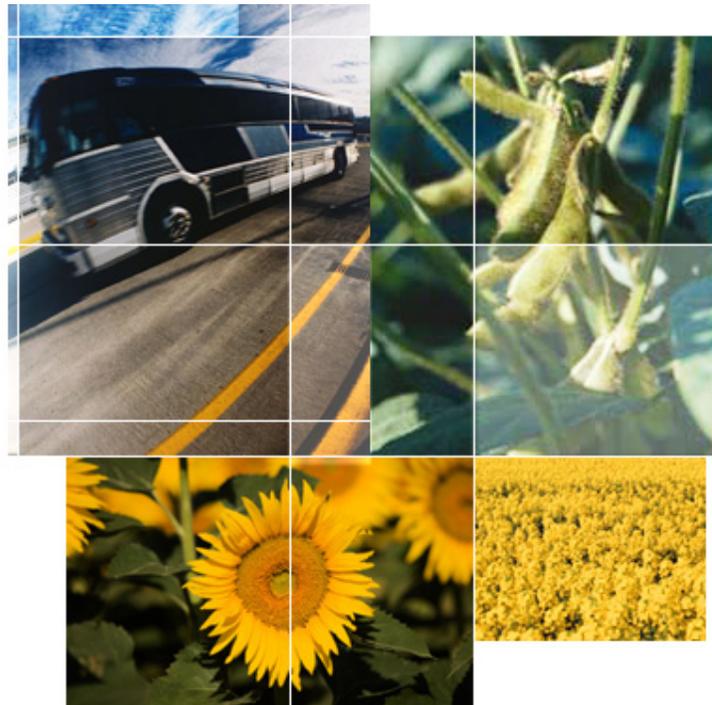


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# RENEWABLE ENERGY

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*"Let me start first by telling you that America has got to change its habits. We've got to get off oil. And the reason why is, first, oil is -- dependency on oil presents a real challenge to our economy. As economies grow -- and we want all our economies to grow; we want people to be prosperous, we want people who are living in poverty to be able to grow out of poverty. We want there to be general prosperity, but as economies grow, until we change our habits, there is going to be more dependency on oil."*

President George W. Bush, March 5, 2008

**Information compiled by  
The Information Resource Center  
Embassy of the United States of America  
June 5, 2008**

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## **Introduction**

The Information Resource Center (IRC) of the Embassy of the United States in Madrid has prepared this information packet for Digital Video Conference (DVC) on alternative/renewable energy with Kevin Hurst, Philip Clapp and Robert W. Corell. This DVC will take place on June 5, 2008.

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## **1. Kevin Hurst**



### **Senior Policy Analyst at the White House Office of Science and Technology Policy**

Kevin Hurst, serves as a Senior Policy Analyst at the White House Office of Science and Technology Policy (OSTP). Since November 2001, Dr. Hurst has worked in the OSTP Technology Division on policy issues related to biometrics, border security, and counterterrorism. He also works on technology policy in the domain of energy and climate change. After working at Sundstrand Aerospace and General Motors, Dr. Hurst began a technology policy Fellowship in 2001, which led to a regular staff position at OSTP in 2002. Dr. Hurst graduated from MIT in 1987 and subsequently served four years as a U.S. Navy officer. He completed a Ph.D. at Georgia Tech involving research in controls, signal processing, and power electronics.

Source: U.S. State Department

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## **2. Philip Clapp**



### **Deputy Managing Director at the Pew Environment Group, Pew Charitable Trusts**

Philip Clapp is Deputy Managing Director at the Pew Environment Group, Pew Charitable Trusts.

Philip Clapp is Deputy Managing Director of the Environment Group at The Pew Charitable Trusts. The Pew Environment Group is a national not-for-profit organization with major offices in Philadelphia and Washington DC, which focuses primarily on addressing the problems of climate change, the preservation of large intact wilderness ecosystems, and the protection of the global marine environment. The work conducted by the Pew Environment Group is considered to be some of the most influential conservation policy work in the United States with a growing international presence.

Prior to its 2008 merger with the Pew Charitable Trusts, Philip was the founding chief executive officer of the National Environmental Trust (NET). NET was founded in 1994 as a campaign-based organization, designed to target specific environmental issues with an innovative and progressive style of environmental advocacy. As the chief executive officer of NET, Philip served as its principal fundraiser representing the organization with more than fifty foundations and individuals donors in the United States and Europe. He also functioned as the key media spokesperson and strategist, appearing in more than 200 broadcasts and cable news and public affairs programs, including network evening news and morning programs. Philip regularly represented NET before Congress and executive branch agencies.

