NATIONAL GOVERNORS ASSOCIATION

Winter Meeting

February 23, 2008

SECURING A CLEAN ENERGY FUTURE:

A CALL TO ACTION

Lower Level, Salon III

J.W. Marriott Hotel

1331 Pennsylvania Avenue, NW

Washington, D.C. 20004

I N D E X

P R O C E E D I N G S

(10:13 a.m.)

CHAIRMAN PAWLENTY: If we could have everybody take their seats, please. Okay, we are going to go ahead and get started, thank you.

As a housekeeping note this morning, please do not have your Blackberries by the microphones because they interfere with the microphones, and apparently cause some technical problems.

I am Minnesota Governor Tim Pawlenty, this year's Chair of the National Governors Association. We want to now call to order the 2008 Winter Meeting of the National Governors Association. We need to start by adopting the Rules of Procedure for the meeting. I am asking for a motion for approval of the Rules.

GOVERNOR GRANHOLM: So moved.

CHAIRMAN PAWLENTY: So moved, thank you. Governor Granholm makes the motion.

GOVERNOR SEBELIUS: Second.

CHAIRMAN PAWLENTY: Governor Sebelius

seconds. All those in favor of adoption of the Rules, say aye.

(Chorus of ayes.)

CHAIRMAN PAWLENTY: Opposed, say no.

(No response.)

CHAIRMAN PAWLENTY: The motion prevails and the Rules are adopted.

As a quick reminder, please know that the Rules require that any Governor who wants to submit a new policy for consideration or a resolution for adoption needs to do so with a three-fourths' vote to suspend the Rules. And any proposal needs to be in writing and submitted to David Quam of the NGA Staff by 5:00 p.m. on Sunday. So we hope that you will remember those rules if you want to change any policy or bring up a new policy in that regard.

We are joined at this gathering, this annual gathering, of the Nation's Governors by two new colleagues that we're excited and pleased to have with us this morning.

The first is from Kentucky, Governor Jim Beshear, and the second is from Louisiana: Governor

Bobby Jindal. Will you please join me in welcoming them to the National Governors Association.

(Applause.)

CHAIRMAN PAWLENTY: We also want to welcome and thank all of our fellow Governors, new and old, their invited guests, our esteemed speakers, and the generous funders who have made the meeting and the ongoing work and progress of the NGA possible.

I think these meetings provide a valuable opportunity to share experiences and ideas and work together for the common good on issues vitally important to our respective States and to our Nation.

I hope everyone in the room is mindful of the fact that today marks kind of the official kickoff of the NGA's 100th Anniversary, Centennial Celebration. A century ago then-President Teddy Roosevelt hosted the first meetings of the Nation's Governors at the White House to discuss conserving America's natural resources.

For 100 years now the NGA has served as a collective voice of Governors on issues that affect

all Americans, and we have demonstrated that commitment with fortitude and clarity to tackle some of the Nation's most pressing public policy issues.

There are some interesting historical facts and developments that have occurred over the 100 years of the NGA. This summer in Philadelphia we are going to be celebrating more formally the Centennial Celebration of the NGA. But just as a couple of quick asides about our history:

Did you know that seven Governors have become Presidents of the United States? And seven have become--and four have become Vice Presidents. Three have become members of the U.S. Supreme Court. And two of those Governors became Chief Justices of the Supreme Court.

Did you know that both the first and last States to join the Union are now governed by women Governors, and they are with us this weekend as well. We often have two or three Governor-only sessions during the winter, and during the annual meeting in the summer, but the first one was in 1930, and the principal topic for discussion was Prohibition.

(Laughter.)

CHAIRMAN PAWLENTY: And so I have had extensive discussions with Governor Rendell--

(Laughter.)

CHAIRMAN PAWLENTY: He's an advocate for current law in that regard--

(Laughter.)

CHAIRMAN PAWLENTY: And we're going to leave it settled at that from 1930.

In 1954, Vice President Richard Nixon appeared at an NGA meeting on behalf of then-President Eisenhower to promote and advocate President Eisenhower's vision and goals for an Interstate Highway System, and Governors were instrumental in supporting and assisting with that effort as key partners with the Federal Government.

In 1965, Lyndon Johnson sent a plane to the National Governors Association meeting in Minnesota to bring back the Governors to Washington so he could advocate for his Viet Nam War policy with the Nation's Governors. I'm not sure how they reacted to that, but it was interesting.

In 1996, the Governors reached an historic and very meaningful and impactful agreement and helped lead the efforts in the Nation for bipartisan Welfare Reform that has I think improved the Welfare System in our respective states and the Nation as well. That year the White House agreed--or this year, I should say, after 100 years after Teddy Roosevelt had a picture at the White House, we're going to try to recreate that picture at the White House this year with the Nation's Governors.

So the NGA has had a robust and long and storied 100-year history, and as we celebrate that anniversary we hope we can continue to make an impact this year and in the years to come.

We do have some distinguished guests with us this morning, before we get into our program. I would like to acknowledge their presence.

First we would like to welcome from the White House the former Mayor of Canton, Ohio, Janet Weir Creighton. She is the new Deputy Assistant to the President and Director of Intergovernmental Affairs. Janet? Where is she? Is she here this

morning? In the back of the room. There she is.

So she is--some of you will remember Maggie Grant and Rubin Boralis. She is in that position, or its equivalent. So if you have issues regarding the White House and intergovernmental relations, she can hopefully be of assistance to you.

We also have Elizabeth Dial, who is Assistant to the President and Deputy Director of Intergovernmental Affairs. She is also in that vicinity in the room if she can be of assistance to you.

We are also joined today by distinguished guests from the Canadian Parliament who are representing a U.S. Interparliamentary Group. I know they are here somewhere in the room, if they could just raise their hands or stand. Let's welcome our Canadian Parliamentary guests.

(Applause.)

CHAIRMAN PAWLENTY: And just to kick off the plenary session this morning which focuses on the Security A Clean Energy Future Initiative, which was announced at the Traverse City meeting last summer.

We have participated through the NGA in a variety of ways, but one of the ways we have done that is to convene a Secure A Clean Energy Future Task Force, which I co-chair along with Governor Sebelius from Kansas, which also includes Governor Rendell, Governors Crist and Rell and Lingle and Gregoire and Schweitzer.

The Initiative comes I think at a key moment for our States and our Nation as it relates to energy policy. When we announced the Initiative just one year or so ago, a little more than that, in July of 2007 oil was $70 a barrel. Now as we gather here today, it bounces around a little bit but it's $100 a barrel, more or less, and it's hovered in the $85 to $95 a barrel range since then.

One study has indicated that for every $10 per barrel increase in the price of oil, we send another $50 billion annually to foreign nations. And when you consider the fact that 60 percent or so of our oil is imported from foreign nations, that is a very large financial drain or export to foreign countries out of the United States of America.

In addition to concerns about oil, though, we also have concerns about--and our citizens have concerns about the affordability and reliability of electricity and energy more broadly.

Our Nation has abundant coal resources, which constitute about 50 percent of the electricity portfolio in the country today. And nuclear and natural gas represent about 20 percent each of that portfolio. These resources have served us and will continue to do so for the years to come.

Going forward, our challenge is to maintain reliability and affordability while also achieving environmental goals and not wrecking the economy. So we have to balance all of these competing goals in an initiative to move forward in security a clean energy future.

So we want to examine how we use traditional fuels. Also, how to develop more diverse portfolios with enhanced efficiency efforts, more conservation, more renewable energy--hopefully new technology to make our traditional sources more clean, more reliable, and hopefully more Americanized

in that regard.

In light of these challenges, we've got four principal areas of focus for this initiative for the year:

One is to increase the use of cleaner domestic fuels and advanced vehicles.

Another is to improve energy conservation and efficiency.

A third is to diversify our electricity portfolio by using other types of energy.

And leveraging opportunities for clean energy research and development and the like.

And Governors, through Best Practices and sharing information, we think are well suited to share R&D breakthroughs, cutting edge technologies, and opportunities in that regard.

We know this is not going to happen overnight, but we have been working on it in advance of this meeting in a variety of forms.

In December Governor Crist hosted a forum in Tampa which focused on clean transportation fuels and advanced vehicles. We were joined by Governor

Schweitzer, and Governor Crist, and others for a roundtable discussion in that area.

Also at our summit in Tampa we released a Call To Action, which you should have at your chairs and in front of you. It was sent to you in December, and there is a copy on the tables hopefully for the audience as well. It outlines the energy challenges for our nation. It dispels some myths that say it can't be done. And it discusses why states in particular are well positioned to help lead the efforts as it relates to the energy challenges faced by our country.

So I hope you will have a chance to look through that document and get some good ideas from it.

Increasing the use of alternative transportation fuels in many states is an area where there has been good progress. I am pleased to announce today that we have also available a new State Resource guide called "Greener Fuels, Greener Vehicles," which should also be in front of you. It is the result of some great staff work, public policy

best practices work that should be on the tables in front of you as well.

Other important steps come in the area of research and development and demonstration of cleaner electricity generation. We have two additional meetings that I would just call to your attention and invite you to attend, if you can.

One is an R&D workshop that is going to be in Seattle in March. Governor Gregoire is going to help host that.

And another is a Clean Power and Energy Efficiency Summit in Kansas City hosted by Governor Sebelius, and we hope that you will consider attending that, as well.

As creative and innovative as states are, we know we cannot do it alone. There is going to have to be partnerships with a number of other private and public entities.

We have got a wonderful partnership that has been launched with the Discovery Channel where you'll see a number of NGA-inspired PSAs and other things taking place on the Discovery Channel, and

some of their partnered networks as well.

We also must engage the private sector. So as part of the Initiative we have held meetings with more than 70 business and trade groups and industry groups and policy organizations from across the country.

As one take-away from that, and with more to come, Governor Sebelius and I announced the Climate Savers Computing Initiative, where we are asking other States to consider buying computers in this next generation stage that are 20 to 40 percent more efficient in terms of their energy conservation, and even if you're not yet ready to do that--which we think is smart because it saves the additional cost of the computers over a short period of time--simple things like asking your State employees, and in the case of Kansas actually programming the computers to shut off or go into sleep mode at certain times of the night when they're not in use can save a lot of energy.

That was kicked off with the help of Intel, and Google, and others, and we hope that you

will join that Initiative.

Through that partnership, our States have pledged to do more. And there are other ideas like that that will be coming forward as part of this Initiative.

I am pleased also today to announce a new unique public/private partnership as part of the Initiative which is going to be sponsored by and led by Wal-Mart to offer States access to an energy audit of state capitol complexes by a team of Wal-Mart experts.

Wal-Mart has already helped many companies and entities across the country save on their electricity and energy bills, and is prepared to help states do the same through this process.

Under the partnership Wal-Mart will send, at your request and if you would like, engineering experts to perform energy audits in as many as 20 state capitol complexes during the remainder of this year and 2009.

The NGA Center For Best Practices will help identify the states for participation and

partnership and catalogue the results.

Wal-Mart's audit and assessment will include recommended energy efficiency improvements, as well as the potential savings that will result from implementing these suggestions.

They will only recommend technologies that give state a return on investment within five years; that provide estimates of carbon dioxide emission reductions that could result from the efficiency.

So if your state has not performed one of these audits yet, I would encourage you to look into this. Wal-Mart has in their own stores and with some of their partnership entities demonstrated dramatic, dramatic results around conservation and efficiency in a very economical and in most cases self-financing way. So we are grateful for their partnership.

I want to just introduce Leslie Dach, who is here form Wal-Mart. Leslie, if you could just stand up. She's the Executive Vice President of Corporate Affairs, and Leslie, we thank you for your commitment and your partnership.

(Applause.)

CHAIRMAN PAWLENTY: Leslie is a "he" not a "she."

(Laughter.)

CHAIRMAN PAWLENTY: Thank you.

The Security A Clean Energy Future is also about other tangible steps that we can take, and we look forward to bringing those forward to you.

Now I have the pleasure of bringing some speakers forward to underline the need and the cause and the opportunity, and today we are fortunate to have two renowned speakers and commentators and leaders in this area.

The first is Tom Friedman, who I will introduce more formally in just a moment, but also Jeff Immelt, who is the CEO of General Electric.

The related economic implications of this Initiative are very important, and we have two powerful observers of not just the environmental and international security aspects of this Initiative, but the economic aspects of it as well.

I will start by introducing Tom Friedman, who I am proud to say was born and raised in

Minnesota. We lost him as a young adult, but he I think still have some fondness and loyalties to our Great State.

Of course he is a New York Times commentator and columnist. He joined The New York Times in 1981 as a financial reporter specializing in OPEC and oil-related news. He later served as the Chief Diplomatic, Chief White House, and International Economics Correspondent for The New York Times. He is a three-time Pulitzer Prize winner. He has travelled hundreds of thousands of miles across the world reporting on things such as the Middle East conflict, the end of the Cold War, U.S. domestic and foreign policy initiatives, international economics, and the world-wide impact of terror and energy security.

His Foreign Affairs Column appears twice a week in The New York Times and is syndicated in over 700 other newspapers worldwide. Recently he has been writing about energy challenges, particularly our addiction to oil. He has a fondness for quoting others, but we will quote him by saying that "Green

Is The New Red, White & Blue."

Please join me in welcoming our distinguished guest and speaker, Tom Friedman.

(Applause.)

MR. FRIEDMAN; Well, Governor, thank you very much. It is a treat to be here today. I was originally reluctant because I'm on leave, but I couldn't say no to Governor Pawlenty from my still-home State of Minnesota, and couldn't say no to another change to appear with my other good friend, Jeff Immelt. Jeff and I have been doing--I think we should take this on the road, Jeff. I mean, if it doesn't work out at GE for you, or The New York Times for me, we probably have another career.

This is my third time at the NGA over the years, and it is really an honor to be back. Each time I've talked about something different: 9/11 I think the first time, and then "The World is Flat," and now Energy.

What I would like to share with you is just a little sliver of what I am now working on. I'm on leave working on a book. The title of the

book is, as Governor Pawlenty suggested, "Green Is The New Red, White & Blue: America's Role In A World That's Hot, Flat, and Crowded."

And let me just begin there because I believe it is the convergence of what I call "hot, flat, and crowded" global warming of 150 years of the industrial revolution, the flattening of the world which is increasing global demand for services and jobs and production from India, China, the former Soviet Empire. We all know about that. And lastly, crowded.

When I was born in Minneapolis in 1953--you can Google this--you can find out how many other people were on the planet the day you were born. I put in July 20, 1953, and what comes up is 2.68 billion people. If Jeff succeeds at GE with all this good health care stuff, I may live to be 100. And if you go to the U.N. Table, it says that in the year 2053 there will be 9.2 billion people on the planet.

That means that in my lifetime the population of the planet will more than triple. In

fact, there will be more people on the planet between now and when I die in 2053 than were here when I was born. More people will be added to the world population between now and 2053.

So the demand, it is really this convergence of what I call "hot, flat, and crowded" that is really the underlying engine driving all of this energy demand, climate change, and resource demand that is really the subject I think of all your concerns and also opportunities.

The "hot, flat, and crowded" convergence is actually driving what I would call five tipping points:

The first is on energy. That tipping point is reflected in $100 per barrel oil. That is from simply so many people advancing of these 9 billion that are going to be on this planet their life styles and their living much more American-like lifestyles.

The second tipping point is around climate change. We saw that with Katrina and the IPCC Report.

The third tipping point is around what I call "petro politics." Fill 'er up with dictators. And we are seeing petro politicians now throwing their weight around the world as never before.

The fourth tipping point is around something I call energy poverty. We are seeing energy poverty appear more and more. Being poor isn't what it used to be now. If you don't have energy, can't connect to the flat world, and you can't get on Google, you aren't just behind arithmetically anymore, you're behind exponentially.

And lastly is biodiversity loss. We are seeing rates of extinction happening on the planet in our lifetime that are comparable only to when the asteroid hit the dinosaurs.

So I call these kind of the five interwoven problems that this combination of global warming, flattening of the world, and population growth are really driving.

Now it is my view--and this really gets I think to the role of Governors today--that the country or companies that come up with the solutions

to these five problems, they're going to own the 21st Century. These are the five key problems.

And if in your State you have companies, and if we collectively as a country take the lead in finding the solutions to these problems, we are going to own the 21st Century. And if we do not, we are not going to own this 21st Century.

Now there is one simple solution to these five problems, one solution that runs through all of them, and that is: Clean, abundant, cheap, renewable fuel. That is the common denominator to all five of those problems.

You give me cheap, abundant, clean, renewable fuel and I will give you the answer and the economic solution and opportunity to answer all five of those problems.

Early in January I had the honor--Jeff invited me down to GE's management meeting, and I'm going to embarrass him a little, and we got to do a dialogue together. One of my favorite points in that dialogue was at one point Jeff and I were talking about the different policy pillars we need to put in

place in order to make sure America does take the lead in answering those five questions.

At one point Jeff said: You know, Tom, what doesn't exist today in the energy business is the Hand of God. He said, I think if you ask the utilities and the big manufacturers in this business what they would most like from a leader today, it would be if he or she would stand up and say: Look, by 2025 we are going to have this much coal, this much natural gas, this much wind, this much solar, this much nuclear, and nothing is going to stand in the way. We're going to get it.

What would happen? Well, Jeff said, what would happen is after about 30 days of complaining and crying and whining from everyone in the industry, people across the whole energy industry would stand up and say: Thank you for that direction. Now let's go do it. And we would go out and do it.

Because once that enabling framework was set, said Jeff, all the tremendous assets and advantages that America has would immediately kick in and the whole system would take off.

Well I thought about our conversation after a few days, and one night I had a dream. I had a dream. I dreamt that America could be China for a day. I dreamt that America could be China for just one day. Not two. Just one day.

As far as I'm concerned, China's system of government is inferior to ours in every way except one: the ability of China's leaders when they want to to cut through all the lobbies, all the legacy industries, all the pleading special interests, and order the sweeping changes in prices, regulations, standards, and infrastructure and manpower education that reflect China's strategic, long-run national interest; changes that would normally take Western Democracies, not to mention our own, months, years, or even decades to debate and implement,

Just the other day--I don't know if you saw this story--China's shop keepers woke up and found that China's State Council had announced that beginning on June 1, 2008, all supermarkets, department stores, and shops would be prohibited from giving out free plastic bags, or even manufacturing

them. And the sale of ultra-thin plastic bags was made illegal. Bam! Just like that. 1.3 billion people would stop using plastic bags.

Tons of petroleum saved. Mountains of garbage avoided.

America started the process of removing lead from gasoline in 1973. It took until 1995 for all lead to be removed from gasoline in our country. We took 32 years from the first major effort to improve fuel economy in our cars to the most recent in 2007 to improve fuel economy in our cars.

In China in 2003 they decided on a major fuel economy initiative. The initiatives were adopted in 2004, and they went into effect in 2005. I confess, I was jealous. If we could only be China for a day. Wow. Did I just say that? Did I just say that I wished America could be China for a day? Where did that come from?

Where it came from was enormous frustration, a frustration I feel born of traveling from one end of this country to the other to many of your states over the last three years looking at

almost every conceivable form of energy generation, and meeting all sorts of zany, brainy, daring, innovators from garages to our premiere research institutes and coming away with the conclusion that we are really close to something really big.

