ENERGY AND CLIMATE CHANGE: Comprehensive Strategy to Address the Climate and Energy Challenge

Thank you all so much. Thank you Senator Hogg. Thank you all for being here. This is such an exciting day because we are in this facility being part of the future that we will make together for our country. I want to thank Senator Hogg because he has campaigned on climate change, he has campaigned on renewable energy, he's campaigned on the future we need for our children.

And I'm thrilled to have so many others here with me today. I want to thank County Supervisor Jim Houser. I want to thank Justin Shields from the Hawkeye Labor Council. I want to thank State Representative Swati Dandekar, I want to thank State Representative Todd Taylor. I want to thank my dear friend Christie Vilsack who's with me and I want to especially thank Clipper Windpower because other people are talking and you're doing. You're making it happen.

[Applause]

I have been looking forward to being here because I know how important it is that those of us who are running for President, asking the good people of Iowa for your support, that we tell you what we will do when we're President to deal with the big problems facing America. And today I want to focus on energy and climate change.

Two years ago as part of a bipartisan congressional delegation, I traveled to Barrow, Alaska. That's the northern most point of the United States. And I also traveled through on my way there the Yukon Territory in Canada. Traveling over those vast coniferous forests that blanket those harsh unforgiving latitudes, I looked down to see dead trees as far as the eye could reach. These trees are part of an ecosystem formed to survive brutal conditions. But the giant spruce trees of the Yukon, some centuries old, are no match for a relative newcomer: a tiny insect known as the bark beetle. The forests, it turns out, were once protected by cold, cold winters. The beetle could not survive. But warmer temperatures have allowed this invasive species to travel into higher latitudes and wreak unnatural havoc. In once pristine forests, there was devastation. Millions of acres infested. Whole swaths of land - once green - now brown.

When we arrived in Barrow, virtually everyone I spoke to had a personal wake up call about what was happening in the climate. A visit to a boyhood watering hole revealed a dried up lakebed. A native village uprooted by erosion. I met lifelong participants in dogsled races who told me they no longer even needed to wear gloves during those races. At the top of the world, you hear stories -- affirmed by decades of scientific investigation -- of changing weather patterns, melting ice, retreating glaciers, unprecedented wildfires, eroding coasts, and invasive species. You can see the evidence with your own eyes. There are no climate change skeptics inside the Arctic Circle.

Of course, this is a story about a place thousands of miles from here, in one of the most remote regions of our planet. But I share it because it is not an isolated
experience any longer. It is a part of our story. It is part of Iowa's story and America's story. Alarming climate changes, a stagnant economy, our health weakened, our national security compromised -- because of our failure to move to a clean, efficient energy future.

It is our story because the climate crisis portends drastic changes to our way of life. The last two decades of the 20th century were the hottest in 400 years. The Intergovernmental Panel on Climate Change found that 11 of the past 12 years are among the warmest since 1850. Rising sea levels along the coastal United States could cost $170 billion in the coming decades. Beyond our shores, you have African countries experiencing water stress, Asian countries contending with increasing flooding.

It's our story because our dependence on foreign oil threatens our economy. America's national and economic security has taken a backseat to the driver's seat. Gas prices have doubled over the past six years. Nationwide, diesel recently hit an all-time high. You know gasoline prices, depending upon where you shop, are around $3 a gallon.

Two thirds of Americans now say that rising gas prices are a hardship for their families. One in four low income families have already missed a mortgage or a rent payment because of rising energy costs.

Meanwhile, we are more dependent on foreign oil today than we were on 9/11. And one third of our trade deficit is the petroleum we import, as we transfer massive amounts of wealth to undemocratic governments that use those funds to stifle opposition and finance extremism.

It's our story because the carbon economy compromises our health, the air we breathe, and the environment in which we raise our children. One study found that pollution from power plants causes 24,000 premature deaths in our country each year. Nearly a third of our childhood asthma cases are caused by air pollution and environmental contamination.

And finally, it's our story because the President has systematically undermined our path to a clean energy future.

Instead of recognizing the irrefutable evidence, this Administration has launched a war on science itself. Political appointees have censored studies on global warming, silenced climate experts. According to a survey by the Union of Concerned Scientists, nearly three fourths of climate experts witnessed inappropriate interference in climate research. And just this past March, the Administration issued a gag order to employees of the Fish and Wildlife Service forbidding them to speak about the plight of polar bears without prior official approval.

Instead of an all out optimistic assault on the problem, the Bush Administration launched an assault on the problem solvers. The President took seven years to recognize climate change. He refused really to engage in talks with other global leaders at the United Nations and even tried to stop individual states from taking their own action to reduce CO2 emissions under the Clean Air Act.

This is the biggest challenge we have faced in a generation. It is a challenge to our economy, to our security, to our health, and to our planet. And it's time for America to meet it. It is time to get back into the solutions business. And that is what America does better than anybody else.