Before founding the National Environmental Trust, Phil served as legislative director to Congressman (later Senator) Timothy E. Wirth (D-CO), and directed the House Budget Committee Task Force on Energy and the Environment. After leaving Capitol Hill, Phil was vice president of National Strategies, Inc., where he advised major investment banking firms and represented both management and labor unions in mergers and acquisitions. He has also headed the government affairs practice of the Washington law firm of Spiegel & McDiarmid, which represents more than 400 local governments on federal regulatory issues. Phil is a graduate of Harvard College.

Source: U.S. State Department

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### 3. Robert W. Corell



#### **The H. John Heinz III Center for Science, Economics, and the Environment's Global Change Director**

Robert W. Corell, Ph.D., The H. John Heinz III Center for Science, Economics, and the Environment's Global Change Director is also a Council Member for the Global Energy Assessment and a Senior Policy Fellow at the Policy Program of the American Meteorological Society. Dr. Corell, the lead author for IPCC's assessments won the Nobel Peace Prize award in 2007. He has been quoted in Vanity Fair, Golf Digest, CBS News' 60 Minutes, and many additional public media outlets. In 2006, he completed an appointment as a Senior Research Fellow at the Belfer Center for Science and International Affairs of the Kennedy School for Government at Harvard University. Dr. Corell is actively engaged in research concerned with both the sciences of global change and with the interface between science and public policy, particularly research activities that are focused on global and regional climate change and related environmental issues. Dr. Corell is the chair of the Arctic Climate Impact Assessment and he chairs an 18-country international planning effort to outline the major Arctic-region research challenges for the decade or so ahead. He lead an international strategic planning group that developed the strategy for and the programs and activities designed to harness science, technology and innovation for sustainable development. Prior to January 2000, he was Assistant Director for Geosciences at the National Science Foundation where he had oversight for the Atmospheric, Earth, and Ocean Sciences, the NSF's Polar Programs, and the NSF Global Change Program. While at NSD, Dr. Corell also served as the Chair of the President's National Science and Technology Council's committee that has oversight of the U.S. Global Change Research Program and he was chair of the international committee of government agencies funding global change research. Further, he served as chair and principal U.S. delegate to many international bodies with interest in and responsibilities for climate and global change research programs. Prior to joining the NSF in 1987, he was a Professor and academic administrator at the University of New Hampshire. Dr. Corell is an oceanographer and engineer by background and training, having received Ph.D., M.S. and B.S. degrees at Case Western Reserve University and MIT. He has also held appointments at the Woods Hole Institution of Oceanography, the Scripps Institution of Oceanography, the University of Washington, and Case Western Reserve University.

Source: U.S. State Department

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**4. Remarks by President Bush to the  
Washington International Renewable Energy Conference 2008,  
Washington Convention Center  
Washington, D.C.  
March 5, 2008**



President Bush stands next to a Mack-Volvo hybrid truck  
at renewable energy conference trade show in Washington.

(© AP Image)

THE PRESIDENT: Thank you all. Thank you for the warm welcome. Thanks for coming. It's my honor to be here. I'm proud to address the Washington International Renewable Energy Conference. (Applause.) Thankfully, you only left it for five words. (Laughter.) I appreciate your commitment to renewable energy. I probably didn't help today when I rode over in a 20-car motorcade. (Laughter.)

I appreciate the fact that -- I hope you understand that you're pioneers on the frontiers of change; that I fully suspect that this conference will seem unbelievably outdated within a decade; that people will marvel about how far technology has helped change our habits and change the world. And I hope you take great pride in being a part of this constructive change. And so thanks for coming to America. We welcome you here.

To my fellow citizens, thanks for being entrepreneurs and forward thinkers. To members of my administration, like Sam Bodman who just introduced me, or Ed Schafer, the head of the Agriculture Department, or Steve Johnson, EPA -- thank you all for serving our country. Thanks for your kind words, Sam. I appreciate all the others who are here from my administration.

Mike Eckhart is the President of the American Council on Renewable Energy -- he and I went to Harvard together. I don't know if he has had to spend time overcoming that, but I certainly have -- (laughter) -- particularly in Texas politics. But it's good to be with my friend, Mike. I can assure you that when we were at Harvard Business School together he never envisioned that we would be in our respective positions, like we are today. As a matter of fact, I know in 1975 he never even thought about the word "renewable fuel," much less "President George W. Bush." (Laughter.)

I welcome the ambassadors who are here. I welcome -- listen, let me start first by telling you that America has got to change its habits. We've got to get off oil. And the reason why is, first, oil is -- dependency on oil presents a real challenge to our economy. As economies grow -- and we want all our economies to grow; we want people to be prosperous, we want people who are living in poverty to be able to grow out of poverty. We want there to be general prosperity, but as economies grow, until we change our habits, there is going to be more dependency on oil.

My job, as the President of the country, is to put pro-growth policies in place. But we're dependent upon oil, and so as our economy grows, it's going to create more demand for oil -- same with China, same with India, same with other growing countries. It should be obvious to you all that the demand is outstripping supply, which causes prices to go up. And it's making it harder here in America for working families to save, and for farmers to be prosperous, and for small businesses to grow.