We are really close to something really big. America has every piece of the energy innovation ecosystem a country could want, and more than any other in the world to launch a true disruptive transformational, what I call GeoGreen Revolution At Scale to be the world's leader in this field in the 21st Century.

We have these amazing National Labs, research centers where scientists are lining up to work on these issues. I just came from Lawrence Berkley Lab. They had 700 students and researchers wanting to do solar projects. They barely had funding for a dozen.

The next day I went to Cal Tech. I've been to Stanford, and MIT. We have these amazing universities. There's a project at MIT, the Vehicle Design Summit Group, a global, open-source

collaborative effort managed by MIT students that's made up of 25 college teams around the world, including from India and China, working together to build a plug-in electric hybrid within three years.

These are students, ladies and gentlemen. This is not a Detroit project. Each team contributes a different set of parts or designs. I thought writing for my college newspaper was cool. These kids are building a hyper-efficient car which they hope will demonstrate a 95 percent reduction in embodied energy materials and toxicity from cradle to grave, and provide 200-miles-per-gallon energy equivalency or better. It's the Linux of cars.

Their goal, they explain on their web site, is to identify the key characteristics of events like the race to the Moon and then transpose this energy, passion, focus, and urgency on catalyzing a global clean car team to deliver it. On their web site, their tag line, long before Barack Obama got it, was: We are the people we've been waiting for.

We have these amazing innovative

companies, General Electric and DuPont, Microsoft and Dell, IBM, Gridpoint, Duke Energy, and Southern California Edison. They are powerhouses of talent and ideas. We have these risk-loving capitalists and investment bankers primed to make huge bets that they can turn the next startup into the next grownup of energy efficiency and clean power, the next Green Google.

And we have private equity firms buying their own wind farms, and solar companies providing the patient capital that they need to scale. Yes, our country is primed for a geogreen takeoff. But--and there is a big "but"--although we know what the right policies are, we still do not have a leadership with the political courage and vision to put them in place to get the whole system working together in a way that will truly drive innovation around clean electrons, energy efficiency, and conservation to a radically new level.

And if you don't have scale, you have nothing. You have a green hobby. I like hobbies. I play golf for a hobby. I used to build model

airplanes as a hobby. I don't try to green the world as a hobby. This is a scale issue.

If you don't have scale, you have nothing. And the only way to get scale is if you have a systemic response.

So whenever I think of America today, the image that comes to my mind is of a space shuttle lifting off and the Kennedy Space Center. It has this tremendous thrust coming from below, just tremendous, but there are some leaks in the booster rocket that are sapping its power and the pilots in the cockpit are bickering over every issue of the flight plan. As a result, no one's quite steering and this space shuttle, this remarkable machine that no other country in the world can design or manufacture, cannot achieve escape velocity to get into a new orbit, a geogreen orbit, for the 21st Century.

So we are drifting. We do not have the systemic response we need. Why do you need a systemic response?

First of all, you need a system of

policies to create the incentives to create green power, clean electrons, at scale. Then you need a smart grid that can balance those clean electronics with traditional fuels--coal, natural gas, nuclear. If you do not have a smart grid, you will be capped on the amount of clean power you can introduce, because wind and solar are intermittent, and no utility can rely on them.

Ultimately it has to go into a smart home where every appliance is connected through an internet of things, and can bid and communicate and be managed in a way that will maximize energy efficiency.

If you do not have that ecosystem from the right policies to generate clean electrons into a smart grid, into a smart home and back, you will never get scale. And without scale, you will not be able to do the essential thing for an energy transformation, which is to empower all of our citizens to do all of these ordinary people--God bless them--to do extraordinary things.

That is what a clean power system is

needed for: so ordinary people an do extraordinary things around energy.

Why do you need a price signal? Why do we need either a cap-and-trade or a carbon tax? It's very simple economics. And there is no escaping this, friends.

The example I like to give is from my friend Nate Lewis at Cal Tech. Let's say I invented the first cell phone. I invented the first cell phone. And I came to my friend, Governor Pawlenty.

I said, "Tim, I have a phone you can carry in your pocket."

Tim would say, "A phone I can carry in my pocket? That would change my life."

I'd say, "Yeah, Tim, I've got a phone you can carry in your pocket."

He says, "I'll take 10."

"Wait, Tim, these phones are each going to cost $1000."

"No problem, Tom, a phone I could carry in my pocket, I'll take 10."

I sell 10 to him. 10 to Governor Rendell.

10 to all of you. Six months later, you know what happens.

I'm back. The phone's a little smaller, and it only costs $850. I'm down the cost volume curve. Now I'm on a roll. I come back a year later to my friend Tim.

I say, "Tim, got another deal for you. That phone worked out okay for you? Right? Worked out okay?"

"Yeah, worked out okay, Tom."

"I've got another deal. See that light there, Tim? I'm going to power that light with solar electrons. It's gonna cost you $100 more a month, though."

"Oh," the Governor of Minnesota, he's a wise man, "He says, Tom, remember that phone you sold me? That changed my life. In case you haven't noticed, I already have light and I really don't care where the electrons come from."

So unless the government comes in and says: Governor, from now on you are going to pay for the CO2 in that light, the cost of troops in the

Persian Gulf, that light's gonna cost you $150 extra more a month.

Oh, when the government says that, then what does Tim say to me?

He says, "Tom, I'll take 10 of your solar lights."

Then I'm down the cost volume curve and I'm back six months later and it's only $75. It's simple economics.

Everyone says: This is like a moon shot, clean power. It's like a moon shot. Yeah, it's like a moon shot when Southwest Airlines already flies to the moon. You are competing against an existing cheap alternative. And unless the government comes in with a different price signal, we will never achieve escape velocity.

Let me sum up by saying this: I have great respect for what China has accomplished economically over the past 30 years, but I don't want to be China. I don't really want to be China even for a day. I want to be America. And not just for a day. I want to be that country where ordinary people

do extraordinary things, and have done so over the past two centuries, whether it's erecting a national railroad system, forging a national economy, pulling together to defeat Nazi fascism in World War II overnight. And when they did, though, there was always one common denominator:

A public/private partnership. The political leadership laid out the vision from the top, and created the enabling taxes, regulations, and incentives to harness the explosive innovative energies of a free society coming up from below.

When you get these two working right, you have an innovation engine that is simply unstoppable. Now sometimes I find it is foreigners who best understand this moment and this opportunity.

I was in India six months ago and travelling around with "My World Is Flat" pals, my friend Ramalinga Raju who runs Satyam, India's fourth largest outsourcing firm, and we were talking about America and this energy moment.

And he said something that really struck with me that I want to share with you. He said:

Ultimately, Tom, the rewards for those companies, countries, and individuals who put themselves at the forefront of the energy technology, the ET revolution, their rewards will not be incremental. They will be transformational and dramatic.

There will be quantum jumps and leapfrogging opportunities. So the rewards to the U.S. we would get would not be incremental from making the world green, they would be orders of magnitude higher. And the payback would not be anywhere nearly as long as anyone assumes.

But if America doesn't seize this opportunity, he said, India, China, and others eventually will. Their solutions will not be the best because they will not be coming at it from the frontier of scientific and technological knowledge. They will be a lot better, though, than nothing.

They won't do it as well. It won't quickly--it won't scale as quickly, but it will happen. It will happen without the best architect, but the brick and mortar carriers will learn to do

their own clean energy designs.

The house will take four years to build instead of two. There will be more mistakes. Less capital will be available. But it will get built. And once they get going, the replication process will take place every six months and America will not have a place in it. You will be watching. You will not be part of the house building, and not derive the maximum benefits of having been the architect.

If you do take the lead, the world will be queuing up at your counter. But to take the lead, we cannot view this as just some new tax like any other. If you view green as a cost, it is a failure. If you view it as an ordinary investment, it is a failure.

If you view it as an extraordinary investment that will bring transformational rewards and dramatic benefits and therefore a huge opportunity, you will find success.

For me, this could not be more obvious. Just go through the mental exercise. What kind of America would you like to see?

One that's addicted to oil, and thereby fueling the worst autocracies in the world?

Or one that's building scalable alternatives to crude oil and thereby freeing ourselves from the grip of countries who have drawn a bulls eye on our back?

If it's the latter, you want to be green.

What kind of America would you like to see?

One that is steadily outsourcing more and more blue collar, labor-intensive manufacturing jobs to China?

Or one that's building more and more knowledge-intensive, green collar technology jobs for making green buildings, vehicles, and power sources?

That is sure to be the industry of the future, and are much more difficult to outsource. You cannot make a product greener without making it smarter. It is impossible. Ask Jeff Immelt. Either smarter design, smarter material, or smarter software. You cannot make a product greener without making it smarter, and that is a product much more

difficult to outsource.

If that's what you want, then you want to be green. What kind of America would you like to see?

One with more and more urban sprawl devouring more and more open lands? Or one where cities start to grow upwards smartly rather than outward where mass transit becomes the norm rather than mass traffic jams?

If it's the latter, you want to be green.

What kind of America would you like to see?

One where government relaxes energy and efficiency standards on cars, buildings, appliances, prompting our industries to get lazy? Or one where the U.S. Government imposes steadily higher efficiency standards forcing a constant flow of innovation around materials, power systems, and energy software that make it the most sustainable energy productive country in the world?

If it's the latter, you want to be green.

What kind of America would you like to

see?

One where there is no national goal? And the most talked about figures are hedge fund managers and Paris Hilton? Or one where America is the greenest country in the world and becomes the aspirational moon shot of this generation, inspiring young people to go into math, science, biology, physics, and nanotechnology?

If it's the latter, you want to be green.

What kind of America would you like to see?

One that's spotlighted as the last holdout at international environmental conferences earning the world's contempt? Or one that is seen as the country most committed by example to preserving the environment and the species that inhabit it, earning the world's respect?

If it's the latter, you want to be green.

What kind of America would you like to see?

One whose armies abroad are stretched out across Iraq and Afghanistan waiting every day in the

desert heat for a convoy of diesel fuel from Kuwait to be trucked to their generators at $20 a gallon delivered fuel and praying those fuel convoys don't get blown up by insurgents? Or an America whose army is so much more flexible because it runs on distributed energy from solar power to fuel cells and has no supply lines?

If it's the latter, you want to be green. We can out-green al-Qaeda.

So, my friends, let me leave you with a thought from my teacher, Rob Watson, one of the great eco-entrepreneurs, pioneer of green buildings. Rob always likes to say that let's say it turns out that Al Gore and the climate alarmists are all wrong. What's the result if we're a green country? We'll have cleaner air, newer technology, higher energy prices, but lower bills, more productivity, healthier people, and an export industry that we can be proud of.

And if the climate skeptics are wrong? Then we have population collapse and the human race as a bad biological experiment on the planet.

Who do you want to bet on? I want to put my money on green. Thank you, very much.

(Applause.)

CHAIRMAN PAWLENTY: Thank you, sir. I just want you to know, all Minnesotans are that smart.

(Laughter.)

CHAIRMAN PAWLENTY: Next we have a very special guest, Jeff Immelt, who is the CEO and Chairman of General Electric. We have as the introducer, Governor Rell who will come forward and provide an introduction. Then we will have some time for Q&A with both of the presenters.

Governor Rell.

GOVERNOR RELL: Thank you, Tim, and to all of you it is my pleasure to be able to introduce Jeff Immelt, Chairman and CEO of General Electric. And of course you know that General Electric is one of the Nation's oldest and most respected companies.

Barron's twice named him one of the world's best CEOs. And since he began serving as Chief Executive Officer, GE was named America's most

admired company in a poll conducted by Fortune Magazine, and one of the world's most respected companies in polls by Barron's and the Financial Times.

It is fitting that Jeff is here with us today. After all--and, Tom, you mentioned the light over there, that we would come back and ask for ten of them at some time--it was Thomas Edison's light bulb that was the invention that effectively launched GE in 1879.

We have asked Jeff to talk today to us about other energy innovations. GE has in store for the world many exciting things. In May 2005 GE launched ecomagination, a business strategy to meet the customer's demands for more energy-efficient, less emissive products, and to drive reliable growth for GE

Ecomagination also reflects GE's commitment to invest in a future that creates innovative solutions to environmental challenges, and delivers valuable products and services to customers while generating profitable growth for the company.

With ecomagination I believe GE is demonstrating what is good for the environment can also be good for the American business.

Ladies and gentlemen, join me in welcoming Mr. Jeff Immelt. Jeff?

(Applause.)

MR. IMMELT: Thank you. Thank you, very much. It's great to be with you here this morning. Governor Rell, thanks, and Tim, thanks again for the invitation. I am truly honored to be here with such a great group of leaders.

Unfortunately I always have to go after Tom Friedman, so you are about to enter the corporate sluggo part of the presentations here this morning.

(Laughter.)

MR. IMMELT: I would say at the outset that I am a capitalist. I work for investors. The things I talk about are all things that are necessary to grow the company in the future. And I am here really on behalf of showing what business can do to enter this debate, but I do it from the standpoint of really not having hobbies around it, but building

long-term shareholder value for my company, not just in the next year but in the future generations.

I get a chance to travel the world in my job, and so I get to meet government leaders--your counterparts, if you will--on a global basis. And because of our breadth and age, we are in all of your states, so we are local with basically everybody in the room.

I would say there's really four pillars to a competitive society. It's education. It's health care. It's energy. And it's financial institutions that promote growth.

Whether you go from Turkey, to France, to the U.K., to Minnesota, to Ohio, my home State, those four pillars are the constants that produce a competitive society.

So what we are talking about today when we talk about energy is one of the essential pillars that makes the U.S. competitive. It is important, and it is timely, and it is really hard.

I would circle back to the way Tom started, that there are some reasons why this is such

a tough challenge.

The first one is that oil prices, which increased in the late '70s and then were reduced for the period of about 30 years, are going to stay permanently high. There are more people, billions of people, that want to have the same spending standards that Americans have.

One of the most important inventions that you've probably read about in some corner of a newspaper is India is going to launch, the Tata Group, one of the best companies in India, a $2500 car.

Now when you start selling new cars at $2500, there's a lot more people that are going to be driving cars. And so the demand on energy, there's 2300 gigawatts of power that are going to be installed in the next 20 years.

San Francisco is 1 gigawatt. So that's a lot of power that's going to be. So the demands are going to be very significant.

Fear. The energy haves versus the have-nots. In 1980, 85 percent of the world's oil and

natural gas were controlled by integrated oil companies: Exxon, Chevron, people like that. In 2008, about 85 percent is controlled by the national oil companies, in Venezuela, other parts of the world, Russia. So there's a real sense of how do you get control over this energy future?

The time horizon. If you invest in a plant today, a nuclear power plant, it's going to last for 50 years. How do you expect people today to make a $3 billion decision with all the vagaries that are going to take place over the next 50 years? So you've got a time horizon challenge.

The science of global warming. Again, I look at this purely as a technical company. It's pretty compelling. If you just leave the United States, half of GE is outside the United States. There's more people outside of the United States every day that think it's a technical fact. And that has got to be factored into technology and investment.

And we've got weak infrastructure. So you've got some things that Tom mentioned that I

would put more in a business standpoint that make what you're talking about the next two or three days really hard.

And the last point I would make--again, you don't have a job like running GE and not be a free market capitalist, and that's what I am, but I would tell you that clean energy is more than just an innovation; it's got to be a public policy.

Government has to get involved. Because the market doesn't yet value pollution. The market doesn't yet value infrastructure that has to be rebuilt. And no market can really value shortage. In other words, no market can accurately value the fact that something might run out 50 years from now. And because of that, the discussion you're having and the discussion you need to have with us and other industrialists in the United States is important, and that's the context in which I'm going to just make a few comments this morning.

We live in this world. Again, I apologize that this is not going to be a GE commercial, but it has to be a little bit of commercial because it's all

I really think about and do is in the context of my company, so I have to. You know, we're a 130-year-old company, $190 billion in revenue in 2008.

We spend between $6 and $7 billion on R&D. We are more than half outside the United States. We're one of five AAA-rated companies in the U.S. today, and by the way that is really important in the U.S. today. That's a good thing.

And the only way you can grow a big company like GE is you have to be big with big themes. So we basically focus the whole company around six big themes:

Infrastructure and infrastructure technology.

Winning in emerging markets.

Environmental solutions, what Tom talked about.

Demographics, so the whole focus on health care, and how that grows over time.

Digital connections, the way that the Internet is driving our lives.

And what I would call integrative

solutions around origination. So how do you match people that need money with pools of money? And how do you bridge that gap?

So we're big, and big themes. And a couple of those themes really integrate around our energy business. We're about a $40 billion energy company within this context. Our energy business is growing about 15 percent a year. And so we're one of the biggest energy players in the world.

And in 2004 we launched an initiative inside the company called ecomagination. The basic thrust we had inside the company is that green could be green. And that we saw the way our customers were evolving broadly. We saw the way regulation was evolving broadly. And we launched with 17 products, now 60 products, and we made four commitments:

That we would focus our R&D on environmental technology;

That we would grow our revenue from $6 billion in 2004 to $20 billion in 2010;

That we would reduce our own carbon footprint by 1 percent, net effective 30 percent over

that time period;

And that we would be transparent. We would talk openly about what we were doing. So our focus on the environment was never a soft feel-good initiative. It was never to curry the favor of NGOs or things like that.

It was all about business and making money. And we're blowing away all the numbers. We hit $15 billion revenue in 2005. We'll be now $25 billion by 2010.

We are creating jobs. We are actually saving money by reducing our own carbon footprint. We are increasing the amount we're spending on R&D. And so in every way we've been part of this debate, and we've done it not as a feel-good initiative but as a business initiative in order to make our company prepared for the future.

So with that as a commercial, what I would really like to talk to you about today is something I think we can share, which is: How would you approach something like this philosophically? And how would you approach it strategically to build together what

this green energy future is all about? And that is really what I would like to spend the time talking about today.

So the commercial on GE is about over, not completely over but about over. So first I would say we have kind of three philosophies with which we run this initiative and think about the company.

The first one is you get energy security through energy diversity. I'm just not sure that energy independence in our lifetime may be feasible, it may not be feasible, but we can certainly have greater security through energy diversity, and that ought to be one of the big goals that we have.

You know, we ought to have real focus on different fuel streams. And together we can make that happen, number one.

Number two--and you know Tom always steals my words. I'm flattered because he's such a good writer, but no hobbies. Right? When you're about this, it's got to be about driving costs and creating jobs.

So we're not doing anything that we don't

think we can take down the learning curve in some order, or that we don't think creates jobs as we're doing it. So the first thing is security through diversity. The second thing is economic impact through either taking things, making them lower cost, or creating jobs.

And the third one is: I run my company to be sustainable. In other words, I run my company assuming there's going to be a market for carbon some day; assuming there's going to be a cap-and-trade system some day; assuming that there's going to be a market some day.

No publicly traded CEO should have a different philosophy than that. In other words, the day you decide it's already 10 years too late for me, I've got to be way ahead of you for the day you finally get there. And so I run the company assuming we get there some day. And so my investors are always going to be prepared for that, and we're going to be able to make money in that context.

