Ira Flatow: Let me just throw in a question about something along those lines. Why is it that Europeans pay U.S. \$3 or U.S. \$4 a gallon for gasoline, but we think that's political suicide in this country? I mean they are getting something for their future by paying these prices, getting a trade-off for alternative energies in their future. Yet, we will not ask as policies of either candidate saying, "we shouldn't be paying so cheaply for gasoline because it costs a lot more in the long run, and it's not really what a gallon of gasoline costs."

David Garman: It is one of those bonded third rails of politics. It's very difficult to find any political figure in Washington who is arguing particularly in this environment that Americans should pay more for energy than they currently are paying. We're not proposing that.

David Hayes: It's happening though. Nor is John Kerry, obviously, in terms of suggesting higher taxes or any other surcharges on gasoline. What he is concerned about, as I talked about at the outset, is what the marketplace is doing to the price of gasoline. You are raising a very important sort of philosophical debate, Elizabeth. There is a difference in terms of approach, I think, between John Kerry and the administration on the question of efficiency. The last administration took some very significant steps in helping to establish efficiency targets for some of the major energy users in the United States, like air conditioning, for example. As I mentioned at the very outset, the Bush administration's immediate reaction was to pull back the final rules that they still had within their grasp and to fight it. In the meantime, there has been some web-based encouragement of efficiency, but we should be engaged in a more disciplined, I think, forthright dialogue about whether there are other areas of the economy where we can have more efficient use of energy. The rulemakings that we had in the previous administration to establish sensible standards for air conditioners, refrigerators, etc. have dried up. We haven't seen them in this administration. They are prepared in the energy bill to support them, but they are not prepared to use their administrative authority that they have right now to do what the previous administration did. We have too much at stake, in terms of our energy, not to take a more affirmative, forward-leaning look and dialogue about how we can have a more efficient energy economy in the United States.

Ira Flatow: David Garman, any rebuttal?

David Garman: Oh, absolutely. In the next couple of weeks you'll see announced notice of proposed rulemakings on efficiency standards for commercial air conditioning, residential furnaces and boilers, distribution transformers. And clearly we think the appliance standards program is a successful program. Let me correct this misnomer about the air-conditioning standard. Number one, the current seasonal energy efficiency ratio in regulation for central air-conditioners is something called a SEER 10, that is a ratio of energy use per BTU of cooling. The Bush administration came into office finding that the prior administration had wanted to raise the air conditioning standard 30% to a SEER 13. It reviewed that rulemaking and found that the prior administration had failed to do an antitrust test on that rulemaking, as required by law, and had to withdraw it, and went through a supplementary rule-making process and decided that the appropriate level, after doing the antitrust review as required by law, was to raise energy efficiency standards 20 percent to a SEER 12.

So you hear this discussion about a roll back—it wasn't a roll back. We are proposing to raise it 20%; the prior administration proposed to raise it 30%. It got caught up in litigation and as a consequence, because this standard comes into effect in 2006 and air conditioning manufacturers and everybody else did not know what the standard was going to be because of the litigation, the manufacturers, and we agreed with them, said, "well, let's just go with the higher standard," even though it was not properly promulgated. And yes, one court ruled one way, but in the district court, I think the Second Circuit, a case was waiting to attack the veracity of the original 13 SEER rule, and the manufacturers could have easily won that case. And if we had a case where both, and this was my nightmare, if we had courts in one district rule a 13 improper and courts in another rule 12 improper, my concern was we might be back down to the 10, with no promise of higher without having to start the air-conditioning standard process all over again.

Let me add one more point about efficiency standards because these are very important. These do become very contentious, and this is another one of those areas where, if energy efficiency advocates and manufacturers can come together early on in the rule-making process—and that is what we are trying to facilitate with these announced notices of rule-making on these three new standards that are going to be coming out here in the next few weeks—we want folks to get together and try to collaborate on what makes sense, so that we don't have unnecessary delays resulting from litigation, getting the Hill involved with legislation, and everything else that we've seen in the appliance standard program in the past.

Ira Flatow: David Hayes.