The dependency upon oil also puts us at the mercy of terrorists. If there's tight supply and demand, all it requires is one terrorist disruption of oil and that price goes even higher. It's in our interests to end our dependency on oil because it -- that dependency presents a challenge to our national security. In 1985, 20 percent of America's oil came from abroad. Today that number is nearly 60 percent.

Now, all the countries we import from are friendly, stable countries; but some countries we get oil from don't particularly like us. They don't like the form of government that we embrace. They don't believe in the same freedoms we believe in, and that's a problem from a national security perspective, for the United States and any other nation that values its economic sovereignty and national sovereignty.

And finally, our dependence on fossil fuels like oil presents a challenge to our environment. When we burn fossil fuels we release greenhouse gases. The concentration of greenhouse gases has increased substantially. We recognize all three of these challenges, and we're doing something about it.

I've come today to tell you that America is the kind of country that when they see a problem, we address it head-on. I've set a great goal for our country, and that is to reduce our dependence on oil by investing in technologies that will produce abundant supplies of clean and renewable energy, and at the same time show the world that we're good stewards of the environment.

Now, look, I understand stereotypes are hard to defeat. People get an image planted in their head, and sometimes it causes them not to listen to the facts. But America is in the lead when it comes to energy independence; we're in the lead when it comes to new technologies; we're in the lead when it comes to global climate change -- and we'll stay that way. (Applause.)

Overall, over the past seven years -- or since I've been the President, the federal government spent more than \$12 billion to research, develop and promote alternative energy sources. Our private sector is investing a lot of money -- and I fully understand there needs to be consistent policy out of the U.S. government that has thus far provided incentives to invest. What the government doesn't need to do is send mixed signals. I understand private capital, understand how it flows. And so when people look at the United States to determine whether we're committed to new technologies that will change how we live, they not only need to look at the federal investment, but they've got to understand there's a lot of smart money heading into the private sector to help develop these new technologies.

Our strategy is twofold: One, we're going to change the way we drive our cars; and two, we'll change the way we power our businesses and homes. In other words, the two most vulnerable areas to economic disruption happens to be automobile use and electric power. The two biggest opportunities to help change the environment is through how we drive our cars and how we power our country. So first let me talk about automobiles.

I laid out a goal for the United States to reduce gasoline consumption by 20 percent over the next 10 years -- that's called 20-10 [sic]. By the way, that's in the face of a growing economy -- to reduce gasoline usage by 20 percent over 10 years.

And we'll work with Congress. For those of you who watch the American legislative process, you think it's probably impossible for the American President to work with Congress these days. Well, it's not true. I was able to sign a good piece of legislation called the Energy Independence and Security Act of 2007. This legislation specifies a national mandatory fuel economy standard of 35 miles per gallon by 2020, which will save billions of gallons of gasoline.

Secondly, the legislation requires fuel producers to supply at least 36 billion gallons of renewable fuel in the year 2022. In other words, these just aren't goals, these are mandatory requirements. I'm confident the United States can meet those goals, and I know we must, for the sake of economic security, national security, and for the sake of being good stewards of the environment.

Biodiesel is the most promising of these fuels. Biodiesel refineries can produce fuel from soybeans, and vegetable oils, and recycled cooking grease, from waste materials. All you out there with waste, you may be in business before you know it as this new technology kicks in. Most Americans -- or, more Americans are beginning to realize the benefits of biodiesel every year.

Last year, we produced 450 million gallons of biodiesel. That's up 80 percent from 2006. Today there are more than 650 biodiesel fueling stations in America. There are hundreds of fleet operators that use biodiesel to fuel their trucks, and that's just the beginning of what is going to be a substantial change in our driving habits.

And then there's ethanol. In the 2000 campaign I strongly supported ethanol. In 2008 it's amazing to think about how far our country has come since the year 2000. Ethanol production has quadrupled from 1.6 billion gallons in 2000 to a little over 6.4 billion gallons in 2007.

And the vast majority of that ethanol is coming from corn, and that's good. That's good if you're a corn-grower. And it's good if you're worried about national security. I'd rather have our corn farmers growing energy than relying upon some nation overseas that may not like us. That's how I view it. (Applause.)

In 2005 the United States became the world's leading ethanol producer. Last year we accounted for nearly half of the worldwide ethanol production. I don't know if our fellow citizens understand that, but there is a substantial change taking place, primarily in the Midwest of our country.

Corn ethanol holds a lot of promise, but there's a lot of challenges. If you're a hog-raiser in the United States, you're beginning to worry about the cost of corn to feed your animals. I'm beginning to hear complaints from our cattlemen about the high price of corn. The high price of corn is beginning to affect the price of food.