So those are the three philosophies that we run the company with that are somewhat similar to

the ones that you've got to wrestle with as well.

Then there are three levers that we pull. One is massive infusion of innovation and technology. This is going to be the next big project that this country had, kind of like the Dot Com, the Internet technology that was starting in the late '80s and rippling through. This has got great nascent technology that we can drive. So technology and innovation.

The second thing: A real focus on selling these products everywhere. In other words, I wouldn't come here and make the case to you if I didn't think I could sell clean energy products in China, Saudi Arabia, India, Brazil, every place in the world. So make this an export competency, an export industry.

And the third thing is: Engage between government and business and construct a public policy that's going to allow us to get there.

So what I would like to do in the remainder of my comments this morning is talk about innovation, talk about how you make this an export

industry; and again what things Governors can do to make this more accommodating and make this more of a winning proposal in the future.

Innovation technology. I've worked for GE for 26 years. We've got a huge health care business, and we've got a huge energy business. And in 26 years, our health are business has basically iterated technology about eight or nine times. In other words, if you think about the product cycles, in energy we're still selling some of the same products we sold 26 years ago.

So the whole focus on what technology can bring is somewhat stilted in the case of energy. The industry. This is not GE statistics; these are industry statistics. Basically health care spends about 8 percent of their revenue back into R&D. Energy has spent over the last 20 years about 2 percent. That difference is $50 billion a year.

So there's a lot of innovation out there that can be brought to bear if we just brought this back to the front seat and made it work. And I'll just discuss very briefly what some of those

technologies are some of the things that I think we should be working on right now.

You always have to start with efficiency and conservation. Let's make the existing products more efficient. And I think that's still got a long ways to go. I mean, when you think about again in the world I live in, but I think you could throw into this the automotive industry and others, turbines, commercial aviation, distributed technology. You know, we believe that with materials science that things like gas turbines, or jet engines, or automotive engines can be made radically more efficient, 10, 15, 20 percent more efficient in the coming years.

So I always start with; Let's make everything we do today better. The commercial jet that will go on the Boeing 787, which by the way is made by GE of course--

(Laughter.)

MR. IMMELT: --has got a fuel burn that's 20 percent better than what it replaced, and it's got emissions 50 percent less than what it replaced. So

efficiency through materials technology is a really important topic.

The second one is conservation. Incent people through technology or incentives to consume less. This is getting into hybrid technology. It's getting into demand-side management inside the home. If you could take some of the technologies that exist in terms of energy management that exist in a computer center and took those into a home, or an industrial setting and brought that into the home so that you're not running the refrigerator at night, or you're running it at different level, there's literally major percentages, 10, 15, 20, 30 percent less consumption that we can drive with the right innovations and the right efficiency that's in the system.

In 2009 we will have 100 locomotives that use hybrid technology getting 15 percent better fuel consumption just by conserving and finding different ways to do the electrification, if you will, of that power generation. So efficiency conservation.

The third are renewables. Renewables in

wind, in solar, in biofuels have made great progress. You know wind is now 4 or 5 cents a kilowatt hour. People never thought it would get to 4 or 5 cents a kilowatt hour.

Solar is still at 30 cents a kilowatt hour, but I think we could cut that in half probably by thin-film technology and distributed technology.

Biofuels, again we've got a big presence in Brazil. We now can burn B-10 and some other biofuels in locomotives. We're working on being able to do it in jet engines. So we're really looking at ways to take biofuels throughout the system. But renewables have to be a big part, and they've made a lot more progress than anybody thought they'd make over the last couple of years.

Exploration. There's new technology to get more gas in subsea applications, which again is something we think is going to have to be a part of the future. We've got get more energy sources out there, and there are new technologies that can do that.

Big-bet baseload technologies. Coal

gasification with sequestration and nuclear power have to be on the table. These are going to take a lot of capital to make happen.

You know in the case of coal it's 49 percent in the U.S. It's even bigger outside the United States. In the case of nuclear, it's 19 percent of the U.S., slightly higher on a global basis.

Any strategy has to encompass where we're going to go with those big-bet baseload technologies and shouldn't be taken off the table.

Smart grid. National grid. I mean, you guys hear the stories, you're part of the solution and the problem by the way on smart grid technologies, but finding ways to make sure that we have less wastage across the system; that we can do a better job of base load management.

There's a lot of software and hardware technologies that are going into that area. I won't talk a lot about water, but water--you know, the shortage of water. If you're in the Southeast like a couple of my friends down here, you know the whole

notion around desalination, and how do we do a better job of managing our water supply?

There's great technologies that are being developed in terms of how do you do a better job of industrial re-use and conservation that we think are very important.

There's billions of dollars going into the entrepreneurial space. Still not enough. You know, I would say for the last 25 years, if you go from 1978 to 2003 you had to have your head examined if you were an entrepreneur and you invested in energy.

At $20 oil, there is no margin for anybody, any of the smart investment money, outside GE, to go into energy. That's changed. So there's real entrepreneurial dollars that are coming in today, a lot of which we like to partner with.

And the last point I would make on innovation, really one thing. We're a 130-year-old company. We get there by taking these technologies and making them low cost.

You know, the first IGCC plant, guess what, it's going to be expensive. The first

pulverized coal plant, guess what, it was expensive. The 10th IGCC plant isn't going to be so expensive. So we know how to take these things down the learning curve, and we've got to let some of that ingenuity play through with your help in terms of where we go.

So I think in the next 15 years, if you think about it, we could be driving big efficiency improvements. We could be driving big gains in conservation. We could have security through diversity, which I think would be a great goal for the Governors to have.

We could get the cost down of some of these big-bet baseload technologies. We could be hitting our sustainable goals, of which whatever you decide but my hunch is that by 2020 we're going to have some on greenhouse gas emission reduction, and I'm going to get the company ready to do that, and we could be creating jobs.

So the first point we would make to you is that the innovation exists; that it is being funded in various ways throughout the country. My advice to you would be not to take any options off the table,

but to set real goals in terms of how much cost you want to put into it, what the target should be for emissions reduction and things like that, and allow the market to drive forward and make those innovations happen.

But allow diversity to be your friend, and try not to pick two or three because I think there's more options.

The second thing that I would say is that this creates jobs. The thing you should hold me accountable for is taking this technology and creating exports out of it.

Now GE is one of the biggest exporters from the United States. We export about $15 billion a year, and virtually all of those exports are in clean energy; virtually all of them.

So we can win. You know, I don't think you have to be lacking confidence that if you're doing it right we can create the winning formulation. It's about technology. It's about developing emerging market cost structure and modern manufacturing techniques.

Just to give you a few examples:

Heavy duty gas turbines. We're the best in the world. We've got the lowest cost. We've got high efficiency. Last year in 2007, 95 percent of the products we made in South Carolina, New York State, and Georgia were exported outside the United States, 95 percent.

Commercial aviation. Best efficiency. Lowest emissions in the world. We make them in Ohio, North Carolina, New Mexico, Mississippi, Massachusetts; 90 percent of those sold outside the United States last year. Ninety percent outside the United States.

Evolution Locomotive, we've got the most efficient, lowest emissions locomotive in the world. Erie, Pennsylvania, my buddy Governor Rendell here, a 110-year-old factory. It's straight out of a Charles Dickens novel, okay? One of the first GE sites. I guarantee you, it said nothing's being made here. 50 percent outside the United States: Brazil, China, high efficiency, low emissions technology.

Renewables we make in New York, Iowa,

California, Delaware, Florida, 30 percent outside the United States exports.

Advanced controls: Nevada, Massachusetts, 50 percent outside the United States.

The point I would make to you is that countries become good when they can match innovation with domain expertise. In energy, this country can match innovation with domain expertise. This is one we ought to be winning at.

Now other people want to compete with us in that. The Chinese, the Indians, the Turks, the Eastern Europeans, the Russians, all want to compete with us today. But I think that this could be one of the great export industries in this country, and we should be more confident about the fact that this could be a great framework.

I believe even if you look at nuclear, coal gasification with sequestration, this is a country that's got more domain expertise between the coal, the oil, the utility industry that all these countries are going to do.

You know, we can sit here and talk about

China and India as much as we want, and they're burning a lot of coal today, and these are tough environmental places, but they are going to get better some day. They are going to get better some day. And I would rather them get better with technologies I'm making and selling from here than in things we just delegate to them because we were too lazy to do it in the first place.

(Some applause.)

MR. IMMELT: So I think that's the way to think about exports--and more jobs in Mississippi, Haley, as well.

(Laughter.)

MR. IMMELT: So the first point is innovation is real. It's out there. It's very profound.

The second thing is we could make this a real export industry for all of us.

And the third point I would make is that you have a central role as Governors in terms of how this all gets done in the next 5 or 10 years. There is no doubt in my mind that with clean energy the

States are going to lead the Federal Government. It's not that it's unique to this, but clearly in this space the States are going to have a leadership role to play. And there are just four or five things I would ask you to do as you think about how you manage this:

The first one is: Promote innovation using your markets and your market power to do so. Let me tell you, renewable performance standards now in 30 States have been very effective to promote innovation, to promote investment in your States. That's just one example. There's others. But you have the ability, you have the power to create the right type of market incentives to drive real innovation.

And there's been I think even innovation across the States. The RGGI, the Western Climate Initiative, the Midwestern Climate Accord, things like that have been every effective I think to drive that across the space. So first, promote innovation using your market power as a guide.

The second one is: You've got to help us

drive this big-bet technologies in nuclear and coal gasification with sequestration. You've got to stand up for it. You've got to take the heat on it. You've got to be willing to stand up and make it happen alongside of us.

Look, we have invested a lot of money in R&D on our new boiling water reactor, and on coal gasification, with almost no government support. So, you know, we're out there. We've got products that have to be commercialized, but they're not going to get done without your--if you believe in it.

In other words, what we try to do in GE is make sure that we're not dependent on any one of these technologies. So if the world doesn't want nuclear power, I'm not sure I completely understand but we're going to march on and sell gas turbines and wind and things like that. But if you believe in it, you're going to have to stand up and really help us make this happen. And we've got lots of great work with Governor Freudenthal in Wyoming on a sequestration project that we're working with him on; a lot of work in West Virginia, Ohio, Indiana, in

coal gasification and sequestration, big plants, and more of that is going to have to happen to go forward.

The third thing is: Update the regulatory framework to incent the right behaviors. Again, with the PUCs and things like that, driving the right incentives around storage, around transportation, around the sites that you want to put, if you believe in natural gas and things like that, you lead that. And you can be big advocates of that.

And along those lines, I would urge every one of you in your state to have your own ecomagination project. In other words, I never cease to be amazed that when I stand up in front of my company and give them four objectives, they actually try to hit them.

(Laughter.)

MR. IMMELT: It's one of the beautiful things about leadership is, if you've got really good people they try to do it, and do better. And I think if the States had real goals that were public, and people knew, you would get tremendous response from

industry to help do that.

The fourth thing that I would ask you to think about is: How best to use your universities and your entrepreneurial focus. I just think the colleges in this country are such a great resource. What we've tried to do is create pools of funds where we can co-invest with a Governor around a university, and bring in external funding.

So we can bring in--you know, you'll have John Doerr here tomorrow from Kleiner Perkins. We can bring in venture capital, state funds, our funds, and work on one specific topic--thin-film solar, sequestration, things like that--and you've got a tremendous asset vis-a-vis the universities to help us.

The last thing that I would say--and I think this is always tough for a Governor--is some day we need national standards. Fifty State standards, guys, if you're running a company is a really tough way to run a railroad.

You know, we stuck our neck out about a year ago and joined--and helped form something called

"The U.S. Climate Action Partnership." We had 30 companies, six NGOs, and we basically wanted to put a set of markers in the ground that would allow us to act now and set some real standards in terms of greenhouse gas emission reduction, and try to create a market, foster innovation, and be fair vis-a-vis allocations and things like that.

Now what I would ask is: Somehow lend your voice to either this or something else, but at some point I think as a country we do need a set of national standards. We do need a set of national goals.

I am not sure that ours is the right one, but we do need one. And that is the only thing I would ask, at some point for your support or your understanding, or your leadership more importantly, on that.

So again the third point I would make is that you're important; that you can create the right spirit of investment. You can make this move faster, and a lot of these activities, particularly sophisticated investments like coal gasification with

sequestration and nuclear power won't happen without you.

So in conclusion, you know I think philosophy by and large we share. It's security through diversity. It's positive economic impact in terms of cost and jobs. And it's getting on a sustainable pathway. That is the philosophy.

It requires technology. It requires a real focus on exports and competitiveness. And it is going to require support of both state and national policy. That's what I am here to argue with. You play a very good role because in many ways the government can bridge between short-term and long-term, and that is really what we need right now.

If our only signal that we invest on is today's price for oil, and you are a CEO and you've got some great CEOs talking here, so the CEOs you're talking to this afternoon who are great guys, they won't be probably in their jobs to see any of these big-bet investments take place. So they've got to be tremendously courageous to make these kind of investments and, like I said, they can't do it

without you.

In my career I've been around launching products and solving problems. That's basically what business people do. You know, we solve problems and we try to build things, make things and make money. And, you know, I've seen things where there's been invention required and no market. That's really hard, right? I can't tell you, we've done some of those. Those are really hard.

I've seen things where technology is available and the market is easy--with willing customers, that's easy. This is somewhere in between. The technology exists but it's unproven. There needs to be a mitigation of risk, and the benefits are obvious in the future.

We can do this. You know, there's not big inventions that require this. Lots of commercialization that's required. So I'm very optimistic about the technology and innovation that's needed to do this.

So I'm where we started. There's four pillars of a competitive society. It's education.

It's health care. It's financial systems that nurture economic growth. And it's energy. And you've picked one of the toughest ones to work on today.

GE is really in the middle of it, and you are going to be the people that we listen to very strongly about where we should go, where we should make investments, and where the future is going to be. So I've enjoyed being here. Thank you, very much.

(Applause.)

CHAIRMAN PAWLENTY: Thank you.

Both Tom and jeff made extraordinary efforts to be here today on a Saturday, taking time away from their families and other commitments, and we sincerely appreciate their time and for two excellent presentations.

Now we have a bit of time for some questions and answers from the Governors. Governor Granholm, you start us out.

GOVERNOR GRANHOLM: Thank you so much. You guys are outstanding, inspirational. I come

from the State with the most challenged economy in the Nation due to the challenges of our auto industry.

I am determined to create a new industrial revolution in Michigan by replacing lost manufacturing jobs with green jobs.

As an organization, we have the ability to move Congress, potentially, in some direction but we've got to focus. You have listed an array of opportunities for us to approach Congress on and have a national, united effort.

If you had to advise us on the top one or two policy items we should rally around as Governors in a united fashion to change the landscape, what would those be?

CHAIRMAN PAWLENTY: Is that a question for both?

GOVERNOR GRANHOLM: Either or both of them have expertise.

CHAIRMAN PAWLENTY: We'll start with Tom.

MR. FRIEDMAN; That's a really important question. I guess if I wouldn't upset anyone I

would really point to what California has done around utilities. Because your utilities are really the central player. They are the heart in this energy system. When Jeff is selling those coal gasification plants or, you know, nuclear, they're selling them to utilities, and they are the interface between the innovator and the customer basically.

If you look at the environmental world right now, you know, there's probably one school that says, you know, we've got to take these people on. You know, they're not doing the right thing.

Like Jeff, I am a capitalist. I want utilities to get rich doing the right thing rather than the wrong thing. And basically all these years, since utilities have existed, they existed basically like a $5 all-you-can-eat buffet.

Energy was what they served. It was all you could eat for $5. And their job was to get cheap electrons to your home in a reliable way.

Clean wasn't part of it. And innovation wasn't part of it. It's been often cited, the American dog food industry spends more on R&D than

the American utility industry. So there's a reason for it, because they had a captive audience.

And so what I would look for, Governor, is really how to incent that key player, that's interface, to do all the right things. And I would point to three things.

One is the decoupling plus approach which says to the utility: Henceforth you will be remunerated not for how much energy you sell but how much energy you save. Number one.

Number two, California has just started this this year, you will be paid more. You will get a rate base increase on the basis of how much equity you invest in clean power, however we define clean power.

And third, I think utilities should be paid. I want to pay them. I want to incentivize them as part of the rate base for what role they play, how much they contribute to higher energy efficiency standards for refrigerators, air conditioners, whatever appliances it is. You take this utility that for 100 years was basically running and all-you-

can-eat electron buffet and not really caring much how those electrons were made, and you pivot it into the key player in driving efficiency, standards, and clean power.

CHAIRMAN PAWLENTY: Thank you, Tom. Jeff?

MR. IMMELT: You know, I would just, elevating above specific technologies, Governor, what I would say is forming of a market that allows people to value whatever it is, change, or carbon, or something like that.

My first job with GE was selling plastics to the automotive industry in the early '80s when CAFE hit the first time, and it drove immense change. And so the fundamentals are that the market signals do drive technical innovation. So I would say that is number one.

Number two is, I would be very basic. I would say incentives that create real incentives for job creation and export jobs. If you have the combination of strong market signals and real incentives to create great export jobs, that's a pretty good one-two punch I think.

And then we could always talk about specific renewable standards and things like that that I also think would be nice within that context.

CHAIRMAN PAWLENTY: While we're waiting for the next question, I'll just share a quick experience from Minnesota.

When we set our renewable energy standard at 25 percent by the year 2025, our largest utility in Minnesota Xcel Energy voluntarily came forward and said we'll do 30 percent by 2020. And that was not something imposed upon them, that's something they wanted to be leaders and innovators on.

We've also switched our energy conservation incentive system from one of giving credits to utilities for how much they spend on conservation to how much can you actually prove that you've saved, and we'll credit you for that, and that seems to be having a positive difference, to underscore a couple of the points that were made.

Somebody other than from the Midwest. Governor Spitzer.

GOVERNOR SPITZER: Thank you, Tim.

This is more perhaps a theoretical question both for Tom and for Jeff. I think the critical words you uttered today were pricing externalities. This goes to the heart of what is perhaps more a political question than a technical question. We're trying to do the things you just talked about: decoupling, building things into the rate base, and setting standards.

The problem we have is that every time we try to do this it is viewed as invasive of the market system. And so the question I have is:

How do we create an understanding that pricing externalities, which is viewed as essentially a regulatory structure, is necessary for the market system to work?

If you look at the Clean Air Act many years back, then you look at the more recent iterations of it, RGGI, which is the sort of New York and Northeastern Regional Greenhouse Gas Initiative, and as you said it's replicated around the Nation, these are regulatory frameworks designed to account for the public cost of our failure to act.

How do we get the business leadership--and maybe, Jeff, this is more to you, and like you I think all of us around the table are confirmed capitalists--but we need to get the public to understand that smart capitalism accounts for these costs, and that failure to account for them is taking us down a dead end.

So how do we overcome that ideological problem?

CHAIRMAN PAWLENTY: Jeff, do you want to take that one first?

MR. IMMELT: Yes, Governor, you know again I completely get it. I would give you two responses. One is that the people that we have worked with, broadly speaking, in U.S. Climate Action Partnership just recognize that in this market the lack of match and time horizons means that you are just always going to be mismatched on investment versus payoff.