David Hayes: There were very strong signals sent early in the administration, in connection with the air-conditioning standard, when it was pulled back, that this is not the approach the administration wanted to take in terms of mandating increased efficiency. It was the same time period as when the EPA arsenic flap arose, where the EPA pulled back a Clinton-based proposal to reduce the arsenic allowed in drinking water. And I would say that we're in the twilight of the first term of the Bush administration, and we're getting an advance notice of proposed rulemaking, meaning it's not even the proposed rule. We're at least a year or two away, I'm sure David would agree in terms of the APA rulemaking process. That is not the kind of leadership in terms of efficiency that John Kerry thinks we need.

AUDIENCE: QUESTION – NATIONAL INTERCONNECTION STANDARDS

Ira Flatow: I'm going to turn now to the questions from the audience. And there are many. We had a lot of questions dealing with nuclear

energy, nuclear power. I think a lot of those were equal or similar questions and they've been dealt with up here. Before you relax, you ought to see the audience questions. Now let me get to a few of those.

This is to David Garman. "The President's national energy plan spoke to ensuring consumer access to renewable and distributed technologies. What has your office or the administration done to work with the states and utilities to break down non-market barriers to promote national interconnections standards?"

David Garman: Shirley Neff, did you ask that question?

Ira Flatow: She did.

David Garman: As you know, this is another one of those very difficult issues. You know the good news is that twenty states now have net metering, which is something that empowers local consumers to be able to sell electricity back to the utility, which makes, frankly, investing in solar panels or some other source of distributed generation more cost effective for end consumers. And this is the good news: states are moving ahead on that. One of the things that we did with respect to interconnection standards, and is something that we've been working on for several years, and we have promulgated that standard through the IEEE, is the technical interconnection standard. What are the technical protocols that have to be abided by so that manufacturers of everything from fuel cells to invertors know what the rules of the game are when you are going to be connecting into the electricity grid? So this progress is moving ahead.

There are more difficult and intractable problems that have to be surmounted, to be sure, and it's part of the whole difficulty that we face in all manner of electricity regulation. For instance, if I want to put six kilowatts or five kilowatts of solar power on my roof, but I still want to be connected to the grid for those times when the sun doesn't shine, or if I'm actually needing more electricity than my solar panels can provide, I still want to be hooked up to the grid so that I have that power. But if I'm not using much electricity from the utility, the utility is forced to pay the fixed cost associated with keeping my home on the grid, but they are not getting any revenue from it. Different states are having difficulty, admittedly, in understanding what's the proper level of compensation to utilities for providing that backup power even when they are not getting revenue on a month-to-month basis. Those are tough questions and it's going to take some time to work through some of those things.

Fortunately, the good news is we continue to bring down the costs of some of these technologies so that they are more and more attractive to consumers in the marketplace. But you know, I'm reminded that grid-connected solar electricity cost around U.S. \$2.00 per kilowatt hour in 1980 and now we've got it down to 20 cents. And that is tremendous progress, but when average retail residential rates are closer to 7 cents, that

still tells you how much further we have to go. So the questioner is absolutely right. We have some technical progress that we still have yet to make for distributed energy, but we also have some regulatory progress that we still have yet to make.

Ira Flatow: David Hayes, any reaction?

David Hayes: I'm pleased to be part of the continuing dialogue between Shirley Neff and David Garman. I'll only say that the question raises a point that we really should not let this session go without mentioning, which is the potential importance of distributed energy in the United States. The traditional model of centralized energy supply delivered through a large national grid is going to continue to be our backbone, but for many reasons including a closer feedback between the energy supplier and user and the ability to take some pressure off the centralized system, distributed energy is going to be extremely important to our future.

David Garman: I agree, and when combined with hydrogen and some of the new technologies, it actually has a possibility of, if you'll forgive the term, democratizing energy services because it lets everybody play.