And so we got to do something about it, and the best thing to do is not to retreat from our commitment to alternative fuels, but to spend research and development money on alternatives to ethanol made from other materials -- for example, cellulosic ethanol holds a lot of promise. I'm sure there are people in the industry here that will tell you how far the industry has come in a very quick period of time.

I look forward to the day when Texas ranchers can grow switchgrass on their country, and then have that switchgrass be converted to fuel. I look forward to the day when people in the parts of our country that have got a lot of forests are able to convert wood chips into fuel. And those days are coming. (Applause.)

The Department of Energy had dedicated nearly \$1 billion to develop technologies that can make cellulosic ethanol cost competitive. And the interesting thing that's happened in a relatively quick period of time is that the projected cost of cellulosic ethanol has dropped by more than 60 percent. In other words, new technologies are coming. The job of the federal government is to expedite their arrival.

Expanding use in ethanol and biodiesel requires getting more cars on the road that use these alternative fuels. We expect the private sector to respond. Our consumers are going to demand flex-fuel vehicles when they find out that these new technologies are available. As a matter of fact, there's 5 million flex-fuel vehicles on our roads now. I just saw some new ones here. Amazing joint venture with Mack and Volvo on these giant trucks that are using biodiesel to power them. I said, can you make it more than a couple of miles? The man said, not only we can make it more than a couple of miles, we can accelerate out of danger if we need to.

Technology is changing. Five years ago those trucks would not have been available for people at this exhibit to look at. Today they're on the road. As a matter of fact, the United States Air Force is using these kinds of trucks. Things are changing.

Another way to reduce our dependence on oil is promote hybrid vehicles. We're providing tax incentives to people to buy these fuel-efficient vehicles. In other words, the government is saying if you buy one, we'll give you a little incentive to do so. I've supported those policies. I think it makes sense to create a consumerism for these kinds of vehicles.

When I was first elected, there were virtually no hybrids on the roads. Today there is nearly a million. We're also investing in plug-in hybrids. We want our city people driving not on gasoline but on electricity. And the goal, the short-term goal, is to have vehicles that are capable of driving the first 40 miles on electricity -- vehicles that don't look like a golf cart, by the way; vehicles that meet consumer demand. And that day is coming. The battery technologies are amazing, and the United States is investing millions of dollars to hasten the day. The battery technology is more efficient and competitive.

This administration is a strong supporter of hydrogen. We spent about \$1.2 billion in research and development to bring vehicles running on hydrogen to the market. A lot of people don't even know what I'm talking about when I'm talking about hydrogen. But the waste product of a hydrogen-powered vehicle is pure and clean water.

This is an amazing opportunity for us. Now, this will be a long-term opportunity, compared to ethanol and biodiesel and plug-in hybrids, but it makes sense to invest now and work on the technology so that when it becomes cost-competitive, it's available. We're also working for the day when, you know, these new fuels power not only automobiles and trucks but airplanes.

In December, the United States Air Force flew a C-17 -- that's a huge airplane -- from Washington state to New Jersey. For those of you who don't live in America, that is a long way. (Laughter.) And they did so on a blend of regular and synthetic fuels. I was interested to see that Virgin Atlantic flew a 747 from London's Heathrow Airport to Amsterdam, fueled partly by

coconuts and Brazilian babassu nuts. I've never seen a babassu nut, but it's amazing that it helped power an airplane the size of a 747. (Applause.)

What I've just described to you is the beginning of a new era. And -- oh, it's probably hard to equate it to the Model T, but maybe we're not that far off. And the United States believes it's in our interests to promote this new era.

Secondly, we've got to reduce our dependence on oil and fossil fuels, and replace them with alternative energy sources to power our homes and our work places. Look, you can't have a vibrant economy unless you've got reliable electricity. For those of you in the developing world, you know what I'm talking about. As a matter of fact, the issue is not reliable electricity; the issue is getting electricity to people in the first place. Well, here in the United States, we've overcome those issues. And now we've got to make sure that we have enough of it that enables us to continue to grow.

And the truth of the matter is, you've got to be -- have a growing economy to be able to afford these technologies in the first place. So here are some ways that we're dealing with the issue of electricity. One, I strongly believe the United States must promote nuclear power here in the United States. Nuclear power -- (applause) -- if you're interested in economic growth and environmental stewardship, there's no better way to achieve both of them than through the promotion of nuclear power. Nuclear power is limitless. It's one existing source that generates a massive amount of electricity without causing air pollution or any greenhouse gases.

And yet the United States -- we haven't built any nuclear power plants in a long time. We have a promising technology available and yet we're stuck -- until recently. All of our citizens probably don't understand, but France, our ally and friend, gets nearly 80 percent of its power from nuclear power. Isn't that an amazing statistic? It's time for America to change.

My administration is working to eliminate the barriers to development of nuclear power plants. Last year we invested more than \$300 million in nuclear energy technologies. We want our people to understand that this generation of nuclear power plants is safe. We want people to feel comfortable about the expansion of nuclear power.