And so we can talk about free markets and things like that as long as we want to, but that's just a technical fact. So I think there's got to be,

again I think if you look at what happened to nitrogen diox and some things like that, there have been effective cap-and-trade markets that over time have lowered costs and still been effective at what they have set out to do.

So I just think this industry is one that renders itself, I wouldn't even call it for intervention, just for some way to say this is the way you mismatch. The most profitable asset to a utility today is a nuclear power plant. It's 30 years old. It's fully depreciated. You can price off the incremental cost of gas. Your cost is virtually zero.

And every one of the CEOs that launched that project 25 years ago got fired. You know? So that's what everybody understands, number one.

Number two is: GE is the broadest company in the world. We're in the health care business. We're in the energy business. We're in the entertainment business. We're in financial services. Guess what? The government is in all of them.

I am not in one industry that I would

consider to be a purely free market. So I just think what the government's got to be about is its own best interests. And what's best for the country, what's best for your States, and industry in some cases has to be a part of that.

And I can't give you one industry we compete in that is a pure, classic Adam Smith free market. So the question is: Don't do harm is part of it, as well.

CHAIRMAN PAWLENTY: Tom?

MR. FRIEDMAN; I would just add a couple of things to that. Jeff was modest when he talked about GE Transportation in Erie, Pennsylvania, but I've written about it so Jeff I'm sure will let me talk about it a little bit--in fact, I'm interviewing John Dineen on Tuesday, Jeff.

I like to use it in my talks, GE Transportation, because Erie, Pennsylvania, has a trade surplus with China and Mexico. I'm here in the middle of the Rust Belt, you'll pardon me, Governor, Erie, Pennsylvania, has a trade surplus with Mexico and China? And why is that? What is it from? It's

from selling choo-choo trains. Choo-choo trains that are so energy efficient that on a total ton-pulled basis they're actually cheaper for China--which sells a competing locomotive, as Jeff will tell you, for 30 percent less.

So how do you pull that? Where did that come from? Well it came from Jeff's far-sighted leadership, but it also came from our national regulatory standards around NOx and SOx. So we had this really high standard. GE had to meet it. And they met it, plus, and they created a global export industry.

Let's look at Japan. Which country in the world has really the highest efficiency standards in the world? It's a country called Japan. Which country in the world has not the highest but among the highest gasoline taxes? It's a country called Japan.

Which country in the world has the richest car company? Japan. Is that just an accident? I don't think so. I think Toyota, and Honda operate in a regulatory environment that they had to meet such

high efficiency standards it drove innovation, which drove their exports.

CHAIRMAN PAWLENTY: Governor Farv?

(Laughter.)

GOVERNOR DOYLE: You know, for a Viking fan to be talking to a Packer in that tone of voice--

(Laughter.)

GOVERNOR DOYLE: --is a little difficult to take.

(Laughter.)

GOVERNOR DOYLE: I think maybe the answer to Elliot's question sort of got to what I was asking, but I guess I'd like to put Jeff somewhat on the spot right here.

You've indicated that you're planning and are ready to live with a carbon market of some kind or other, and anybody in your position would have to be doing that. Do you think it's something that this country should put into place?

CHAIRMAN PAWLENTY: Jeff?

MR. IMMELT: Yes. You know, I think

it's--I would say for three reasons, you know, and again I would say I don't come at this at all as an environmentalist or anything else, Governor, I just do it as a business person.

I'd say the first one is the science, while it can be debated, is getting stronger. So I think technically you can get into a lot of debates on the interactions but there's, you know, enough out there that at least we ought to be thinking about it, number one.

Number two, I've been around business a long time. I've seen the will of the people change. And when the will of the people change, business better get in line. And, you know, I've got a pretty good sense for that. I get paid to get a good sense for that. And so I think we're either there, or getting close to being there, and a lot of the other parts of the world are already there.

And the third one is, bigger and probably more important than all that, in my heart and in the heart of my company, we're about technology and innovation. You know, the 130-year-old company is

about technology and innovation. And I've seen enough in our own pipeline and in exploring the world to say we can unleash more technology here that can help solve this problem without creating economic ill will inside the United States, which I clearly do not want to do.

So now all that being said, we've got to invest a lot in technology. We've got to do a good job on allocations. We've got to get from where we are today to where we are in the future. We shouldn't leave any technologies behind.

We can't allow this to be a coal state versus a non-coal state winners and losers. We've got to have real solutions for coal. Look, 49 percent of our power is coal. The notion that it's not going to be part of the future is just not right. So we've got to do all those things together.

But, Governor, I just think, you know, I've been around long enough to smell it. I've seen enough of the technology to sense it. And, you know, I just think it's one of those things where it may be better three years from now, or three years ago, but

it's going to--I'm just going to run the company as if it's going to happen.

CHAIRMAN PAWLENTY: Governor Manchin.

GOVERNOR MANCHIN: It's good to hear both of these gentlemen with the knowledge they have, and the expertise, but in West Virginia I just--as being a coal extraction State, as you understand, and also natural gas, and we want to be part of the cleaning and greening of America, and all of our other coal-producing states do also.

The thing that we run into, and my good friend Ed Rendell from Pennsylvania being one of the leading coal states at the turn of the century a century ago, basically understands that we can't do it just on passing the rates on to our baseload customers.

We will do whatever we can in playing our part in this cleaning and greening of America, but it has to be done basically on a national policy, not on a regional basis.

Our economies can't handle that. And also the people who depend on the energy that we

produce on the East Coast couldn't handle it either. That is what we are looking for.

We are willing. I mean, everyone-- sometimes there's the perception that those of us in these extraction states are pushing back, and that's not the case. We want to be part of this forward movement. But also with the understand that we've helped bring the Nation where it is today with the energy we've produced.

We have helped defend this Nation through the wars with the energy we've produced. And we want to make sure that we are part of this as it moves forward in the greening and cleaning also.

So with that being said, I talked to Jeff earlier and he might want to respond to this, basically with the technologies that need to be done we're trying to build coal gasification, but now carbon sequestration, or carbon capturing is driving that. With that being done, it's driving the price.

We have a company on the verge of doing something, and it will be done in West Virginia, but who pays that price? Is it just based on the 400,000

base rate on the ratepayers there? Or is it going to be a national policy that helps us make sure we're producing the power of the future?

So if both of you all would kind of give me your comments on that, and on how we can better participate and be part of this.

CHAIRMAN PAWLENTY: Jeff, do you want to take a swing at that first?

MR. IMMELT: Yes, Governor, and then I've got to get Tom so he gets in as much trouble as I get into.

(Laughter.)

MR. IMMELT: Governor, I think it has been 25 years since we've done a coal gasification plant in the United States. The technology exists. Sequestration is nascent technology. It's got to be proven, but there's a lot of work going on to do it.

The first six or ten plants--you know, 6- or 700 megawatt plants are going to be expensive, more expensive than pulverized coal.

GOVERNOR MANCHIN: Right.

MR. IMMELT: But there's no reason to

believe that they won't come down the learning curve just like every other thing in the industry has done. So I would say the first--you know, the first 10 or 12 are going to have to have some kind of national framework so that it's not just borne by the states that are willing and ready to do it.

And really, in some of the early forms, or even the late forms, of the Energy bill it had some of those. You will have Mike here this afternoon, Mike Morris, here this afternoon. He can speak to it as well.

The point I make is that we're a little bit like, on both nuclear and coal gasification, you know, we're like being at the Super Bowl where the teams never leave the locker room. And we've got to get some of these built so that we can start learning.

In some ways, the utilities are in the worst of all worlds now because new coal plants aren't being permitted. And we're going to end up backing into, maybe making worse choices because we're kind of betwixt and between right now. And I

just think clarity and getting off on these investments would be very helpful.

CHAIRMAN PAWLENTY: Tom.

MR. FRIEDMAN; I would simply say a couple of things. One is, I totally agree with Jeff. We've got to use the buying power of the government to buy power. And, to create these kind of pilot projects. So it certainly shouldn't fall on--this is a national objective, and a national priority--it certainly shouldn't fall on the people of West Virginia to do that. So that would be my first point.

My second, though, and it's related also to the Governor of Wisconsin's question, I understand. I'm not the governor of a state that uses coal. I also understand that we're going to need to be dependent on coal for quite a few years coming. There's just no question in my mind.

First of all, I would like to think of some really innovative--I'm worried about sequestration simply because the demand for the technology, when we tried to do this at scale, is just going to--the cost of just the pipes and the

steel and whatnot, I hope it moves down the cost curve. I'm afraid if you try to do this at scale what will happen.

I'm interested in looking at ultra super critical, which is a 30 percent improvement on greenhouse gas. Maybe there's a way you do that, and with offsets. Maybe there's some really innovative ways to say, look, we're going to plant a new forest in West Virginia, and we're going to do ultra super critical. I'm just tossing that out as some--

GOVERNOR MANCHIN: Sure.

MR. FRIEDMAN; --innovative ways to say it.

But if I were to step back and not talk about West Virginia at all for a moment, but just talk about the country and where I think we're going, it's that clean power ultimately. This is going to be the next great global industry in a world that's hot, flat, and crowded. It just has to be.

And from a national point of view, the country that gets there first, fastest, most innovatively I think is going to own the industry of

the 21st Century.

I was in China. I had the pleasure, and honor, and great fun to address the China Clean Car-- at a Clean Car Conference in Tien Jen China in September, and they invited me to speak. It was all Chinese car guys in kind of their Detroit.

They all listened on headsets. Nobody spoke English. And my talk basically, my message was the following, and this gets to the Governor of Wisconsin. I said:

You know, every time I come to China, young Chinese say to me, Mr. Friedman, you got to grow dirty for 150 years. Now it's our turn. You got to grow dirty, now it's our turn.

And I said, my message to you is: You're absolutely right. It's your turn. Take your time. Grow as dirty as you want for as long as you want. Because I think I just need five years for my great innovative companies to own all the clean power technologies that you're going to need before you choke to death, and we are going to clean your clock in the next great global industry.

(Laughter.)

MR. FRIEDMAN; So, you know, when I hear, not you, but when I hear people sort of resisting this, it's sort of what Jeff said. You know, kind of the technology is here, but anyone who is looking just over the horizon in a world that hot, flat and crowded, there is a market there that is so big, so obvious, so going to be there, and I think what anyone who's got these legacy kind of industries has to be thinking about is: How do we get from here to there?

Because I've got people, jobs to create. But also make your State not just the innovator on coal, but for any of those other technologies. Because ultimately that is really where the big market is going to be.

GOVERNOR MANCHIN: Well we're doing all of that, and we're trying to do that, but we also understand that the country is going to need the coal that we've been producing for a long time for a little bit longer.

MR. FRIEDMAN; Oh, absolutely.

GOVERNOR MANCHIN: And the transmission. We don't see anything happening with transmission lines.

MR. FRIEDMAN; No.

GOVERNOR MANCHIN: Every time they want to build a new power line, there's nothing new to innovatively create a more efficient power line, or repowering with ceramics and this. We don't see anyone moving in that direction.

MR. FRIEDMAN; Well it's because we have energy politics in this country; we don't have energy policy. And until we have an energy policy that looks at this as a systems' problem, as you said, that involves transmission, smart grids, smart homes, innovation around clean power, we are all going to be kind of looking out for ourselves. And that's what I was trying to say with the China thing.

Of course I don't want to be China for a day, or a day-and-a-half, but the point--

GOVERNOR MANCHIN: Yes, you really do.

(Laughter.)

MR. FRIEDMAN; Yeah, well, maybe for a

day. Because somebody there is saying this is a strategic objective, and we are going to pursue it strategically.

GOVERNOR MANCHIN: Thank you so much.

CHAIRMAN PAWLENTY: Joe, to your point, we have a coal gasification proposal in Minnesota. The Federal Government gave it a $800 million loan guarantee dedicated to this project, and in State law we passed a law that said if they can deliver the electricity, the maiden utility in Minnesota must buy it if it's delivered at a reasonable price. And the plant isn't even sequestering yet. It will be built sequestered ready and the price doesn't yet factor in piping it into Canada or some other geological place to put the carbon. And they're not able to deliver it without a substantial premium.

So your question is: If the first six of these are going to be really expensive, you know, does a subgroup of the Minnesota ratepayers pay that? Or the West Virginia ratepayers pay that? Or is there another way to distribute that big-bet up front costs that jeff mentioned?

GOVERNOR MANCHIN: I think, Tim, basically just finishing up, is that every coal producing state wants to be part of this movement, moving into this new technology and this new market, if you're market-driven.

The bottom line is we want to continue to help as we get there, but we understand we can't do it by ourself. And it creates sometimes great hardships.

MR. FRIEDMAN; Because, you know, just to pick up on one last thing that Jeff raised, I totally agree. I think we are entering this really dangerous period where we're kind of delegitimizing coal, but we have not enabled or empowered in any way either clean coal or the other technologies at scale.

And whenever you create a vacuum like that around energy, problems happen. I think we really need to pay attention to the gap.

GOVERNOR MANCHIN: We are very pleased that both you all are here helping us get that balance.

CHAIRMAN PAWLENTY: Governor Rendell.

GOVERNOR RENDELL: Joe, one of the things I would add, and I would love to find out how Tim's company got the loan guarantee, because we've had a project in Scuko County we've been waiting for two-and-a-half years for the loan guarantee. The Federal Government did not set up the protocols for two years after the Act was passed on loan guarantees that could have jump-started the clean coal gasification industry.

I think what we all have to do, in using Tim's platform for this year as the fulcrum, we ought to give the next Administration a concrete list of things that they can do to help us do the things that we're trying to do in the States. That would just be one, for example.

The guarantee program was meant to take a nascent industry and give it a hand, get it over the price hump by doing these guarantees; get Wall Street to have a little courage and invest, because there are going to be those price factors up front.

So I think it is really, what Tim's doing is great, particularly with the new Administration,

but we ought to have a goal that by January we come up with a concrete list of proposals we would like the new Administration to begin to enact.

CHAIRMAN PAWLENTY: Thanks, Ed. Governor Hoeven.

GOVERNOR HOEVEN: One of the points that Jeff Immelt made that I think is incredibly important and needs to be emphasized is that we're going to need all these energy sources.

I am amazed at how often when we talk about energy somebody says: Well, we need a certain type of energy. It can be renewable. It can be traditional, whatever.

So I think the first question I would have I guess for both gentlemen is: How do you develop policies that promote the energy diversity and bring all of them forward, and don't hold certain types back and advance others?

But first specifically the question I would like to ask Jeff is: How do we get this clean coal technology moving? In our State in North Dakota we have a coal gasification plant that converts coal

into natural gas. We capture the carbon dioxide. We put it in a pipeline compressed and we ship it into the oil fields for tertiary oil recovery. We've been doing that for awhile.

We're working on developing more of that, but there's billions of dollars--billions of dollars--sitting on the sideline, whether it's in West Virginia, or Montana, or Pennsylvania, or go around the country, where people with all this great ingenuity, amazing ingenuity, aren't moving forward because they have no idea what's going to happen if they do. They don't know what the rules of the road are. They don't know what kind of tax ramifications are going to be.

They have no clue on what their carbon requirements are going to be. And so instead of deploying the solutions, like somebody made the analogy of the Super Bowl team sitting in the locker room, that's exactly what's happening.

So how do we get them moving forward with incentives to deploy these technologies rather than sitting around going well we can't get going, and

frankly some of the things that we're looking at will prevent us from ever going forward. So how do we move forward? How do we get them going?

CHAIRMAN PAWLENTY: We'll get an answer to this question, and then we'll go to Governor Napolitano, and then Governor Baldacci, and then we'll wrap up for this session.

Jeff?

MR. IMMELT: I would just, addressing both your questions, I would say specifically on both, these big-bet baseload technologies like nuclear power and coal gasification with sequestration, the way I approach it is going from the specific to the general.

You know, in other words I've got a list of five or six coal projects, five or six nuclear projects, each one has a unique regulatory, economic, and my view is you're going to have to do a couple--you're going to have to pull a couple of them over the finish line and then stand up and take a look at what works.

I don't think it will work the--I used to

think it would work the other way around. I'm not sure it will anymore. So we're going to have to-- we've got one in Indiana, and maybe one in West Virginia, Virginia, other places that we're just going to have to learn from the specific to the general first.

The second one is, I just think the advantage we have, because we're a big company, is I always thought like I wasn't going to be smart enough to pick which fuel source was going to work 20 years from now, so I'm betting on all of them. In other words, I am betting on nuclear, gas, wind, solar, hybrids, fuel cells, coal, because the vagaries--and so I would say that if we decided how the market is going to work, number one; if we created some incentives broadly on investment without picking which ones had to be the most important ones, and RPS systems do that to a certain extent in the renewable side, I think you're going to see a lot of capital flow in this space and we're going to have a lot of options for it.

But in these big-bet baseload

technologies, Governor, each one takes a unique set of technology government, and I just can't give you a general answer. But I do think it's very important for you to work on it, for Governor Rendell to work on it, you know, all the people that really have to pull these across the finish line.

CHAIRMAN PAWLENTY: Tom, do you want to take a crack at that?

MR. FRIEDMAN; Yes. I would simply say this, Governor, and again just to say pay attention to the one thing that Jeff said that I've often quoted, which is that he's not going to make a 40-year multibillion dollar bet on a 15-minute price signal.

What I've done in writing my book is I've gone to people like Jeff, and Chet Halliday at DuPont, you know, is that all this talk about venture capital going into green, and how much venture capital? If you ask them to look at what they're talking about, do you know how much venture capital went into green--venture capital--last year? $3 billion. Wow! At the height of the IT revolution,

year 2000, VC, just VC capital into IT? Almost $100 billion.

People--if $3 billion fell off the table in the IT revolution, nobody even leaned over to pick it up. Okay? So that is a rounding error. Now that tells you you've got a market failure; that there's so much uncertainty in the market around pricing that people, you know, at our greatest bioscience company, or energy company, they're not all in in Texas Hold 'Em terms. Oh, they are not all in. Because they don't know what's going to happen to that price, and their shareholders will not understand if they go all in and they get whipsawed. And that is the role of either a tax on carbon--yes, a carbon tax. I said the word. A carbon tax, or cap-and-trade that's very clear. Everyone knows that the price is.

They can plan their cash flow and operate around it. And that will unlock all this capital that's sitting there saying I'm not going to make a 40-year bet on a 15-minute price signal.

It's the simplest economics, but we keep running away from it. No, no, no tax. No, no, we

can't say that word. Okay, don't say that word and China is going to clean our clock in the next great global industry. You can bet the farm on it.

CHAIRMAN PAWLENTY: One of the speakers at our Midwestern Governors Association meeting said that the Federal Government spent $1.4 billion last year on renewable energy, or fuel research, and as a country we spent $5 billion on Halloween.

(Laughter.)

CHAIRMAN PAWLENTY: Governor Napolitano.

GOVERNOR NAPOLITANO: Well, and one of the uncertainties that goes into this is the uncertainty based on the governance of the regulated utilities and how that works. That is one of the issues that we are dealing with, because every state has a different way they govern those regulated utilities.

Do they get a portfolio standard? And can they separate their rate base from other things? And how that works is something this group has never really taken on as a subject.