AUDIENCE: QUESTION – ALTERNATIVES TO YUCCA MOUNTAIN

Ira Flatow: That leads to a good segue to my next question from the audience. Secretary, you pointed out how much total renewable energy supplies the United States, as compared to Europe, and you add them all up and it's more than Europe together. So this questioner asks why has Denmark been able to achieve 20% electricity supply from renewables, not hydro renewables—probably she means a lot of wind because I see huge amount of wind energy in Denmark—while the U.S. is only at 2%, even though the U.S. has a much larger renewable resource capacity?

David Garman: Part of the reason is the size of our economy. When you go around the world, you don't realize that our economy is tremendous. On an absolute basis of course, we out-perform the world in terms of renewable energy production. As a percentage basis, we don't. Is that a factor of the size of our economy? In large part it is. We produce, in this country, 25 % of global goods and services, and thus the energy demand associated with that production is higher as well. I was asked this question in Bonn and my response is, "I'm not going to apologize for the large and growing size of the United States economy and the jobs and economic opportunity it provides."

Ira Flatow: Sounds like a Ronald Reagan answer—"I'm not going to apologize"—for you being so young. David Hayes, any reaction? I'll move on to the next question. This is one for you. "What is Senator Kerry's alternative to Yucca Mountain?"

David Hayes: Senator Kerry wants to sit down with the nuclear industry and all interested parties and try to figure this out. All of you who follow nuclear matters know that if there is any issue where there is no easy solution, it's the ultimate disposal of waste from nuclear plants. John Kerry, as I mentioned before and as he said publicly, has lost hope basically with the Yucca Mountain situation, and that clearly means there needs to be a dialogue to figure out Plan B. And frankly, we should have a Plan B anyway. It is no way to deal with nuclear waste to basically put all of our eggs in one basket, as this administration has done with Yucca Mountain.

Ira Flatow: And the President's policy?

David Garman: I would only add that the process that led us to Yucca Mountain really began in 1981 when we were considering the Nuclear Waste Policy Act in Democratic and Republican congresses alike. Democratic and Republican administrations alike have coalesced on this site in Nevada between Death Valley and Yucca Flats. Candidly, we are preparing an NRC license, which will in essence put in public view all of the scientific modeling and the discussion inherent in the NRC. Frankly, the public needs to judge the suitability of Yucca Mountain as a permanent repository. This is a tough question. And it would be a shame, when this process that has been going on for twenty-five years and led us to this point, if we had to say, "no, stop, wait, let's start all over," because we need this emissions-free electrical generation capability, and without it you can say goodbye to any serious effort to dealing with the carbon emissions problem.

AUDIENCE: QUESTION – STRIP MINING COAL

Ira Flatow: Next question. Mountaintop-removal coal mining has devastated southern Appalachia. How do you propose to mitigate the environmental harm of strip mining coal? I'll begin with David Hayes.

David Hayes: I think President John Kerry would, I would expect, have more credibility in dealing with this issue, frankly, than the current administration. It's a serious issue. The approaches that are taken to mining coal are very tricky from an environmental perspective. There is also a recognition that coal is a very important part of our energy economy, as I said before. The United Mine Workers have endorsed John Kerry. They are prepared to work with John Kerry along with the coal companies to ensure that our mining operations, as we go forward, are environmentally sound.

David Garman: I don't know how you can say, "I want to." Maybe you're not saying this, maybe I misunderstood, that if you want a supply of coal from the east you have to use modern methods, and I'm all for making sure that these are environmentally stringent. I think the record

indicates that the rules have been getting tougher and tougher on these kinds of mining operations. I think it's difficult to say on the one hand, "we want to curtail mining operations in the east," while at the same time saying, "we like coal and coal needs to be used." It's a tough thing, and I don't know how this . . .

David Hayes: And that's not what I said, David. You know, and I want to be clear about this, John Kerry recognizes the importance of coal. He wants to continue to have a vibrant coal industry in the United States. And the key to sustainable long-term coal in the United States, among other things, is to make sure it is harvested, if you will, in an environmentally sound manner.

David Garman: I agree, and there comes a point where if one is not properly balancing environmental values and costs, coal mining in the east shuts down and you merely extract coal from the Powder River basin in the west, and that becomes our coal supply. So, it is a tricky problem and a balance that has to be maintained.