There's regulatory uncertainty when it comes to permitting plants in the United States. You can't expect somebody to invest a lot of money and have the regulatory process at the very end stop that capital from being deployed. It makes no sense. Just like tax policy has to be certain, so does regulatory policy have to create a sense of certainty in order to get people to invest.

So in the energy bill I signed in 2005, we began to address that uncertainty with federal risk insurance for those who build nuclear power plants. This insurance protects the builders of the first six new plants against lawsuits -- we got a lot of them in America, by the way; too many lawsuits, in my judgment -- against bureaucratic obstacles and against delays beyond the -- that would cause people to hesitate to participate in this program.

We've also launched a program called Nuclear Power 2010. Sam Bodman is in charge of all these. It's a partnership between our industry and the U.S. government. Since we've started these programs, we've received six applications to build and operate new nuclear power plants in the United States. The paradigm is beginning to shift. And we anticipate that another 13 applications will be submitted this year.

Many of the construction projects will be supported by \$18.5 billion in loan guarantees provided by the government. By the way, that's part of a loan-guarantee projects that we got out of Congress -- \$18 billion for the nukes, \$10 billion for renewable energy expansions in the United States. (Applause.) This will enable our plant owners -- guys that are applying for loans -- (laughter) -- the whole purpose is, is we want to expand our nuclear power industry. And we're taking specific actions to do it.

You know, there's a lot of politicians who just talk. I hope when history is written of this administration, we not only talked, we actually did positive things and constructive things.

We're also working with our friends overseas for the Global Nuclear Energy Partnership. I believe developing nations ought to be encouraged to use nuclear power. I believe it's in our interests, I believe it will help take pressure off the price of oil, and I know it's going to help protect the environment. And so we're working with other nations, like Japan and France and Great Britain and Russia and China, to form this energy partnership, the purpose of which is to help developing nations secure cost-effective and proliferation-resistant nuclear power, and at the same time to conduct joint research on how to deal with the nuclear waste issue, through positive, productive reprocessing.

And so the United States of America has got a strategy to help change our electricity mix here at home. And part of that strategy is on nuclear power. Another part of that strategy is based upon wind power. Now, since 2001, America has increased wind energy production by more than 300 percent. This is a new industry for us, and it's beginning to grow. More than 20 percent of new electrical generating capacity added in America came from wind last year. I met some of the wind boys. They're excited about the opportunities in the U.S. market, and they should be, because this new technology is taking hold. Last year, America installed more wind power capacity than any other country in the world.

I don't know if you know this or not: When I was the governor of Texas, I signed a electric deregulation bill that encouraged and mandated the use of renewable energy. Today, Texas produces more wind energy than any other state in the Union. If an oil state can produce wind energy, other states in America can produce wind energy. (Applause.) I remember when I signed the bill, I said, there's a new day coming for wind. And they said, well, you're leaving the state, and a lot of hot air is going with it. (Laughter.)

In addition to wind power, we have spent, since I've been the President, a billion dollars on harnessing the power of the sun. The solar technology folks who are here will tell you there's some amazing changes have taken place in a quick period of time. I mean, I really see a day in which each house can be a little electric generator of their own, and feeding back excess power into the grid through the use of solar power. (Applause.)

I told you that we're -- and by the way, last year U.S. solar installations grew by more than 32 percent in the U.S. In other words -- I hope you're excited by these statistics; I certainly am. But these are just the beginning. Before I came over here, I really did sit around the Oval Office trying to figure out what a President will be saying 10 years from now. If you really think about what would have been said in 2000 compared to today, imagine what's going to be said 10 years from now compared to today.

I will repeat something I've been saying a lot here in America: The United States is serious about confronting climate change, and the strategies I just laid out for you are an integral part of dealing with climate change. Should there be an international agreement? Yes, there should be,

and we support it. (Applause.) But I would remind you, an agreement will be effective -- and that's what we want, we want an effective agreement. I think we ought to be results oriented people, not process people. It's one thing to have a nice conference, but out of those conferences we should expect results. We want a strategy that works, not sounds good.

And so in order for there to be effective international agreements, it must include -- these agreements must include commitments, solid commitments, by every major economy, and no country should get a free ride. (Applause.)

And meeting this goal is going to take some tough choices. I've got a good man named Dan Price on my staff who is leading the U.S. efforts on the major economies conferences that we're hosting. That's, by the way, running parallel to the U.N. process. This is not in lieu of the U.N. process; it is to enable the U.N. process to become effective.

The first step is to get the major economies to agree to a goal. If you want commitment, if you want all folks at the table, the first step has got to be to say, we've got a problem, and here's a goal. I believe in setting clear goals, goals that are easy to understand.

And then it's up to us, each nation, to develop a strategy to help meet those goals. We've got different economies. We've got different electricity mixes. What I've just described to you is a strategy to deal with energy dependence, as well as climate change. It will be different from country to country. We've got a different energy mix than a lot of nations do.