I come from Arizona. Our goal is to be the Persian Gulf of solar. So we will be back to you

on that. But a question I had, and maybe Jeff appropriately directed to you is, you just mentioned the word "nuclear." I think it was the first time I heard it mentioned this morning.

I want your understanding, and maybe Tom's as well, on what you think the role of nuclear will be? And is that really an innovative technology as you are looking or thinking in the concept of renewable and innovative energy supply?

MR. IMMELT: You know Governor we've got 60 ecomagination products in GE, and so these are products that we've had outside people take a look at to see do they meet certain standards for, you know, are they better generation? Do they reduce global warming? Things like that.

And our new boiling water reactor is one of them. We spent a lot of time thinking about this, right? We've spent a lot of time considering it. We spent a lot of time thinking about the politics of it, and my view is that if you believe in energy security, if you believe in energy productivity, and if we believe in the need to reduce greenhouse gas

emissions, we just can't take nuclear off the table.

It's 19 percent of the installed base in this country. It's higher outside this country. I clearly recognize that there's storage issues, that there's recycling issues, and things like that.

My personal advice is: Let's not take it off the table. Let's again try to get back in this game in a way that the citizens of the country will support. But again I don't think we have to choose between solar and nuclear. I think we ought to be pushing hard down both trails.

I think solar at 15 cents a kilowatt hour is going to be huge.

GOVERNOR NAPOLITANO: Right.

MR. IMMELT: It's going to be massive.

GOVERNOR NAPOLITANO: We have both in Arizona. But as you are looking at innovations and your own internal investment in innovations, are you applying any of that to the storage and the waste issues associated with nuclear to try to get us out of this--

MR. IMMELT: You know, we're part--these

things are always best handled on an industry consortium basis, and we're part of these consortiums. But I would think the following argument, too, and i say this purely as a friend. Who in their right mind in the last 25 years would have put a penny in the storage of nuclear waste, given the fact that we haven't had a new plant built in 25 years?

So we have this endless chicken and egg scenario that says how much real capital is going to go in given the fact that we have not built a nuclear power plant for 25 years? And do you have the political--do we have the will to get started?

I think if we had the will to get started, I think you'd get a lot of capital. Right now we participate with the NRC and the other people in the industry, and we think it is important.

Again, I would not base my whole company on any one of these fuels because each one could fail in the end because they did not reduce global warming enough, they weren't economic enough, or they had some other political issue.

That is why I think energy diversity is so gosh darn important.

CHAIRMAN PAWLENTY: Tom, would you like to address the nuclear question?

MR. FRIEDMAN; I would say a couple of things, Governor. One is, I just came back a couple of weeks ago from the Hague. I was at Royal Dutch Shell. They have an energy scenario team, probably the best in the world.

It's really instructive when you sit down with them. They do a global chart basically of all power generation in the world, breaking down every kind of fuel. And it's kind of interesting. You kind of go down the list. You start with coal, and natural gas, nuclear, whatnot, and you get to wind. Wind, for total global energy generation according to the Shell Scenario Team, is one-tenth of one percent today. Solar doesn't make the list.

On a global basis, it's so small they can't pick it up. And this gets back to the Governor of West Virginia's point. I mean, between now and when we get to that clean fuel future, there are only

two ways to fill it in a cleaner way. That is, some kind of cleaner coal and nuclear. At scale, I don't see any other way.

So I am personally, I don't want to say a fan, but I have absolutely no problem with it. I weigh the balance of climate change and nuclear, and I think it comes out very much in favor of nuclear. And I think, to answer the points that Jeff has rightly raised, I think the government is going to have to build some of these plants and assume all the risk, at least the first ones, before you're going to get CEOs to bet half their market cap on building on nuclear plant that could be stopped at any point.

CHAIRMAN PAWLENTY: A lot of the leaders, Governor Napolitano, of the utility industry have told us in our discussions leading up to this conference that if there isn't progress on nuclear, and we don't have progress on coal, by default they'll just go to established technology on natural gas, which has its own supply and price volatility.

GOVERNOR NAPOLITANO: Issues, right. But let me just say that on nuclear, because we have the

Nation's largest nuclear plant right outside of Phoenix, and I agree with you on the nuclear, it just seems to me some of the politics of nuclear would be easier if we were looking at, or could talk about innovative ways to deal with the big political issue that is raised, which is the waste issue.

MR. IMMELT: Don't get me wrong. I totally agree with you. And I think the industry would agree, as well. It's just, it's been, you know, again I think we've got to drag a couple of these projects over the finish line, including what we are going to do with the waste streams and things like that, so that we can really get experience back in the system again.

MR. FRIEDMAN; You know there's a common denominator I think to a lot of this discussion. It's there's such a crying need for education, and re-education of our citizens, our voters, ourselves. I've been on a three-year master's degree trying to learn about these issues, did two documentaries for the Discovery Channel, visited a lot of your States, saw every kind of energy, you know I've really been

educating myself, and I feel like I'm just kind of there, basically. I mean, just getting on the first rung.

But there is a real need at the national level for some serious education: Where we are. What's real. What's possible.

As a reporter I've covered a lot of different issues--globalization, the Middle East, and whatnot--and the ratio of people who talk about this issue to those who understand it is unlike any issue I've ever met.

(Laughter.)

MR. FRIEDMAN; A million-to-one ratio. I thought the Middle East was bad. I thought everyone was an expert on the Middle East. It's nothing compared to energy.

CHAIRMAN PAWLENTY: We have time just for one last question. We're a little over time, and then we'll wrap up. But before we do I want to announce that the executive committee, instead of having a formal meeting in sit-down fashion, if you would just informally assemble here at the podium

immediately after the response to this next question we will have you out in five minutes. We've got to do a couple of housekeeping items.

Then, remember the Governors-Only Session, which will be a lively continuation of all of this, will be at one o'clock. And if you can come promptly, that would be appreciated.

Governor Baldacci.

GOVERNOR BALDACCI: Let me just say first of all, Governor, thank you very much. It has been very passionate, very insightful, and educational, and just like a little appetizer before the main course, just enough to get us really motivated.

But let me just say, I appreciate, Jeff, what you had to say about everything being on the table. It's just that for the life of me, I mean this industry in nuclear and in coal, and I supported clean coal technology, have had opportunities to come forward with new next-generation products.

Sometimes it gets very frustrating because I feel like we've been left at the gate, and there are so many other opportunities. In our State we

went about siting an area where wind would be able to be developed, and we have two wonderful General Electric plants in Maine, too, so thank you very much for that. We are building wind turbines and component parts, wind turbines. But we now have $2 billion worth of projects, a billion that are on the board that are going through regulatory process, and another billion that are being proposed, and looking at the transmission capabilities.

And I am just one small State out of all of this, and I see what Texas is doing with wind--and I'm not saying wind is the answer, and I understand what Tom said about the percentage change over time is minuscule at what they estimated--but I just think that there's so much opportunity in terms of not only building a renewable industry, but building a manufacturing base, or rebuilding one, and focusing on the issues that Tom was compelling all of us to about all the security issues, all the energy issues, all the environmental issues. So I just think that a lot of this is that we're not wasting our time, but we've been held at the gate too long on the old

technologies when we could be investing.

I mean, they tell me tidal power is not the same old tidal power it used to be. You know, it's much more efficient. And we could be doing a lot of this as a country ourselves, and putting people to work.

I mean, the factory in Governor Rendell's State, the utility company, Iberdrola, the Spanish company, a large wind presence. And they're looking at building wind factories in our State, windmill factories.

So I just think that we've got to start to go down this road, realize the tremendous opportunity, but we've been waiting around for nuclear waste to get something to the next generation, and we've been waiting for something on clean coal technology. I know that, as a former Member of Congress, that we're not going to be able to do what works for Maine or New England. We're going to have to do what works for the entire country. So there's going to have to be some appreciation for coal and nuclear. I just don't know

what it is, and I just don't want to hold everything else back. That's my concern.

CHAIRMAN PAWLENTY: Jeff?

MR. IMMELT: You know, again I think you make a great point. I think a lot of these renewable technologies are really good. But I think your point is also illustrative of a bigger point. I would like to answer it in this way:

The good news for all of us is that none of these technologies we're talking about, none of them are new. We just haven't commercialized them. And so the wind industry was the worst industry in the world for 25 years. From the second oil shock in the late '70s until 2003, you couldn't pick a worse business than the wind energy business. Because oil was $15 a barrel. There were no incentives.

Then three things happened. One was the European Union decided that 10 percent of the energy generated in Europe was going to be renewable energy by something like 2012. And they just said we're going to do it, therefore it's going to happen.

The second thing is that some of the

states around this table, some of the leaders around this table, put in place renewable performance standards.

And the third thing that happened is that oil went from $15 a barrel to $100. And the combination of those three things has created a wind industry. We're in it. We love it. It's fantastic. And it's gone from 20 cents a kilowatt hour to 4 cents a kilowatt hour.

It's still got issues on intermittent power, but we will solve those. And so the point i make is that if we started setting a few goals around these technologies and actually built our muscle back up, you're going to be surprised about what's possible.

And when it's been 25 years since we built our last nuclear plant, and 25 years since we've done our last coal gasification plant, our muscles are atrophied. But if we really put some stakes in the ground and said, you know what, by 2020 we're going to do X,Y,Z. You're going to see that a lot of these really develop just like your comments on renewable

energy.

CHAIRMAN PAWLENTY: Tom Friedman, a closing thought.

MR. FRIEDMAN; I think you raised a really important point, Governor. My hope for the next President would be that he or she would invite people like Jeff, like Chet Halliday from DuPont, I mean our really leading energy, bio companies, into a room and simply say: I want one answer to one question. What would it take to get you and your companies to go all in? All in on clean coal? All in on new nuclear? All in on wind? All in on solar?

You are not all in. What would it take to get you to go all in? And then I would go back and i would sit down with Congress and I would say these are the goals. This is where we need to be. But that is not what we have been doing. We have been on a kick of dumb as we want to be.

We can be dumb as we want to be. We've been on a kick of we'll get it it when we get to it. Well, the world is flat. And you stay on that kick and someone will get to it before you get to it,

because if there is one thing I have learned from all of this: "Later" is over.

GOVERNOR BALDACCI: Yes. Thank you.

CHAIRMAN PAWLENTY: Well, that's a great closing thought, and a good prelude to our discussion. Let's thank our guests for coming. We appreciate it very much.

(Applause.)

CHAIRMAN PAWLENTY: This plenary session is adjourned.

(Whereupon, at 12:48 p.m., Saturday, February 23, 2008, the plenary session for Saturday was adjourned.)

NATIONAL GOVERNORS ASSOCIATION

Winter Meeting

Monday, February 25, 2008

SECURING A CLEAN ENERGY FUTURE:
A CALL TO ACTION

Lower Level, Salon III

J.W. Marriott Hotel

1331 Pennsylvania Avenue, NW

Washington, D.C. 20004

P R O C E E D I N G S

(2:01 p.m.)

CHAIRMAN PAWLENTY: I know we have Governors off in different directions, but we have some very special guests that we want to hear from.

We want to welcome our guests and the audience, as well, as this begins our closing plenary session and work of the 2008 Winter Meeting of the National Governors Association.

We want to welcome to the plenary sessions, our guests, which I'll introduce in just a moment, but we've enjoyed hearing from many experts and engaging commentators on a wide variety of topics over these last few days, ranging from biofuels and energy efficiency, to National Guard issues and so many others.

I hope that you have, as I have, found the discussion helpful and informative. For much of the past several days, though, we've also worked on energy issues, as it relates to how can we make it better through technology, through innovation, through commercialization of emerging technologies?

We have two individuals here today, who are very deep and serious students of these issues and opportunities to utilize emerging technologies for a cleaner energy future, and also have the potential for commercializing it in ways that might be helpful to our states in terms of jobs and investment and economic development.

Today we're joined by James Woolsey and also Dr. John Doerr, who are working to lead us on this new path.

I'll first introduce Jim Woolsey. Jim Woolsey is perhaps best known as the former Director of the Central Intelligence Agency. As such, he is particularly concerned and attuned about security concerns resulting from our addiction to oil.

He will soon be a partner, a venture partner with Vantage Point, and a Senior Executive Advisor to Booz, Allen, currently. He's an individual who has served our country in a variety of capacities and in many ways, and we are grateful that he would take time to be with us today at the National Governors Association.

Please help me welcome our speaker, Jim Woolsey.

(Applause.)

MR. WOOLSEY: Thank you, Governor. I was very honored to be asked to be with you today, of course, but to tell you the truth, since I spent 22 years as a Washington lawyer and then I spent some time out at the CIA in the Clinton Administration, I'm actually honored to be invited into any polite company for any purpose whatsoever.

(Laughter.)

MR. WOOLSEY: I thought I would start by sharing with you, some thoughts about an aspect of our energy structure, that has, from what I've been told, not been addressed, as well as one that has.

I would divide up the serious problems we have to deal with in international affairs and in world politics, into the malignant and the malevolent.

Malevolent problems are problems like terrorism, that someone is actually trying to cause.

Malignant ones are one that we're not

trying to bring about, but because we are as a society, sort of doing the functional equivalent of smoking five packs a day of cigarettes and putting a huge amount of carbon into the atmosphere, we are creating the risk of catastrophic change at some point in the future.

Now, the people who focus often on malevolent problems such as terrorism, often have something of a blind spot about the malignant ones, and vice versa; people who focus on climate change, sometimes figure, well, somebody else is going to deal with the terrorism issues.

I want to say a word about each of these, and suggest to you that there may be more synergy in dealing with these two very important sets of problems than we have heretofore thought.

In terms of malevolence, we, of course, have several kinds of serious problems with respect to energy.

Our electricity grid is extremely vulnerable. It has gotten more vulnerable in recent years, with privatization, because we've layered on

top of a highly-balkanized set of electricity grids and utilities, a national system, a continent-wide system, really, for buying and selling electricity.

Power lines and transmission lines are congested, a tree branch is touched by a sagging power line in Cleveland, Ohio, four years ago, and 50 millon consumers are without electricity for days, including in eastern Canada.

Now, we tried to take a leaf from the book of the South Park kids there, and blame Canada for that outage.

(Laughter.)

MR. WOOLSEY: But the Canadians were on to us, and, in their polite way, they pointed out that Cleveland is, in fact, south of Lake Erie, not north of Lake Erie.

(Laughter.)

MR. WOOLSEY: And we had to own up to the fact that it had been our power line.

The interesting thing, is that terrorists are a lot smarter than tree branches. All they have to do, is read the reports of the Critical

Infrastructure Commissions and the new report of the Defense Science Board that I chaired a portion of, that's on the web, and they can see that there are very substantial vulnerabilities to our electricity grid, that, unfortunately, can be exploited relatively easily, and we need to move to deal with them.

Often, there are institutional barriers at the state level, by the way, for public utility commissions, in making some of these things happen.

Another type of potential malevolent threat, is the threat terrorism funded by our oil purchases. We borrow over a billion a day now at today's oil prices, to finance just our oil imports. That's not oil, as a whole; that's just our imports.

A fair chunk of that goes to the Middle East, as it does from a number of other countries, and so if you wonder who is paying for those madrasses in various Middle Eastern countries where little eight-year old boys are being taught to terrorists and infected with the Wahabe Saudi ideology, you don't need to look too much further

than the person you see when you get out to charge your gasoline at a filling station, if you'll just turn the rearview mirror a few inches before you get out, because if you're looking into your own eyes, you know who's paying for those madrasses to teach those little boys to be terrorists.

Not only that, Tom Friedman, I know, talked to you in the last few days. Tom has a wonderful formulation. He says that the price of oil and the path of freedom, run in opposite directions, because oil can, if it comes into a central government that is not yet a democracy, like, say, Norway, but if it comes into a central government that is a dictatorship or autocratic kingdom, it tends to enhance the power of the central government, without letting alternative sources of economic and political power, build up, and it thus tends, as Tom says, to move things in a nondemocratic and autocratic direction, and one need look only at the behavior of Messrs. Putin, Chavez and Ahmadinejad, over the course of the last two or three years as oil has shot up, to see what Tom

Friedman means.

Of course, also, there is vulnerability in the Middle East to attacks on the oil infrastructure. Al-Qaeda has tried two against Abkaik and has been thwarted both times. Should they be able to take out the sulfur clearing towers at Abkaik in northeastern Saudi Arabia, the largest oil production facility in the world, they would probably send oil up for a year or more, to at least $200 a barrel and probably more.

So, we have a full set of problems that we need to deal with in the vulnerabilities of our energy infrastructure -- electricity, on the one hand, which outside Hawaii and one or two places in the continental United States, uses relatively little oil, so only about two percent of our electricity comes from oil.

But the oil problem is not so much an electricity generation problem, as it is a problem of dependence for transportation purposes. Transportation in the U.S., is about 97 percent oil products, and as a result of that, we have a

situation in which those who produce oil and who dominate oil -- OPEC, essentially -- hold a great deal of leverage over the rest of the world.

We don't do much that's useful at all, by just moving our consumption patterns around. If we buy less in the Middle East and more from Norway, the Europeans just buy more from the Middle East and less from Norway and it doesn't do any good.

We have to start thinking about doing to oil, something similar to what was done to salt in the late 19th Century by electrification and refrigeration. Salt had a monopoly on meat preservation until nearly the end of the 19th Century.

Believe it or not, countries fought wars over salt mines and it mattered, whether or not your country had salt. Today, nobody cares. Why? Because refrigeration is a much better way of preserving meat, electricity made that possible, and nobody dominates his neighbor anymore because he has salt mines.

We need to do the same thing to oil. We

need not just to buy less foreign oil, but to undermine oil's monopoly on transportation and free oil to be bought and sold for all sorts of different purposes for which it's useful. It's a good way to transport energy long distances; it's useful in chemical plants, home heating, and so forth.

But it doesn't dominate any of those markets; it doesn't have a monopoly, and we need to break it's monopoly on transportation.

On the malignant side of this divide between major problems that I have described, there are many ways in which complex systems can fail catastrophically from minor interruptions. Theorists sometimes call that the butterfly effect. A butterfly flutters its wings on one side of the world, cascading interactions in the ecosphere, create a tornado on the other side.

It seems kind of theoretical, until you remember the tree branch falling in Cleveland four years ago.

Well, climate change, I believe, is a problem somewhat like that. There are a number of

effects in nature, that once one goes around a tipping point, can cascade in their failures.

We don't know -- I wouldn't say I know, anyway -- exactly when such a thing is going to occur, but one example is this: In the tundra of the Arctic, there is more carbon than there is in the atmosphere, because the tundra is largely a giant frozen peat bog.

Methane, which is the form of the chemical in which the carbon is, is about 22 times worse than CO2 as a global warming gas, so if it warms up enough in the Arctic that the tundra starts to melt, starts to release methane, the methane heats things up, in turn, speeds up the release, in turns, speeds up, and so forth, the so-called feedback loop, one doesn't know when or exactly how it would occur, but the possibility of having a very major and negative development in climate over a relatively short period of time, a few decades, I believe, exists.

And it is that judgment, not so much the models that the climatologists produce, but judgment

of people like James Hanson at NASA and the rest, that suggest to me that we ought to pay attention.