David Hayes: I agree 100%.

Ira Flatow: I can't have agreement. Let me move on to something else. Here's something, "While *The Day After Tomorrow* is a movie with dubious scientific basis," I told you it would get better, "the possibility of an abrupt climate change is a serious scientific concern. This has been reflected by a series of studies by notable sectors of our government and various professionals in this field. What, if any, policy measures against abrupt climate change have both advisors formulated?" So we won't be left with the Statue of Liberty under water.

David Hayes: I'll take a crack at it. I didn't see the movie, but it's a serious issue. The questioner is right and the questioner was referring, I think, to the Department of Defense study that talked about it, and there are other very reputable scientists who are quite concerned about it. I don't know if you, I'm speaking personally here, can take any special steps to deal with sudden climate change *per se*. I think the thing to do is to get serious about climate change period. And hope that with appropriate actions we can not have that day come.

David Garman: I'm fascinated with the subject because, you know, the geologic record shows that about 15,000 years ago coming out of the second ice age there was a period known as the Younger Dryas period where we had sudden and abrupt climate change. It had nothing to do with human influence or human impact, but it happened. We plunged back into an ice age as a consequence of that. It was, you know, an interesting geologic event. And it did happen remarkably rapidly over the course of decade or two. But it is interesting to note that this happened absent any kind of human-induced forcing mechanism. And there is a lot we're still learning about the planet, a lot we're still learning about atmosphere-sea ice interactions, and it's one of the reasons that the

administration has proposed to spend more on climate science to fully understand just what the implications and possibilities that might confront us in the future are.

Ira Flatow: Is it then the administration's position that the current global warming is not related to human activity?

David Garman: No, it's not. I mean it's not the position of the National Academy of Sciences report that the President accepted, which said, in essence, that while it's very difficult to get the human fingerprint, if you will, human activities were creating elevations in greenhouse gas concentrations and that had an impact on the climate. You can't derive from that any specific climate event, such as a flood in Germany, a tornado in Nebraska. What it tells us is that there is a lot more we need to learn about the climate, the climate system, how we interact with it. There is an increasing level of, in my personal view, scientific certainty about human influence on the total climate system. What we don't know is how dramatic is that influence. Is it just part of background noise or is it actually a prime driver? There is solar variability, there are all kinds of other factors that are also playing. We can't isolate the human factor necessarily from the other factors that are involved.

Ira Flatow: Alright, we've now reached the end of the Q&A part of our session and the audience questions. Our intent now is to allow each of our speakers to speak for -- concluding remarks -- for about ten minutes total. Each of the speakers will have five minutes to provide a closing statement, no rebuttal. And since David Hayes was first to start off, we'll give that honor to the Secretary. David Garman, go ahead.

DAVID GARMAN: CONCLUDING REMARKS

David Garman: I guess I will just close with a couple of observations. What is the Bush administration's vision for the future? We're envisioning a future where many of our homes can generate their own power from renewable resources and where homeowners can actually make money selling excess energy back to local utilities, in other words, Shirley Neff's question. We're envisioning a future where businesses can be housed in net zero-energy buildings that produce on average as much energy as they consume. We're envisioning a future where our factories can become energy parks that both use and produce energy. We're envisioning a future where our cars and trucks are powered by fuel cells, fueled by hydrogen, and their only emissions are water vapor. We're envisioning that future where rural America, and we didn't get to talk about this today, and I wish we had, because I think this is another area of agreement between the two camps, is revitalized through the production of agricultural feed stock, for bio fuels and a whole new range of products. We're thinking about that future where our electricity infrastructure is

revitalized, where it's robust and reliable and allows greater consumer choice and allows market signals to be sent and acted on.