And we expect countries that sign up to that goal to develop a strategy to meet that goal. And the United States will do the same thing. We're not going to say, okay, you set the goal and you meet it, but we're not going to join. Once we join, we join. And so you're watching a process unfold to make sure that we have an effective international agreement.

And I fully understand -- and by the way, I want to repeat what I said before: An effective agreement is one that recognizes that economies got to grow in order to be able to afford investment in the first place; that you must have economic wealth in order to be able to afford the research and development.

This is an issue that requires substantial commitments of money, and it's hard to commit money if you don't have any. And it's hard to commit money if your economies are hurting. So we ought to make sure we grow our economies and at the same time have the money necessary to invest. And I fully understand some nations are incapable of affording these new technologies.

And here's what we intend to do about it: There ought to be an international fund, a clean technology fund from the wealthy nations to help poorer nations clean up their environments. (Applause.) I call on our Congress to commit \$2 billion to the fund. And in my travels here in my last year of the presidency, I'm going to call on other wealthy nations to contribute to this fund.

I want any agreement to be effective. I don't want us just to feel good. I want to be able to say, when it's all said and done, we've done something that's actually going to solve the problem. And if people are truly interested in solving the problem, if you're interested in expanding alternative energy, then we need to come together to eliminate tariffs and other trade barriers to enable clean technologies to move duty-free around the world. (Applause.)

There's too many -- too many impediments. There's too much protectionism. I mean, if you're truly interested in solving global climate change, then you should insist to your leaders to join the United States and other countries to make it easier to move these products, to eliminate all barriers to trade and technologies that will enable us to be better stewards of the environment.

So here's the strategy to deal with climate change and energy dependence. The United States not only is pursuing this strategy on an international basis, we also have got bilateral partnerships -- with Brazil, for example, we signed a biofuels compact. We signed agreements with China to expand cooperation on biomass and to improve energy efficiencies for vehicles and industrial production. We're working with Sweden. The Deputy Prime Minister is here, and I'm honored you are here, on a very constructive relationship. There's a U.S. company working with United Kingdom's Wave Hub to harness the power of the seas.

This is an ambitious vision I've just described to you. And obviously you support something ambitious being done, otherwise you wouldn't be here at this conference. I hope you're excited when you see the exhibits. Just keep in mind how far we have come in a short period of time, and be hopeful about how far we will go in a short period of time.

There was an article in The New York Sun not long after Alexander Bell's famous phone call; his first phone call to a fellow named Thomas Watson. I would like to read to you from that article: "It is to be doubted if the telephone will be used otherwise than locally. It's too sensitive for circuits exceeding a few miles in length." Imagine if that author of that article were alive today. I suspect he would have been sorry he used the words "it should be doubted." After all, he'd see a world where crystal-clear telephone calls are placed over circuits that stretch not miles but across the globe. He would see a wireless infrastructure developing around the world.

Same thing is going to happen when it comes to energy. Oh, I know there's doubters, but I'm confident that when we look back at this period of time, they will say, how could you have doubted the capacity of mankind to develop the technologies necessary to deal with the real problems of the 21st century?

Leave with one thing in mind: The United States is committed, and we're firm in our commitments, to deal with energy problems and to deal with global climate change. And it's been my honor to be with you today.

May God bless you.

Source: The White House, Office of the Press Secretary
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***5. Investment in Renewable and Alternative Energy Technologies***  
***Bush discusses efforts to increase energy security, confront climate change.***  
**March 5, 2008**

Increasing Our Energy Security And Confronting Climate Change Through Investment In Renewable Technologies

The United States Is Reducing Dependence On Oil By Diversifying Energy Supply, Increasing Energy Efficiency

Today, President Bush spoke to the Washington International Renewable Energy Conference and discussed the importance of renewable and alternative energy technologies to increasing America's energy security and addressing the long-term challenge of global climate change. The more sources of energy we have, the less influence any one of them, such as oil, has over the United States' security and prosperity. Renewable energies are some of the most promising new sources for energy because they are clean and because their supply can be regenerated. The Washington International Renewable Energy Conference brings together government, civil society, and private sector leaders to address benefits and costs of the global deployment of renewable energy technology.

The United States Is Increasing Renewable Fuels And Reducing Its Dependence On Oil Through Improved Energy Efficiency

In December, President Bush signed the Energy Independence and Security Act (EISA) of 2007, which responded to his "Twenty in Ten" challenge in last year's State of the Union Address to improve vehicle fuel economy and increase alternative fuels.

- The Renewable Fuels Mandate will increase the use of renewable fuels by 500 percent – requiring fuel producers to supply at least 36 billion gallons of renewable fuel in the year 2022.
- The Vehicle Fuel Economy Mandate specifies a national mandatory fuel economy standard of 35 miles per gallon by 2020, which will save billions of gallons of fuel and increase efficiency by 40 percent.