It doesn't know we mean exactly when things are going to get warmer or exactly by how much, but if, to use the analogy I used before, if we are doing the society equivalent of smoking five packs a day, we can't tell we're going to get lung cancer at such and such an age, and we might live to be 95 and never get it, and we might have gotten it without ever smoking, but we're increasing our risk by smoking five packs a day. I think that's the way we should think of the amount of carbon we are putting into the atmosphere.

If we look at both of these needs, the need to deal with the climate change issues and disruption of the ecosphere and the need to deal with the threats to our security from malevolent or intentional change, I think there are several things we should pay attention to.

Sometimes when I do this, I do a little dialogue between the two individuals I'm going to name, but I don't think there's time to do that

today, so I'm just going to touch on their issues.

The dialogue I do, is between a tree hugger and a hawk. The tree hugger is only worried about carbon and believes that anything about terrorism, can be dealt with by the FBI, if need be; the hawk is only worried about terrorism, and he thinks this climate change stuff, is something that some bunch of Birkenstock wearers cooked up while they were having a good time one night or something.

The tree hugger I use, is the ghost of John Muir, the founder of the Sierra Club, father of the National Park System, the hawk is the ghost of George S. Patton. I use these two, because they are two of my favorite Americans.

And what I have them do, is to get into a discussion of trying to deal with climate change, and trying to deal with terrorism, and they find, as the discussion goes on, that they are able to agree about more and more in substance of what needs to be done, even though they never convince one another of the importance of their issue.

Muir, for example, suggests that Walmart

is doing an amazing job, as are some other companies, of radically reducing their energy use in existing buildings, which is just such changes as refrigerators and lights and skylights and so forth. Patton is very happy about that, because it's less use of the grid, and Patton is very worried about our dependence on the electricity grid.

He says that, you know, the Magineau Line was at least defensible from one direction, the electricity grid isn't defensible at all, the way it's structured now.

Muir mentions California. He says that, you know, 20 years ago, California changed its rules for utilities. It decoupled revenue from earnings for utilities, and said that from now on, you make money as a utility by investing, including sometimes in energy-savings equipment and technology; you don't make more money by building more power plants and selling the electricity, even if it's wasted.

And, by the way, what that has done, it has kept California's per capita consumption of electricity, absolutely flat over the course of the

last 20 years, when the rest of the country has gone up by 60 percent. Some six other states have now followed California on the electricity side, and a few more on the natural gas side of this decoupling. It's a simple, straightforward change for utilities, that can make a huge amount of difference.

A third point that Muir raises, is Denmark, because the Danes make over a third of their electricity out of something called combined heat and power or cogeneration. In Denmark, if one of our guests here, if John owned a coking plant on one side of the road and I owned an aluminum plant on the other, he would simply put in some generators, string a wire across the road and sell me the electricity cheaply to make aluminum.

In Europe, particularly in Denmark, that is encouraged, and so it's waste that is being used, heat that would just go into the atmosphere. In the United States, that's very hard. Public utility commissions make that very, very difficult to do, and it's one of the reasons that Europe is ahead of is in using this type of distributed generation, because

these steps are permitted in Europe, and they are very rarely permitted in the United States.

Muir also talks about rooftops. He says, do you realize what is happening just among people who are doing photovoltaics and batteries? Photovoltaics are getting cheaper, not quite as fast as Moore's Law of doubling their capacity every 18 months to two years, but they're doubling their capacity about every three to four years.

And they are getting much more efficient, and the same thing is happening to batteries. We are already, again, in California, in a situation where in many parts of the state, you can buy electricity from your roof, from a company that will put up photovoltaics, cheaper than you can get it from the grid.

California's utility prices are about double the rest of the country, but that condition of so-called grid parity, will probably come to be close to the case in much of the rest of the country, over the course of the next three to four years.

When Muir talks about cleaner power plants, Patton backs off a bit. Muir says, look, whatever we do, George, it's got to be clean. So, maybe we can capture and sequester the carbon from coal-fired power plants, maybe we can do nuclear; either of those is fine with me, but it's got to be clean.

Patton says, look, I like the first things you were talking about, better, because this is adding power plants, it's adding to the grid, it's adding to dependence on the grid. Terrorists will take down the grid, tree branches will take down the grid.

I'm willing to do it, if we absolutely have to, but it's not real high up on my list, Patton says.

So this is one on which they partially disagree, the tree hugger and the hawk. Muir turns to automobiles, and he explains to Patton that we are in the midst of a revolution with respect to batteries, that is, as far as they say, going to put, for General Motors, a plug-in hybrid being able

to go 40 miles on an overnight charge on a battery, for just really a few cents each day, and three-quarters of the cars in the country, go less than 40 miles a day, so that means less than a quarter of the cars are going to need to use the liquid fuel in their tank, which is there as an insurance policy, because, if you get past your 40-mile charge on the battery, then you just become a regular hybrid.

Having a plug-in hybrid that can get 40 miles, would turn a small car, for an average driver, let's say, even one who drives as much as 50 miles a day, from being a 50-mile-a-gallon car, into being a 150-mile-per-gallon-of-gasoline car, and if what's in that tank, is 85 percent either ethanol or, in times in the future, butanol, or other types of alternative liquid fuels, you have something on the order of a 500-mile-per-gallon-of-gasoline car, because, with existing technology, you are using mainly electricity and alternative liquid fuels.

Patton loves this. He says, this is incredible. He said, that's going to make Wahabes unhappy and anything, as far as I'm concerned, John,

that makes Wahabes unhappy, is a good idea.

Finally, the two of them get into a discussion about hydrogen and the hydrogen highway. They kind of shake their heads and say, well, we ought to keep working on it, it's an interesting technology, it's useful, there are things that it can do, but, you know, the infrastructure you're going to need, is pretty substantial, with tens of billions of dollars to have the family nearby filling station, the family car to be able to be refueled with hydrogen at a nearby filling station, whereas the infrastructure you need for a plug-in hybrid, is that every family absolutely would have to have an extension cord, period -- no new power plants until three-quarters of the cars are plug-in hybrids, according to Pacific Northwest National Laboratory, and an improvement of some percent, 15 to 20 percent, countrywide, in global warming gas emission for every car that goes from being internal combustion to being a plug-in hybrid.

In clean states like -- clean grid states such as the West Coast or anyplace that has

largely nuclear or hydro, it's about an 80- to 90-percent improvement.

So, as they look at these things, Muir and Patton find that there's really only one big issue they disagree on, and that's coal to liquid. The reason is, Patton loves it, because coal is here in the United States and it's not oil and we don't have to get it from the Middle East.

Muir hates it, because it puts a lot of carbon into the atmosphere, and they just agree to disagree on that.

But what this abbreviated dialogue, I think, shows, is that although there are some things that your constituents who are tree huggers and your constituents who are hawks, may not agree on by way of solutions, they're going to disagree a lot more about the underlying reasons and their underlying concerns, than about what to do.

And there are a number of things, many of which are in the hands and the control of state governments, particularly with respect to electricity, there are many things that they can do,

which should tell all of us that we ought to listen to one another. Thank you.

(Applause.)

CHAIRMAN PAWLENTY: Great, thank you very much. We're going to have Jim come back up in a little bit and do the Q&A.

John Doerr is a partner with one of the country's leading venture capital firms. It's Kleiner Perkins Caufield and Byers. Together with the partners of that firm, John's backed many of America's best entrepreneurial companies and enterprises, including Google and Amazon.

He recently has been deeply involved in supporting the development of green technology innovation and cutting-edge investments in that regard, to address our nation's environmental and energy challenges.

His firm was the top venture capital firm last year in clean energy technologies. He's going to share his view on some of the most promising emerging technologies and how they might be commercialized to help tackle these important issues

facing our nation. John Doerr.

(Applause.)

MR. DOERR: Thank you, Governor Pawlenty, for your terrific leadership in Minnesota and also with this Association, on clean energy policy, and thank you, Mr. Vice Chairman, Governor Rendell and Jim Woolsey, and, Governors, thank you, each of you, for your leadership in innovative energy policy.

Kleiner Perkins is a venture capital firm that works for U.S. colleges, and we invest their funds in risky plans and unproven entrepreneurs who would never qualify for a bank loan.

(Laugher.)

MR. DOERR: We help these entrepreneurs build teams, build businesses, and jobs, lots of jobs -- over 200 companies and 400,000 jobs in the U.S. And we help them build whole new industries, and, in some cases, change the world.

Genentech, for example, pioneered genomics and revolutionized healthcare; Google revolutionized the Internet.

But I'm here to talk to you today about

climate change, because it's the biggest challenge we've ever faced.

Kleiner Perkins first invested in green technologies about five years ago, seeing the breakthrough technologies and what was possible in the market, but, honestly, this challenge got very personal for me, a couple of years ago, when, around the family dinner table, we were having a conversation about global warming.

My ten-year old daughter, Esther, said, Dad, is global warming going to hit before I'm out of high school? And then my teenage daughter, Mary, said, very firmly, I'm scared and I'm angry. Dad, your generation created this problem, you better fix it, and I had no idea, friends, what to say.

Well, I'm here today to say that our children may know more about this problem than we do. Esther as asking about speed, how quickly is this going to happen, and Mary was asking about scale, the scale of the mess that we're in.

They want us to act now and act with speed and scale. Now, Governors, as the CEOs of our

states, you've really led the way.

You're acting; you've put in place, renewable standards, carbon emission targets, and you are well ahead of the feds, but, forgive me now for being blunt, what we're doing, is not enough; it's not enough.

With respect to speed, the scientists tell us that the next three to five years, are going to determine whether or not we set off, really, irreversible climate change. The scientists agree.

With respect to scale, we know that this is a problem of the a size that we've never faced before. Energy is a $6 trillion market, worldwide; it is the mother of all markets.

So our investments, our policies and our government R&D, must match the scale of this problem, and we've got to work together. If we don't scale, we're going to fail.

Global warming is really a crisis. It's an unprecedented opportunity. If we do it right, as Tom Friedman told us, it can get America growing again, improve our national security, and allow us to

lead in this new global energy revolution.

Some have compared this to the Apollo Project or the Manhattan Project, and I'm tempted to say that's wrong. Of course, it's right; we need both, but those programs were just multibillion dollar programs and a single agency of the U.S. Government pursuing a single mission. And they failed miserably to convey the size of this.

This is just reindustrializing all of our cities, our states, and nations on the planet.

There's no single silver bullet, but I'm going to tell you today about several great big bullets that are in your arsenal.

Now, on this handout in front of you, is a map that's also on the screen, of the U.S. Energy flows. It's where energy comes from and where it goes.

On the left-hand side, are the sources of energy, the dirty fossil fuels, like coal and gas and oil, and above them, are the clean renewables -- hydro, biomass, wind, and geothermal and solar.

I make three big observations about this:

First, all the renewable sources, including hydro, are less than five percent of America's energy sources; second, look in the upper right and you will see that 55 percent of our energy for electricity, is wasted in heat or in transmission, generating 1.6 gigatons of CO2 per year.

The bottom line is achieving efficiency, reducing greenhouse gases, is all about the three Cs: Cars, coal, and conservation or efficiency.

Now, by this point in time, you may be thinking I'm some kind of Prius-driving, tree-hugging quiche-eating Californian, and I want you to know that's only partly right, because I'm also a practical, profit-driven, growth-maximizing free markets venture capitalist.

I am asked from time to time, what's going to be the next big thing? What comes after the Internet?

It's not IT, it's ET, it's green technologies. Kleiner Perkins has already invested $250 million in 25 new greentech ventures. This is not a hobby.

In the next two years, we're going to invest in 40 more, and we're not alone. The private investment in North American greentech ventures, was $3 billion in 2006, jumped to $4 billion last year.

But to put all this in perspective, $4 billion is just four days of the revenues of ExxonMobil.

The 2007 federal budget for renewable energy, was barely $1 billion, less than one day of Exxon-Mobil's revenues, so all of this is clearly not enough, particularly because I believe that greentech is going to be the greatest economic opportunity of the 21st Century.

So, where, then, are we investing? Well, in solutions for those three Cs, right, the cars, the coal, and the conservation.

I'm going to tell you four stories about new greentech ventures. Their technologies and your policies can speed these to scale.

The first is a story about better biofuels from California. It's from a company called Amyris and it's about cars and also about

trucks and airplanes and about bugs.

The technology here is synthetic biology, which custom tailors the metabolic pathways in microbes to produce superior biofuels for gasoline, for diesel, for jet fuels.

Picture this: We've got warm vats full of bugs, and they are living chemical factories. They're eating sugar and literally excreting better fuels, better biofuels, with higher octane and cleaner combustion.

These bugs will eat sugars, not only from corn and cane, but also from the feedstocks that are found throughout your states, from switchgrass, from wood chips. This technology can be plugged into existing corn ethanol plants in states like Iowa and Illinois, with really just minor modifications.

I know that all of this may sound to you like science fiction, but it's actually really happening today.

One more thing to accelerate these, we need the kinds of policies that don't pick winners and losers, but, instead, support all biofuel

innovations.

Now, turning from cars to coal, you know that half of our electricity comes from burning coal. The U.S. has the world's largest known coal reserves.

But coal is the dirtiest and the cheapest of all fossil fuels, and, therefore, a really tough problem. There's two things to do about this: Create clean coal solutions and then grow renewable sources of energy that can substitute for coal, which is going to lead to my second story about a company called GreatPoint Energy.

Now, GreatPoint's technology converts coal into a lower-cost synthetic natural gas, while capturing and sequestering the CO2. That's really important, because gasifying coal, instead of burning it, makes the capture of CO2 much easier and cost-effective.

When GreatPoint's natural gas is used to generate power, the CO2 emissions from it are 50 percent less than they would have been from a coal-fired power plant.

Their first plant, Governors, is going to be in Massachusetts at GreatPoint, where the state legislators are currently considering energy tax credits to help them scale. They intend to expand this technology to coal-rich states such as Wyoming and Montana.

Now, I mentioned there's also attractive, large-scale renewable substitutes for coal, which brings me to my third story:

It's about solar thermal, not be confused with solar cells. Picture very large fields of mirrors in your state, several square miles, that reflect and concentrate sunlight onto pipes, heating water to drive steam turbines and generate hundreds or even thousands of megawatts of renewable energy.

Well, today, Ausra's technology is competitive with technology from natural gas prices, and tomorrow, it will be competitive with coal.

They're building a 177-megawatt plant in Central California, which is enough energy to power 60,000 homes. They plan to extend to states that have robust renewable portfolio standards, and, of

course, plentiful sunlight -- Arizona, Colorado, Nevada, New Mexico, and Texas.

Your states, our country, needs a new nationwide smart grid to bring this clean, cheap energy to all the states in the nation. Mr. Chairman, I really ask that the NGA create a task force to work with the feds to try to solve this problem.

My last story is about conservation, efficiency and Recycle Bank. This is a New York-based company that uses the Internet and RFID-tagged waste. You see these waste bins, these are smart and they're tagged, and they reward the residents for recycling.

Recyclers earn points by redeeming, and then redeem them with the local businesses, and they lift the recycling rates by more than 50 percent in every community they're in.

Recycled materials, you know, are an increasing valuable commodity. They use significantly less electricity. Recycled aluminum, for example, uses only five percent of the

electricity that original aluminum does, so it can transform a city's waste disposal cost, literally into a profit.

When Recycle Bank is serving 10 million homes, it will save over four million tons of greenhouse gases, avoid $2 billion in landfill disposal fees, and then put $200 million back into the local economy.

Now, as I mentioned, this is already working in 30 communities in the United States. Chicago and Atlanta have just signed up for this, and if it works there, I can imagine it will both energize and reward the citizens in your state capital and in your largest cities. That's Recycle Bank.

So, these businesses, Amyris, GreatPoint, Ausra, and Recycle Bank, are in business today. What's going on in the future? What's happening in the labs right now?

Well, the inventor, Allen Kaye, is very famous for saying that the best way to predict the future, is to invent it. At Kleiner Perkins, we

like to say that the second best way, is to fund it.

So, here are several breakthrough technologies that we're now funding: Alterock is pioneering what's called engineered geothermal. That's the ability to drill under the surface of the earth anywhere, and use the earth's hot rocks to generate electricity.

These are mentioned on the back side, now, of that energy graph. SRIA is a breakthrough converting cellulose to ethanol at the lowest cost, we believe, of any technology. They are working on projects in Georgia, Iowa, and South Carolina.

Bloom Energy is making solid oxide fuel cells that allow businesses and governments to generate electricity economically and in a clean way, onsite. Meosolay is making thin-film solar cells on flexible sheets of stainless steel, and those cost one-quarter the cost of conventional solar cells, and take one-tenth the capital equipment.

Fiscar Automotive, Mr. Woolsey, is going to make the first production plug-in hybrid electric

vehicles in the United States in 2009, and that's the car right there in the center of the screen. I'm taking orders now.

(Laughter.)

MR. DOERR: The immediate payoff from all of this, though, is quite serious. It's jobs. If you turn to Texas, their Governor Bush, then-Governor Bush, created and signed the renewable portfolio standard. He created a billion-dollar wind industry and 10,000 jobs.

In California, Governor Schwarzenegger's historic AB-32 bill, global warming bill, is expected to add $4 billion in state income, and 83,000 jobs. Lastly, the Apollo Alliance is in Canada.

McCain, Clinton and Obama estimate that greentech can bring 3.3 million jobs to the United States. The question is, are we going to get our unfair share of those in your states? These are white-collar jobs and blue-collar jobs, they're knowledge jobs, they're manufacturing jobs, they're construction jobs.

I like to call them great green jobs. They're just the kinds of jobs that we need. But we can't take these jobs for granted.

One of most promising solar startups in the U.S., just decided to build its first factory in Germany, and it's not so sunny in Germany. Why? The couldn't find comparable incentives in any state in the country.

I think you have to make a strategic decision on what part is green going to play in your state's economic future? Governor, you know we must do more than change the light bulbs; we've got to change the laws.

So I've got five calls to action, five suggestions for you to advocate and legislate: First, use your influence to get the Federal Government to put a cap and price on carbon. This is number one, the overarching policy.

We need to account for the true cost of emitting greenhouse gases into our atmosphere, and we can't continue to do every day of dumping 70 million tons of CO2 into our atmosphere, as if it's

some kind of free open sewer.

We need a market-based system, a cap-and-trade system to reduce greenhouse gas emissions at the lowest cost possible. It worked with the acid rain program, and, properly designed, it can work with greenhouse gases.

As Jeff Immelt said on Saturday, businesses expect this and investors want clarity and certainty.

Furthermore, I believe we should also have a carbon tax, to significantly reduce and replace employment and payroll taxes by taxing dirty electricity and fuels.

This would not be a tax increases, but, rather, a dollar-for-dollar substitute that's cost-neutral to the taxpayers, much like the one that British Columbia just passed last week, much like the one that the Congressional Budget Office found last week, is most efficient.

Today, we're very close to the 60 Senate votes that we need for a cap-and-trade system. All the remaining Presidential candidates now favor a

carbon policy.

So please let Congress and the Administration know how important this is to you, to businesses in your state, so that we get to the final goal.