We're not going to realize this kind of an energy future by working alone or working independent from each other. Democrats and Republicans, westerners and easterners, states and local communities, regions with ample energy sources, regions without many energy resources, all have to be willing to compromise and work together to achieve that vision. That's tough because we are in a politically divided nation, and we have a polarized electorate and frankly that has a tendency to politicize everything. But we should continue to strive to make progress on issues where we really just disagree on the margins. We think it is right to cut mercury about 70%, and our critics want to push closer to 90%, and as long as we fight about that, mercury remains unregulated. And we want to pursue cleaner air through [the President's] Clear Skies [proposal] that can provide some real certainty. Our critics want to pursue cleaner air through a method that ultimately depends on reinterpretation of the Clean Air Act and the law and litigation that emerges from that. That is a recipe for continued inaction. Where clean air is concerned, I would rather go for certainty.

We can argue about how much we ought to spend on the things we agree on, such as hydrogen and carbon sequestration or clean coal, but let's work together to get the programs under way, and we'll adjust the funding as we go. If we're serious about carbon dioxide, let's not pretend we won't need nuclear energy or carbon capture and sequestration technologies to get us to a lower emission profile. We need all of the emissions-free technologies that we can muster and shouldn't dismiss any of them out of hand.

Finally, let's not forget about how far we've come and what we can be proud of. Since 1970, total emissions in the six principal pollutants listed in the Clean Air Act have been cut 48% in spite of a 164% increase in our economic output. We remain the world's largest producer of energy from clean renewable resources, with an installed capacity of 116 gigawatts. We can be proud of the progress we've made on the environment as a nation, and while we still have significant challenges ahead, I am optimistic that if we can keep a civil discourse like we had today, there will be no limit to what we can accomplish in meeting the energy needs of our country, while protecting and improving the environment. And I just want to thank SEI and Georgetown University for hosting us today, thank our moderator, thank the panelists, and all of you in the audience.

DAVID HAYES: CONCLUDING REMARKS

David Hayes: Thank you also for the opportunity to participate and for your attention today. In summary, I would start by commenting that John Kerry is disappointed with the Bush energy policy. This administration came in making energy a priority. It went about establishing an energy policy in a way that has been very controversial. The administration fought all the way to the Supreme Court to not share who visited the administration, etc. The recommendations that have come out, of which Secretary Abraham has said 90% percent have been implemented, have not given us an energy secure future. Mr. Garman is a terrific representative of the administration, as you've seen here today. I think that if you look across the rhetoric of the administration there is a very strong supply-side orientation to how to deal with our energy problem, with a strong emphasis on drilling here at home the traditional oil and gas, a reluctance to take bold steps to push for efficiency standards, a reluctance to fund to make a bold step to have a dedicated fund for renewables.

And the results have been dramatic for Americans. In the last twelve months, twenty-four months, in ways that I think none of us could have imagined, we have been reminded of how important the implications of a successful energy policy are, as Americans have paid more and more money for gasoline and other energy supplies. Since George Bush took office, rising gas prices have cost the U.S. consumers over U.S. \$25 billion, while incidentally, at the same time, the major oil companies have made more than U.S. \$33 billion in profits. We are not on a course toward energy independence. The administration also has not dealt with the serious issue of ensuring that our increased energy supplies and approach come with environmental protection, dealing with the climate change issues we talked about today, the localized air pollution issues such as mercury, sulfur dioxide, acid rain, nitrogen oxide, and ozone, which are causing significant health effects throughout America.

John Kerry has a plan. He wants to change the dynamic. He is making energy one of his top priorities. He is very, very serious about it, as demonstrated by his commitment to dedicate over U.S. \$2 billion a year in new money through the energy and conservation trust fund coming from oil royalties, his dedication and commitment to making renewables a part of the real portfolio of America going forward, establishing a goal, providing the leadership, and energizing the American workplace to get there. We are in a transformative period here. The oil and gas backbone of the energy world, we've known in particular oil, because of increased world competition, our own concerns about national security should shift. We need to make it shift and we need to make sure that American workers and American business are at the forefront of the new energy economy.

John Kerry is making this one of his top priorities. He is going to be there with leadership, with funding, with commitment throughout, and our economic security and our national security will both benefit greatly if we elect John Kerry to pursue this new national energy policy. Thank you.

Ira Flatow: I want to thank both our guests, David Hayes and David Garman, for taking time to be with us today. I thank you all for joining us. I'm Ira Flatow. I'll see you on Friday.