Additionally, the Act advances the following efficiencies:

- The Lighting Efficiency Mandate will phase out the use of incandescent light bulbs by 2014, and improve lighting efficiency by more than 70 percent by 2020.
- The Appliance Efficiency Mandate sets over 45 new standards for appliances.
- The Federal Government Operations Mandate will reduce the energy consumption of Federal Government facilities 30 percent by 2015. Additionally, all new Federal buildings will be carbon-neutral by 2030.

The President is reducing dependence on oil through the development and use of vehicles that run on different sources of energy. President Bush is:

- Calling on every vehicle manufacturer that serves the U.S. market to produce flex-fuel vehicles – cars and trucks that can be powered with either gasoline or biofuels – across their fleet;
- Providing tax incentives for people to buy fuel-efficient hybrid vehicles that run on both gasoline and electricity; and
- Investing in plug-in hybrids that can cover up to 40 miles on electricity alone.

-- Since President Bush took office, the Federal Government has spent more than \$12 billion to research, develop, and promote alternative energy sources.

In December, President Bush signed into law new loan guarantee authorities to support alternative energy sources. The new authority would allow additional loan guarantees of up to \$38.5 billion, of which \$18.5 billion in loan guarantees will support construction of new plants and enable nuclear plant owners to reduce their interest costs. \$10 billion of loan guarantees will go towards renewable and/or energy efficient systems and manufacturing, and distributed energy generation, transmission, and distribution. This loan guarantee authority also includes: \$6 million for coal-based power generation and industrial gasification activities at retrofitted and new facilities that incorporate carbon capture and sequestration or other beneficial uses of carbon; \$2 million for advanced coal gasification; and \$2 million for advanced nuclear facilities for the "front-end" of the nuclear fuel cycle.

#### The United States Is Reducing The Use Of Gasoline In Cars And Trucks And Replacing It With Alternative Fuels

Since 2001, ethanol production has quadrupled from 1.6 billion gallons in 2000 to an estimated 6.4 billion gallons in 2007, with the vast majority coming from corn. In 2005, the United States became the world's leading ethanol producer, and last year, the U.S. accounted for nearly half of worldwide ethanol production.

The Administration is also investing in next generation biofuels such as cellulosic ethanol. This can be made from wood chips, switch grass, and other agriculture products. With the President's 2009 Budget, the Department of Energy has dedicated about \$1 billion since 2001 to develop technologies that can make cellulosic ethanol cost-competitive. Since the President took office, the projected cost of cellulosic ethanol has dropped by more than 60 percent.

Last year, the U.S. produced about 450 million gallons of biodiesel – up 80 percent from 2006. Today, there are more than 650 biodiesel fueling stations, and hundreds of fleet operators use biodiesel to fuel their trucks. Every year, more Americans are realizing the benefits of biodiesel, which can produce fuel from soybeans and other vegetable oils, including waste products like recycled cooking grease.

Over the last five years, the U.S. Government has invested about \$1.2 billion in hydrogen research and development to help bring hydrogen fuel cell vehicles to market. These vehicles use no gasoline at all, and emit clean, pure water.

#### The United States Is Reducing Dependence On Oil And Other Fossil Fuels By Replacing Them With Alternative Energy Sources To Power Our Homes And Workplaces

Since 2001, the U.S. has increased wind energy production by more than 300 percent. Last year, more than 20 percent of new electrical generating capacity added in the U.S. came from wind – up

from just three percent a few years ago – and the U.S. installed more wind power capacity than any other country in the world.

Between 2000 and 2007, the United States' solar energy capacity doubled – and last year, U.S. solar installations grew by more than 32 percent.

President Bush supports an increase in the use of nuclear power as a clean, efficient energy source to meet America's growing needs for electricity. Nuclear power can generate massive amounts of electricity without causing any air pollution or emitting greenhouse gases, and a growing number of people believe it is an environmentally necessary choice.

-- Last year, the Administration invested more than \$300 million in nuclear energy technologies.

-- The Administration also launched a partnership between industry and the U.S. Government called the Nuclear Power 2010 program. This program has resulted in six applications to build and operate new nuclear plants in the U.S., with another 13 applications expected to be submitted this year.

#### Investing In Renewable Energy Technologies Is One Of The Best Ways To Address The Long-Term Challenge Of Global Climate Change

The United States is forming international partnerships to pursue clean sources of renewable energy.

-- The Administration is leading the way toward an international agreement to slow, stop, and eventually reverse the growth of greenhouse gases. This agreement will only be effective if it includes binding commitments by every major economy, developing or developed, and gives none a free ride. The U.S. is promoting consensus toward commitments by every major economy so as to promote post-2012 arrangements that are global and environmentally effective.