Second -- and this is particularly urgent -- please demand that Congress extend the federal investment tax credit and production tax credit for renewables, and for at least ten more years. It's really hard for me to believe this, but the ITC and PTC expire at the end of this year, and we're still not clear, whether or not they're going to be extended.

The on-again/off-again nature of federal incentives, makes renewable energy projects too costly and too risky and is going to kill contracts in your state. I know this. I know of ventures we're backing with contracts in your states signed, that are going to be torn up, if these credits are not extended.

After the PTC -- look at this graphic -- expired at the end of '99, 2001, and 2003, the

additions, the new U.S. wind capacity, declined by 70 percent. We need these extensions approved this quarter, otherwise they are going to make or break the wind and solar industries for years to come.

You know, Congress is taking this issue up right now, this very week, and so if you were going to do just one thing this week for the green economy and jobs in your state, I'd say, please call your Senators and let them know that the ITC and PTC are crucial for the renewable industry and jobs in your state.

And I would be happy to provide you with details, a white paper, whatever you'd like, to move this forward. We're at 59 votes right now in the United States Senate.

Third, please extend, set, and enforce renewable portfolio standards. As you know, electricity generation is 40 percent of greenhouse gases. As state CEOs, you have unique authority over the public utility commissions and the companies they regulate. Twenty-seven states have these standards right now, and let's go make it 50.

Fourth, fix the rules that govern your utilities. This one is very exciting to me, because you can make them prime drivers or energy efficiency.

These utilities are not dumb. If they're rewarded for selling more electrons, they're going to sell more electrons. But if you reward them for finding the cheapest ways to deliver heat, lighting, and cooling, they're going to find all sorts of ways to save energy.

So when you flip these incentives, as Jim Woolsey described, and unleash these utilities, so they can drive and invest in efficiency, you're going to find their vast cashflows, their low-cost capital, and 100-percent market share, is an incredibly powerful engine.

Tom Friedman, on Saturday, mentioned decoupling to us, which breaks that link between revenues and the volume of electrons sold, in a way, importantly, that allows the utilities to continue to grow.

By my count, ten states are doing that

right now for electricity. That leaves 40 more of us to go.

Another key utility policy is net metering. Solar energy, you know, is becoming cheap enough that many homeowners and businesses will put solar cells on their roof. I suggest that all your public utilities commissions should allow your citizens to sell surpluses of their electricity, back to our grid.

Let me tell you, voters really love seeing those meters spin backwards.

Fifth and finally, toughen the building standards. Energy consumption in buildings, accounts for one-third of all of the energy in the U.S., and two-thirds of the greenhouse gases that are generated from the buildings -- sorry, two-thirds of electricity demand.

A well built green home with advanced insulation, windows, heating and cooling, uses only one-half the energy of a conventional home. The energy savings will pay back for that in five to seven years.

In my home state of California, the energy savings from building standards, are more than $16 billion since 1975, and are forecasted to get to $59 billion by 2011. This is serious money to go with the serious offer.

If you want to personally push any of these agenda items, any of these five calls to action, the NGA is prepared to work to help provide world-class technical assistance, planning, not lobbying, together with the Energy Foundation, and, on the matter of new jobs, venture capital investment in your state, we've arranged for the National Venture Capital Association to draw up blueprints and plans, provided you care and you'll follow through on it.

You can just contact me at this e-mail address, jdoerr@kpcb.com.

The word, "crisis," comes from the Greek. It means to decide to choose. This crisis is an opportunity that presents us with choices, and the choices are definitely not between Republicans and Democrats or between red and blue. The choice is

between America leading or following in the new energy economy.

It's between creating green jobs at home, or importing green products.

So we've talked today about American entrepreneurs and their breakthroughs -- designer bugs, cleaner coal, hot rocks, solar power, and smart recycling. We've talked about climate crisis as the challenge of our generation, and I've suggested it's the largest economic opportunity of the 21st Century.

Governors, your policies, together with our investments and American entrepreneurs, are going to make all the difference. I cannot wait to see what happens when you act individually and we act collectively.

I do look forward to reporting back to my daughters about today's meeting, and about your commitment to lead us with speed and scale. Thank you.

(Applause.)

CHAIRMAN PAWLENTY: Now we have time for

questions for John and Jim, and the we have some awards we're going to give out and do a couple of committee reports and then we're going to adjourn.

You can start this off, Governor Rendell.

GOVERNOR RENDELL: John, you said that a lot of us are coal states, and finding clean coal technology is crucial to part of our economic future.

You said that gasification reduces the amount of CO2 emitted, by 50 percent. And that's true and a number of us have gasification projects teed up. All we need is the loan guarantees. That's another thing they haven't done, is the loan guarantee for gasification, they haven't set that policy yet.

But what happens to even the 50 percent? To me, the great challenge for America, is carbon sequestration, and somebody's got to figure it out. It's great to say it's reduced by 50 percent, that's wonderful, but it's still 50 percent.

And we have got to find a way to deal with that. If we do, the sky is the limit for the

next 100 years for American energy.

CHAIRMAN PAWLENTY: John?

MR. DOERR: You state the problem well, Governor, and I think Jeff Immelt described this well. We're all suited up for the SuperBowl, we see sequestration projects at scale in other countries; we know the technology can improve; we know that GreatPoint will make it more economical, but these are big, multibillion-dollar kinds of projects.

The Department of Energy, for various reasons, cancelled the FutureGen Sequestration Project. I believe the key to this, is creating an agency like Fannie Mae or Freddie Mac or Ginnie Mae, that can take these relatively risky projects, some riskier than others, put them together in a portfolio, to lower the risk, and then to access the world's capital markets for them.

And I think that for you to advocate that kind of a proposal, will help bring the capital that's needed for the first two, three, five, six of these efforts.

We can, we have to capture and sequester

CO2 from coal.

CHAIRMAN PAWLENTY: Jim, do you want to jump in on this one?

MR. WOOLSEY: Just a quick word: The capture from integrated gasification, combined-cycle coal plants, is fairly straightforward technologically, and adds on maybe 25 to 30 percent cost, otherwise, to the plant.

The problem with sequestration, is keeping the CO2 deep in the earth. You can use it temporarily, perhaps. We're not sure how long it will stay for tertiary recovery from oil fields, but you've got to get it to where the oil wells are, and that tends to be in the Southwest.

Then the other thing you can do, is, over a long term, probably put it into the deep saline, the deep salt water aquifers, a mile or two down in the earth, which are over a large part of the earth's -- under a large part of the earth's surface.

It's liquid -- CO2 is liquid at those depths, and there's salt water down there and CO2 and salt water are probably going to stay

together for a long time, if you can get it down there.

The question is the cost of doing it. Ernie Menies up at MIT, who has looked into this more than most anybody I know, says probably something on the order of ten years and $10 billion of experimentation to make this all work right, and probably a CO2 price of something in the range of $35 to $40 a ton.

CHAIRMAN PAWLENTY: Governor Granholm from Michigan.

GOVERNOR GRANHOLM: Thank you so much. John, I'm so enthused about this segment of growing the next industrial revolution on energy. Obviously, from the automotive capital of the world, we want to have the man-bites-dog story be that Michigan helped to do this.

But here's my question: In this effort, we'd also like to take a look at trash, too, municipal waste-to-energy. I'm wondering if you can comment just a minute on what you're seeing in terms of breakthroughs there.

It's my understanding that in Sweden, they don't have a single landfill, because they covert their waste to energy. Wouldn't that be fabulous, too?

MR. DOERR: Well, I'm not familiar with the Sweden story, but I'll look into it at your suggestion.

Taking biomass, biomaterials, waste materials and gasifying them, using them to create electricity, is a frontier where we're seeing advances in the sciences that I'm really not at liberty to disclose here, that are very attractive and very economic.

So, I'm investing in the area. The results are not yet in, but they appear very promising.

We actually have a project in Germany to make distributed plants that use municipal waste and biomass, biomaterials, and another one currently at Georgia Tech, so I'm hopeful and interested in learning more.

CHAIRMAN PAWLENTY: Do you want to

disclose the nature and depth of your investments?

(Laughter.)

CHAIRMAN PAWLENTY: Just teasing.

MR. DOERR: I do have some hot stock tips, if you'd like.

(Laughter.)

MR. WOOLSEY: Look into, Governor, Missouri, Carthage, a joint venture between Conagra and a little company called Changing World Technologies. It takes, in this case, waste from a turkey processing facility of Conagra's, but the process works, I'm told, with hog manure, chicken litter, used tires, all sorts of ugly waste, to rather cleanly turn it into high-grade diesel.

And it's worth getting in touch with Conagra and seeing how that's going.

CHAIRMAN PAWLENTY: Similarly, in Benson, Minnesota, we have a plant that takes turkey poop and turns it into electricity. That's worth --

GOVERNOR GRANHOLM: We have a couple of those, too. They're called poop-to-power.

(Laughter.)

GOVERNOR GRANHOLM: But I'm actually referring to the municipal waste side of things.

MR. DOERR: I was going to say that the first thing you have to do with municipal waste, is recycle.

CHAIRMAN PAWLENTY: Governor Hoeven from North Dakota, and then we'll go to Governor Bebee from Arkansas. Governor Hoeven?

GOVERNOR HOEVEN: Thanks, Governor Pawlenty. Is that a technical term, that turkey poop as a fuel source?

(Laughter.)

GOVERNOR HOEVEN: Dr. Woolsey, thank you for coming to North Dakota and seeing some of the things that we're doing there, and speaking at one of our energy seminars. We appreciate it very much. It's good to see you again.

In the discussion about deploying new technologies for carbon capture and sequestration, in both cases, it's going to be very important that both the regulatory framework and the structure of that legislation, as well as the incentives, enable

the industry to move forward with the new technologies.

For example, Mr. Doerr talked about moving forward with GreatPoint, and, obviously, the legislature in Massachusetts has had to deal with that. But what we see right now, is that it looks like billions of dollars, the kind of thing that you talked about, John, in terms of the Manhattan Project, capital that's sitting on the sidelines, both capital that's within the utility industry, within the energy industry, and venture capital, generic venture capital, that's sidelined, because the investors, as well as the technology purveyors, GE or whoever it might be, everybody doesn't know what the regulatory climate is going to be.

So, how do we move forward in a way with these new -- get these new technologies to move forward? I mean, how do we move forward from a public policy standpoint, to empower that?

For example, if we're talking about cap-and-trade, if we're talking about carbon tax, an investment fee, or even investment tax credit, how

do you get those into public policy, in a way that actually enables both the venture capital people, the investment community, and the technology providers, as well as the energy industry, to move forward and put that technology in place?

I mean, right now, we have a coal gasification plant in North Dakota and we're working on another one that actually captures the carbon dioxide, compresses it, puts it in a pipeline and sends it to the Wayburn Oil Fields, which is part of the Williston Basin, for secondary oil recovery.

That was originally started as a Federal Government project, and there are many others. But I'm concerned, when we talk about the public policy standpoint, how do we make sure that we're empowering the right kind of action to go forward, rather than just kind of freeze everybody in place and end up not deploying the technology?

So you've got the old plants that are still out there, instead of getting the new ones going with the new technologies that are more environmentally friendly.

CHAIRMAN PAWLENTY: John Doerr?

MR. DOERR: And, of course, those old plants are completely written off, so they're the lowest-cost, most profitable part, with today's accounting, of an energy company's business.

I'd take a step back and say that the state is sovereign, and more money flows through the world's capital markets in a day, than through all the world's governments in a year. So there's plenty of capital out there.

These projects are just not now profitable, and I suggest that your job as policymakers and your leadership as Governors, is to get a national price put on carbon, so that cleaner renewable forms of energy, cleaner coal, is cheaper than the dirty coal.

And when you solve those problems swiftly, the markets will come in at scale and fund these demonstration projects. I'll add again, there's no silver bullet for this problem, but the first and most important thing we've got to do, is put a price on carbon and then we're going to find

the markets are going to respond.

We want to harness America's great capital markets to fund these efforts. There will be a demonstration project here or there for which we need some federal funding, and we're going to have to collaborate to build the next generation grid, but the scales that we're talking about, hundreds and hundreds of billions of dollars, we're going to need the capital markets.

MR. WOOLSEY: Just one thought. The Europeans had, they thought, a great idea about a carbon cap-and-trade system, but the used a mechanism to set the price of CO2, that was so low that they issued permits to virtually anybody who had any wish for them at all. They ended up with a CO2 price of under one Euro, under a dollar, essentially, a ton, and as a result, Europe, as a whole, is not moving as rapidly as the United States is, voluntarily, toward reducing its CO2 emissions.

So, the whole thing is figuring out the mechanism to set the price for CO2. And, as John said, that's the heart of the matter. You probably

are going to have to have some kind of an auction, rather than people just being granted permits, I would imagine, if you want to make capture and sequestration of carbon, something that's financially attractive.

CHAIRMAN PAWLENTY: Other questions or comments?

GOVERNOR HOEVEN: Governor, if I could, just a quick followup.

CHAIRMAN PAWLENTY: Sure.

GOVERNOR HOEVEN: Dr. Woolsey, when we had both Immelt here yesterday and some of the industry people, they talked about the Federal Government leading the way forward with like a FutureGen, but with the Federal Government actually coming in and doing a number of projects around the country. Everybody said, you know, they don't want to be the first one, they want to be the second one, whether it's IGCC or something else.

What about getting the Federal Government to lead eight or ten projects around the country, that actually get this new technology deployed, so

everyone else is second, third, fourth, fifth, instead of first?

MR. WOOLSEY: I think, as John suggested, that's a good idea, and that's really all that's left, now that FutureGen has been cancelled. One has to do these one and two at a time, and I would hope and think the Federal Government could be involved in that.

MR. DOERR: We saw the Federal Government, in the last energy bill, I believe, offer loan guarantees for, I think, six or eight nuclear power plants, to incentivize the industry to start building. Let's do the same with carbon capture and sequestration.

CHAIRMAN PAWLENTY: John, could you just very briefly share with the Governor of North Dakota, the sequestration and capture plant that you have on the boards or up and running, and how you got it done?

GOVERNOR HOEVEN: Well, we've got one. Dakota Gasification Company was originally a plant that was started by a number of large corporations

in the energy industry, with a federal loan guarantee.

And, essentially, it takes lignite coal and gasifies it, using technology which is a technology that goes all the way back to about the World War II Germany era, but, obviously, it's been advanced greatly.

They gasify the coal. That produces, in essence, methane, that's put into natural gas pipeline, goes off to market. A lot of natural gas comes through our state, both produced in Canada, as well as in North Dakota, Montana, and other places.

It goes to market, so we have the pipelines. So, it's synthetic natural gas that goes to market.

In the gasification process, the CO2 is captured on the front end. It's compressed and then we put it in a pipeline. Dakota Gasification Company puts it in a pipeline, and it goes into the Wayburn Oil Fields, which are actually in Saskatchewan.

Most of those fields are unitized, so

they work very well for secondary recovery, which can be water flood or CO2. And the oil companies pay for the use of this CO2, which helps, of course, cover the cost of the pipeline.

Now we're working on another very similar project, but with newer technologies.

GOVERNOR RENDELL: And the beauty of these plants, is, they're polygen. If you want to do the second step and liquify, you can produce non-sulfur diesel fuel for cars and jet planes.

MR. DOERR: Right, coal to liquids, exactly.

GOVERNOR RENDELL: It's an incredible technology, if we could ever make it financially viable.

CHAIRMAN PAWLENTY: John, go ahead.

MR. DOERR: What technology is going to do in the long run, is make this cheaper and cheaper and cheaper. Right now, there's low-hanging fruit that we can grab, but I think we'll find that we can use CO2 to build valuable products, using new technologies, the science of the small. We'll see.

CHAIRMAN PAWLENTY: Governor Bebee?

GOVERNOR BEBEE: Thank you, Mr. Chairman. John, you pointed out the need, I think, for immediate action on some aspects of this when you indicated the first thing or the best thing we could do this week, is to lobby for or throw our weight behind the extension of the tax credits, which, as you pointed out, will be -- decisions will be made on that, to some extent, this week.

I think we've already authorized the Executive Committee, right, Mr. Chairman, on those short -- on all short-term issues, but specifically that short-term issue, to extend to the Congress, to the Senate, the wishes of the NGA with regard to that issue.

So I think we've already taken that step as a group and as a body, but I would be interested, number one, in knowing who those 59 Senators are that you have committed, so that, you know, if the folks in this room could get that information relatively quickly, we may be able to get you one more.

Now, we may not. All of ours may already

be there, or they may be so intractable that we can never get to that other vote, but I think it's worth trying, if you could share the information with us, or maybe the staff already has that information about who is committed and who perhaps we can work on.

The second thing is, I'm really intrigued by your designer bugs and wanted to know if you are familiar with some technology that exists but there's not a lot of talk about it, with creating cellulosic gasoline, not cellulosic ethanol, but cellulosic gasoline, so you obviate all the problems that exist with infrastructure and with flexfuels and with retraining a sometimes untrainable gas-guzzling public.

So, if you could speak to any knowledge that you have relative to where we stand on cellulosic gasoline, that would be appreciated.

CHAIRMAN PAWLENTY: John Doerr?

MR. DOERR: I'd be happy to. First, and to the crucial matter this week, we'd be happy to work with the NGA. I believe we know which Senators are currently in favor of this and those that are

not, and a few key phone calls, I think, from a few Governors, would make all the difference in this.

By my view of the world, if you eliminate a tax credit, you're raising taxes. And what we're about to do, is raise taxes on renewable energy, and that doesn't make any sense to me.

Now, to the bugs, this company, Amyris, as it turns out studied what it would take to make bugs that would excrete gasoline. And we can make bugs that do that.

The problem is that the gasoline kills the bugs right away.

(Laughter.)

MR. DOERR: So we have found we can make a better gasoline, a substitute for gasoline that will go right through the current cars, right through the current pipelines. We cannot do it at great economic advantage, which is why Amyris will prioritize diesel and then jet fuel.

And I'm very, very excited about what these bugs are going to do for my daughters.

(Laughter.)

GOVERNOR BEBEE: Just as a followup, we have some significant research going on in a collaborative in our state and some private foundations that have invested some significant research dollars.

And I would love to be able to pick your brain and share some information with you, and, before you get out of here, if we can, besides just your e-mail address, we could get your private cell phone number or something --

MR. DOERR: I'd be happy to do that.

CHAIRMAN PAWLENTY: Jim?

MR. WOOLSEY: One quick point: A lot of these alternative liquid fuels, are very attractive and interesting, and I think they will play an important role, but, as John said, they're often going to be kind of close to the cost of gasoline or diesel.

The interesting thing about electricity and plug-in hybrids or moving toward electric vehicles, is that off-peak, overnight electricity, if it's billed off-peak, is somewhere between one

and two cents per mile to drive on in an electric car or plug-in hybrid, and if it's billed at an average daytime/nighttime rate, it's probably around three cents a mile, whereas gasoline now is about 12 and headed up.

So, you are talking about being able to cut your driving costs, in some cases, by an order of magnitude, by going to electricity. And I think electricity will pull the laboring oar.

A number of these alternative liquid fuels are exciting and interesting, and they will be important, too, but I think electricity is going to lead the way.