-- To accelerate this effort, the Administration launched a series of meetings of the world's major economies, which use the most energy and emit the most greenhouse gases. The purpose of these meetings is to support the UN negotiations by recommending a collective long-term goal for reducing greenhouse gas emissions, commitments to national mid-term goals with plans to back them up, and ways to cooperate on goals and technology in key industrial sectors.

-- Internationally, the U.S. launched the Global Nuclear Energy Partnership, with 21 partners so far, to pursue technology breakthroughs to support the long-term expansion of clean, safe, proliferation-resistant nuclear power here and around the world – and figure out better ways to deal with the waste.

-- President Bush is committing \$2 billion over the next three years to create a new international clean energy technology fund to help address the growing problem of accelerating greenhouse gas emissions in major developing countries. Along with contributions from the U.K., Japan, and other countries around the world, this fund will increase and accelerate the deployment of cleaner, more efficient technologies in developing nations like India and China and help leverage substantial private-sector capital by making clean energy projects more financially attractive. The U.S. believes countries seeking access to the fund should be undertaking credible national plans to limit greenhouse gases and have those plans reflected in a post-2012 climate change agreement.

-- In 2007, U.S. Trade Representative Susan C. Schwab announced that the United States and European Union submitted a proposal – in the WTO – to increase global trade in environmental goods and services. The initiative places priority action on technologies directly linked to addressing climate change and energy security. The U.S. and EU proposed to eliminate tariff and non-tariff barriers to environmental technologies and services through a two tiered approach:

1. A first-ever WTO agreement on worldwide elimination of tariffs on a specific list of climate friendly technologies recently identified by the World Bank.
2. A higher level of commitment on the part of the developed and the most advanced developing countries to eliminate barriers to trade across a broader range of other environmental technologies and an array of environment-friendly services.

-- In addition, the U.S. is forming several other international partnerships to pursue clean and renewable energy, such as the Asia-Pacific Partnership on Clean Development and Climate (APP). This partnership includes Australia, Canada, China, Japan, Korea, and India. Since its inception, the APP has endorsed over 25 new renewable energy projects. Additional international partnerships and initiatives include:

- Working with Sweden to advance biofuel and clean vehicle technologies
- Cooperating with Brazil to promote biofuels research, production, and use in the hemisphere and beyond.
- Cooperating with China to expand biofuel production and improve energy efficiency for vehicles and industry
- Working via a U.S. company with the United Kingdom's Wave Hub to harness the power of the ocean

Source: The White House, Office of the Press Secretary

## 6. Web Sites

### Department of Energy

#### Energy Efficiency and Renewable Energy

*20% Wind Energy by 2030*. U.S. Department of Energy. May 2008

<http://www.eere.energy.gov/>



Energy prices, supply uncertainties, and environmental concerns are driving the United States to rethink its energy and develop diverse sources of clean, renewable energy. The nation is working toward generating more energy that can be cost-effective, replaced or “renewed” without contributing to climate change or major adverse environmental impacts. The report identifies requirements to achieve this goal including reducing the cost of wind technologies, citing new transmission infrastructure, and enhancing domestic manufacturing capability. Most notably, the report identifies opportunities for 7.6 cumulative gigatons of CO<sub>2</sub> to be avoided by 2030, saving 825 million metric tons in 2030 and every year thereafter if wind energy achieves 20 percent of the nation’s electricity mix.

Full Text: <http://www1.eere.energy.gov/windandhydro/pdfs/41869.pdf>



### Environment. Protecting Our Nation’s Environment

#### The White House

<http://www.whitehouse.gov/infocus/environment/>

Provides an overview of President Bush's environmental policies.



### Reliable, Affordable, Environmentally-Sound Energy

#### The White House

<http://www.whitehouse.gov/infocus/energy/>

Provides an overview of President Bush's energy policies.

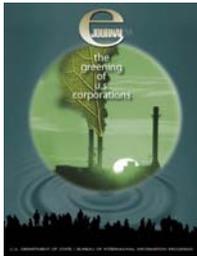


**America.gov**  
*Telling America's Story*

**Environment. Protecting our Natural Resources**  
**U. S. State Department**

<http://science.america.gov/science/environ/energyandclimate.html>

This site delivers information about current U.S. foreign policy and about American life and culture. It is produced by the U.S. Department of State's Bureau of International Information Programs. This web page is focused on Energy & Climate Change.



***The Greening of U.S. Corporations***

**U. S. State Department's eJournal**

<http://www.america.gov/media/pdf/ejs/0309.pdf#popup>

This issue of eJournal USA delves into what those familiar with the history of the environmental movement in the United States might see as a surprising trend — the way U.S. corporations in recent years have embraced environmentally friendly ways of doing business. What prompts a corporation to “go green”?

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*The Information Resource Center*

**Embassy of the United States of America**

**<http://www.embusa.es/irc>**

**June 5, 2008**