CHAIRMAN PAWLENTY: Okay, any other questions or comments, before we move on to our next section? We'll do one more. Governor?

GOVERNOR LINGLE: I just want to ask John one question about the technology --

(Microphone fails.)

MR. DOERR: The question is, what's the prospect for geothermal technologies, long-term? I'm very bullish about those. We've invested in an

MIT-inspired startup, as I may have mentioned to you.

There's enough energy in the hot rocks under the surface of the country, to power America's energy needs for a thousand years. There are tremendous amounts of energy there, and the technology to get to them, is oil drilling technologies.

The challenge is to do it at cost, at competitive cost. So, a price on carbon is going to make that more cost-competitive.

The goal of our venture is not to go to Old Faithful in Yellowstone and tap the steam that's coming out, but to pretty well be able to drill these holes anywhere in the earth's surface -- almost anywhere -- to get the steam and then the electricity close to the centers or demand.

In fact, the experts in this company, tell me that we can put a geothermal well here under the nation's capital, and have it be economic, so we hope to do that as a first demonstration.

But I'm --

VOICES: There's a lot of hot air.

(Laughter.)

MR. DOERR: There's a lot of hot air. That's well said, Governor. We can tap it below the ground and above the ground.

(Laughter.)

MR. DOERR: I think it's a very important renewable source of energy.

MR. WOOLSEY: There's two kinds of geothermal. You don't need, necessarily, hot. That helps with large plants, but we're about to put one under our house, that only goes down to water that's 60 degrees, and it cools in the Summer and it heats up to 60 degrees in the Winter. That's shallow heat pump geothermal, and a lot of residences are starting to be -- pursued by a lot of people, so you've got two kinds of geothermal, not just one.

GOVERNOR LINGLE: John, we would like to obtain, you know, the technology you described awhile ago.

MR. DOERR: I'd be happy to work with you on that, Governor.

GOVERNOR LINGLE: Thanks.

CHAIRMAN PAWLENTY: We're going to move on to our next item, but let's thank our two wonderful guests for sharing their time and information with us.

(Applause.)

CHAIRMAN PAWLENTY: I have just a couple of housekeeping items here and will try to go through them as quickly as I can, but they are important, as well.

The first is to recognize our Public/Private Partnership Award winners. As these guests and many others have discussed at this meeting, innovation is an important part of what we do at NGA, trying to recognize it, celebrate it, encourage it, and with securing a clean energy future.

And we want to remain committed to recognizing innovation and people who demonstrate an appetite to help us with that effort. That's why, last year, NGA unveiled a Public/Private Partnership Award for members of the NGA Corporate Fellows

Program and we're pleased to present this year's winner.

The Award program was created to recognize the NGA Corporate Fellow companies that have partnered with Governors' Offices to implement a program or project that makes a positive and recognizable and measurable difference and contribution to that state and its citizens.

Now, this past Fall, Governors submitted nominations to the Corporate Fellow Awards Program, for his or her states, of nominees, and I want to thank all the Governors who made those submissions, and we also want to thank the people who screened them, led by Charlie Weaver, who runs the Minnesota Business Partnership, but a lot of hard work from Steven Jordan, Susan Trayman, Leanne Wilson.

It wasn't limited, of course, just to energy. There was also infrastructure, healthcare, education, public safety categories and others.

So, without further ado, I'd like to invite Governor Riley from Alabama to come forward. He's going to announce the winning nomination for

the NGA Public/Private Partnership Award.

GOVERNOR RILEY: Thank you, Mr. Chairman. As most of you know, all of us are trying to figure a way to reconstruct what we're doing and do it more effectively and more efficiently than we have in the past.

One of the things a few years ago that we noticed in Alabama, is that we did a tremendous amount of mapping. Our visual imagery was carried on by four or five different departments, yet each one was isolated and located only in that department and available only to that department.

I asked our Department of Homeland Security in Alabama, to come up with a new plan, a new plan that would allow us to make all of this information available to anyone in the State of Alabama, to put it online.

They first talked to the Space and Rocket Center, came up with a geospatial design, and then, working with Google Earth, built a product today that is available online to any agency in the State of Alabama.

It is a 3D image today, that we can use anywhere in the world. And the applications for it have been truly remarkable.

Now, every one of you Governors today, probably have all of the information readily available in your state, but it's to bring it into one single repository, being able to layer it on top of each other, and design a program today that will allow you to show any project, anywhere in the world, to any user and have it located within the confines of your own state government.

Today we have a system that has 2300 users in every agency of state government. This is the kind of innovation that I want to thank Google and Google Earth for. Michael T. Jones, is the Chief Technology Advisor for Google Earth, and is with us today. Michael, if you would come up?

(Applause.)

GOVERNOR RILEY: Let me present this to you, and, again, thank you, thank you for all the help that Google has given the State of Alabama. You really have revolutionized the way we look at

mapping, at the way we look at geographic districts, the way we look at our state.

Every agency in state government today, has benefitted, and I want to thank you for it and ask you to say a few words.

MR. JONES: Well, thank you, Governor.

(Presentation made; applause.)

MR. JONES: Well, I would like first to say that I feel so lucky to be here. We're one of a few great companies, the Google Earth team, that Kleiner Perkins declined to invest in, but we made it anyway.

(Laughter.)

MR. JONES: But, more importantly, the reason we're here, is not because of what we did at Google, but because of what Governor Riley and his team did in Alabama. It's the unique situation that has put Alabama first, as far as Google is concerned, in technology.

They have a Governor who has caused, from the top, a pushing down through their organizations, saying, find a new way to make the best use of the

data that we already have, and that ranges from the pedestrian uses like seeing maps, to extremely aggressive uses, such as seeing the Highway Patrol dashboard cameras, live on top of the computer screen at anybody's desks, so they can see what's going on around the state.

It's truly amazing, what they've done, and it's a real privilege to see our product used in such a great way. So I wanted to thank you, sir.

GOVERNOR RILEY: Michael, thank you. We appreciate it; thank you very much.

(Applause.)

CHAIRMAN PAWLENTY: Next, Governor Mike Rounds is going to come forward to present and recognize South Dakota's winning nomination for an NGA Public/Private Partnership Award. Governor Rounds?

GOVERNOR ROUNDS: Thank you, Governor Pawlenty. I'm honored to be here today to help present this award to Berrick Gold of North America.

Berrick's partnership with and the donation to the South Dakota Science and Technology

Authority, has allowed the Homestake Mine in South Dakota, to be selected as the site of the National Science Foundation's Deep Underground Science and Engineering Laboratory.

The Homestake Mine in Lead, South Dakota, was once a very successful gold mine and was the site of the single largest gold deposit ever found in the western hemisphere. At its peak, it employed more than 3,000 people, but when gold prices fell, the mine was closed in 2001, after 124 years of operation.

Now, if you're wondering where Lead is, it's just outside of another community by about a mile and a half, called Deadwood, South Dakota. I think you might have heard of Deadwood, and that's where the original gold strike was at, and from there, they found the lead into the big vein of gold that the Homestake Mine followed for 124 years.

In 2002, Berrick bought the Homestake Mining Company, which included mines around the world, as well as the Homestake Mine in South Dakota.

Thanks to the wonderful generosity of Berrick, our state has had an opportunity to create a new tomorrow for Homestake and for South Dakota.

Decades of development and the pursuit of gold, left a vast underground architecture that is perfectly suited to accommodate the many different scientific experiments that require underground laboratory space.

The Deep Underground Science and Engineering Lab, or DUSEL, is a proposed federal research laboratory which will house scientific experiments that will expand our knowledge of the planet and our universe. When you think of dark matter and many scientists will someday talk of double-beta decay and kids will share stories of neutrinos, the Laboratory will bring together, some of the brightest minds in the world.

It will create an immeasurable educational opportunity for our country's youth, who want to pursue science. It will produce cutting-edge scientific research in several fields, and build on the Nobel Prize winning work of many scientists such

as Ray Davis, who was awarded the Nobel Prize for Physics in 2002, for his neutrino research conducted at Homestake on the 4250 foot level.

The Homestake site was once in competition with several other locations around the country, for the selection as the Deep Underground Science and Engineering Laboratory. In 2005, the Homestake site was selected by the National Science Foundation, as a finalist in its search for its site for the DUSEL.

Berrick worked together with the Science and Technology Authority, to develop a way to transfer just portions of the property to the state in support of its efforts to secure the DUSEL within our borders.

In 2006, Berrick, through an act of truly tremendous corporate generosity, donated the areas of Homestake that were needed for this science laboratory. They donated it to the State of South Dakota Science and Technology Authority.

This donation included the underground workings of the 8,000 foot deep mine, consisting of

excavated rooms, along with 370 miles of drifts and tunnels, 7,700 acres of mineral rights, and 186 acres above the ground, which contain numerous buildings.

This transfer of ownership was one of the key factors that allowed South Dakota to move forward in securing the DUSEL at Homestake.

Currently, the Science and Technology Authority has reentered the mine and is redeveloping an interim laboratory at various levels, including the 4850 foot level, for experiments, as plans for the deep-level facility continue to be developed.

The development of the Deep Underground Science and Engineering Laboratory at Homestake, is perhaps the single greatest opportunity for the State of South Dakota in this century.

The impact that it will have on science, research, and education, will truly be realized for generations. Already, our legislature, in conjunction with a gentleman, a businessman in South Dakota, T. Denny Sanford, have already contributed, between legislative activity and this private

businessman, over $100 million to invest at this location.

I'm very happy that Patrick Garver is here today to accept this award for Berrick. Mr. Garver was personally involved at every step in this project, and he continues to be a partner in our effort.

Ladies and gentlemen, Patrick Garver is a gentleman. Patrick, if you could please come forward, on behalf of Berrick Gold, I want to share with you that it's not very often that a state buys an abandoned mine. And Patrick was very serious in discussing with us, the implications of what goes on when you purchase something of this size.

And he wanted to make sure that every single eye was dotted and every T was crossed. He wanted to make sure that we recognized the cost involved in protecting this piece of property, this special piece of property.

But throughout literally years of negotiations, he stuck with us; he worked through the challenges that we had, and he could see the

gleam of what could happen in our state, if, rather than mining gold, we started to mine knowledge deep underground.

This would not have happened without Mr. Patrick Garver or without the truly magnanimous gift from the Berrick Gold Corporation, to the citizens of South Dakota, that we get to share with scientists from throughout the United States and around the world.

Mr. Garver, thank you very much on behalf of all of us.

(Presentation made; applause.)

MR. GARVER: Well, I understand that I'm about the last thing on the agenda before adjournment, so I don't want to say very much.

I will say that it was really terrific to work with the State of South Dakota, and, particularly, Governor Rounds. He proved to be extremely determined and extremely entrepreneurial, and that's something that we'd like to see in all of the places where we do business.

In this case, it was a joy -- it was a

long slog, but it was a joy to work together, and I really appreciate the opportunity.

GOVERNOR ROUNDS: Thank you, Patrick.

(Applause.)

CHAIRMAN PAWLENTY: Okay, now we're going to move to adopting the policies that we have before us.

Just a very quick reminder that there's an NGA Centennial Celebration at the Ronald Reagan Building and International Center, which is right across the street, starting at 4:00. All are welcomed and encouraged to attend. Your presence there would be appreciated.

Next, we move on to voting and consideration of various policy positions. These policies were originally sent to the Governors in February, early February.

The packets you have received, reflect those policies, with any amendments that the Executive Committee and other standing committees have considered and are putting forth. To expedite matters, we're going to ask each committee chair to

briefly describe and move the adoption of the committee reports.

We have to do the first one out of order. Governor Rendell, because of a scheduling issue, has to leave, so, Governor Rendell, can you take up the Executive Committee portion of this, then we'll go to the policy committees.

GOVERNOR RENDELL: Fairly quickly, because I know you're all dying with interest to get this done, the Executive Committee recommends the adoption of one new policy that's EC-8, State Countercyclical Funding.

This policy was originally adopted by the Executive Committee as an interim policy, but under our Bylaws, it must be adopted by the full Association as a continuous policy, and since the stimulus debate will continue, it's necessary to adopt an amendment in the nature of a substitute. The substitute is at your table, in the purple.

I would like to move for the adoption of this substitute. Does anybody second it?

CHAIRMAN PAWLENTY: Governor Rendell

moves adoption. Anybody second?

GOVERNOR CARCIERI: Second.

CHAIRMAN PAWLENTY: Governor Carcieri seconds. Any discussion?

(No response.)

CHAIRMAN PAWLENTY: All those in favor, say aye.

(Chorus of ayes.)

CHAIRMAN PAWLENTY: Opposed, say no.

(No response.)

CHAIRMAN PAWLENTY: The motion prevails. Governor Rendell?

GOVERNOR RENDELL: The Executive Committee also recommends the reaffirmation of existing policies EC-1, State Grant Programs; EC-4, Public Pay and Pension Plans; EC-9, Federal Tax Policy; and EC-11, Representation in Congress for the United States Citizens of the Northern Marianas Islands, and lastly, we recommend reassigning EC-12, which is the Streamlining State Sales Tax Systems, to the Economic Development and Commerce Committee.

CHAIRMAN PAWLENTY: Do you make that motion?

GOVERNOR RENDELL: I so move.

CHAIRMAN PAWLENTY: Is there a second to Governor Rendell's motion?

GOVERNOR BEBEE: Second.

CHAIRMAN PAWLENTY: Governor Bebee seconds. Any further discussion, comments, or questoins?

(No response.)

CHAIRMAN PAWLENTY: Seeing none, all those in favor, say aye.

(Chorus of ayes.)

CHAIRMAN PAWLENTY: Opposed, say no.

(No response.)

CHAIRMAN PAWLENTY: The motion prevails. Does that conclude your report, Governor Rendell?

GOVERNOR RENDELL: It sure does.

CHAIRMAN PAWLENTY: Thank you, sir. Next, we're going to go to Governor Rounds, Economic Development and Commerce Committee Chair. Governor Rounds?

GOVERNOR ROUNDS: Thank you, Mr. Chairman. The Vice Chair, Governor Granholm, was simply not able to attend this session, sir.

First of all, the Committee recommends adoption of the NGA Membership of four -- to the NGA, membership, four existing EDC policies, including amendments to three policies and the renewal without substantive change, of one policy.

They are EDC-02, Transportation Conformity with the Clean Air Act; EDC-9, Air Transportation; EDC-13, Surface Transportation; and EDC-15, the Rural Economy.

On behalf of the Committee, Mr. Chairman, I move the adoption of our policy recommendations.

CHAIRMAN PAWLENTY: Is there a second to Governor Rounds's motion?

GOVERNOR HENRY: Second.

CHAIRMAN PAWLENTY: Governor Henry seconds. Any discussion?

(No response.)

CHAIRMAN PAWLENTY: Seeing none, all those in favor, say aye.

(Chorus of ayes.)

CHAIRMAN PAWLENTY: Those opposed, say no.

(No response.)

CHAIRMAN PAWLENTY: The motion prevails. Governor Rounds, does that conclude your report?

GOVERNOR ROUNDS: Yes.

CHAIRMAN PAWLENTY: Thank you. Next, we'll move to Governor Carcieri, Chair of the Education, Early Childhood and Workforce Committee. Governor Carcieri?

GOVERNOR CARCIERI: Thank you, Governor. The Education, Early Childhood and Workforce Committee discussed the issue of Innovative Governor-Led Strategies to Improving Struggling Schools. We heard from Dr. Pedro Guerro, who is the Executive Director of Education, had a lively discussion where Governors then themselves presented Governor-led strategies in their states to improve student achievement.

We did adopt two policies, all without changes, and recommend to the NGA membership, the

reaffirmation of ECW-4, Early Education, Head Start, and Other School Readiness Programs; and an amendment in the nature of a substitute, for ECW-2, Education Reform.

So, I'd ask for those to be passed unanimously.

CHAIRMAN PAWLENTY: Governor Carcieri so moves. Is there a second to his motion?

GOVERNOR PATRICK: Second.

CHAIRMAN PAWLENTY: Governor Patrick seconds the motion. Any discussion?

(No response.)

CHAIRMAN PAWLENTY: Seeing none, all those in favor, say aye.

(Chorus of ayes.)

CHAIRMAN PAWLENTY: Those opposed, say no.

(No response.)

CHAIRMAN PAWLENTY: The motion prevails. Thank you, Governor Carcieri.

Next is Governor Douglas from the Committee on Health and Human Services. Governor

Douglas?

GOVERNOR DOUGLAS: Mr. Chairman, we had a great, spirited session yesterday, a discussion about long-term care in light of the demographic realities that the country is facing and the cost pressure it places on states, as well as individuals and families.

We talked about some strategies for reducing costs, some private sector investment, some innovative approaches that a couple of states are using to address the challenge of long-term care, and keep more people at home, rather than going into institutions in order to improve their quality of life, a very important and timely topic.

We approved amendments to aid eight existing policies, three of them in the nature of a substitute. They are in the packet that's been distributed to all the Governors, and I move that they be considered en bloc.

CHAIRMAN PAWLENTY: All right, thank you, Governor Douglas. He so moves. Is there a second?

GOVERNOR LINGLE: Second.

CHAIRMAN PAWLENTY: Governor Lingle seconds the motion. Thank you, Governor Lingle. Any discussion?

(No response.)

CHAIRMAN PAWLENTY: All those in favor, say aye.

(Chorus of ayes.)

CHAIRMAN PAWLENTY: Opposed, say no.

(No response.)

CHAIRMAN PAWLENTY: The motion prevails. Next is Governor Manchin. Is Governor Manchin here?

(No response.)

CHAIRMAN PAWLENTY: Governor Hoeven, I think you were going to do the report for him. Governor Hoeven from the Committee on Natural Resources.

GOVERNOR HOEVEN: Governor Manchin asked that I present the report on his behalf and on behalf of the Natural Resources Committee.

There are five policies that we have for your approval. They are: NR-5, Transportation Conformity with the Clean Air Act; NR-8,

Environmental Compliance at Federal Facilities; NR-12, Endangered Species Act; NR-17, Land Management and Land use Planning; and NR-19, Low-Level Radioactive Waste Disposal.

We'd ask that you approve all of these five policies, and I will make that motion accordingly.

CHAIRMAN PAWLENTY: Is there a second?

GOVERNOR HENRY: Second.

CHAIRMAN PAWLENTY: Governor Henry, thank you. Any discussion?

(No response.)

CHAIRMAN PAWLENTY: Seeing none, all those in favor, say aye.

(Chorus of ayes.)

CHAIRMAN PAWLENTY: Opposed, say no.

(No response.)

CHAIRMAN PAWLENTY: The motion prevails. Governor Rendell was going to put in a pitch for the Summer Meeting in Philadelphia, but if you had one of those Philly stake and cheese sandwiches that he was offering yesterday, you had a taste of his

hospitality and what's to come for the Summer.

Again, it's our Centennial meeting, and I hope all Governors will make a grand effort to attend. I think it's going to be a wonderful, historic, and hopefully also a good business meeting for us, come this Summer in Philadelphia.

Thank you all for attending. This adjourns the 2008 Winter Meeting of the National Governors Association.

(Whereupon, at 3:30 p.m., the meeting was adjourned.)