[Applause]

You know, when America confronted a Great Depression, we did not wring our hands. We rolled up our sleeves. Try rolling up your sleeves while you're wringing your hands. It can't be done. And we created the New Deal and invented Social Security. When the Greatest Generation was called upon to save the world from tyranny in World War II, our whole country responded. While young men fought overseas, Americans did their part to support the war effort here at home.

When the Soviet Union launched Sputnik, we didn't minimize the challenge or silence the scientists who wanted to get out and meet it. Instead, within one year, President
Eisenhower had created the Defense Advanced Research Projects Agency, created NASA, and passed the National Defense Education Act that fostered the next generation of scientists and engineers. Our nation was so united and determined that we answered President Kennedy’s call to land an American on the moon and return him safely to earth within the decade.

For this generation of Americans, climate change is our Space Race. It is our home-front mobilization during World War II and it is our response to the Great Depression. According to studies, the negative economic consequences of climate change will affect every part of our country, virtually every sector of our economy, and strain our local governments, cost jobs, and extract a horrific human toll. I’m very proud that Vice President Gore and the Intergovernmental Panel on Climate Change just won the Nobel Peace Prize for sounding the alarm that all of us must respond to.

[Applause]

There are also security implications. A group of retired 3 and 4-star generals and admirals issued a recent report describing in detail the threat that global warming poses to our national security, from increased conflict over natural resources to instability and migrations. Earlier this year, the Senate passed my legislation to require the Department of Defense to integrate this issue into our planning.

And for those who still believe that we can’t afford to tackle climate change, the price of inaction is far higher than the price of action. I believe America is ready to take action, to break the bonds of the old energy economy, to prove that the climate crisis is one of the great economic opportunities in the history of our country. Seizing it will unleash a wave of innovation, create millions of new jobs, enhance our security, and lead the world in a revolution in how we produce and use energy. It can literally be a new beginning for the 21st century.

[Applause]

After 35 years of advocacy on behalf of children and families, I believe solving the climate and energy crisis is critical to leaving our children a world as healthy and welcoming as the one we inherited.

[Applause]

After eight years in the White House and seven years in the Senate, I believe I know how to get the job done. I know that a true American response offers us a way not just to bridge the economic divide, but to heal the partisan divide that has paralyzed our politics and compromised our future. There is something for everyone to do, and success will require each of us to do our part. So, if you’re ready for change, I am ready to lead.

[Applause]

When I am President, we will set three major energy goals for America.

One, to reduce greenhouse gas emissions 80 percent from 1990 levels by 2050, the amount necessary to avoid the most dangerous and destructive consequences of climate change.

[Applause]

Two, to cut foreign oil imports by two thirds from projected levels by 2030 to move America toward energy independence.

And three, to move us from a carbon-based economy to an efficient, green economy by unleashing a wave of private-sector innovation in clean energy and energy efficiency. I believe that will create at least five million good new jobs from clean energy over the next decade.

[Applause]

Now, how will we achieve these goals? Well, first, as President, I will lead a national commitment to energy efficiency. This is the cheapest, cleanest, fastest way to reduce energy consumption and save energy costs, and to create good new jobs that
cannot be outsourced.

The Department of Energy estimates that we can reduce energy use in residential buildings 20% by 2020. We can do better than that, I believe. By some estimates all the future growth in energy demand in North America, all of it, could be met through investments in efficiency alone. And we know how to do this.

Since 1970, three-fourths of all new demand has been met simply by using energy more efficiently. Over the past three decades, California has held its electricity use per person flat. In other words, there's been no increase in electricity use per person in the entire state of California for 30 years. They've done it through practical steps in conservation and efficiency.

During the same 30 year period, energy demand in the rest of country, skyrocketed by 50%. California's flat. We've all gone up 50%.

Now, did California get left behind? Did people flee California because it was no longer a good place to live? Just the opposite. It has prospered. A study released earlier this year by the University of California Berkeley found that cutting greenhouse gas emissions to 1990 levels by 2020, through further improvements in efficiency, could create more than 1 million new jobs in California alone. And if American electricity use had fallen at the same rate as California use, our whole country would be using 43% less electricity today. So when I'm President, increasing energy efficiency quickly will be priority one. We will set a goal of reducing electricity demands 20% by 2020.

We must change the way utilities make money. Today the incentives are backwards. The less we conserve, the more carbon we emit, the more money utilities earn. We'll change that with energy efficiency targets for utilities and incentives for saving power instead of generating more of it. This seemingly simple change, called decoupling, has transformational potential because utilities are in the best position to help businesses and families make investments in efficiency. Fourteen states already have some form of efficiency goals for utilities and more utilities are embracing that as well.

Decoupling permits a utility to invest in efficiency. Duke Power and other utilities have committed to go beyond that. They are offering energy audits to all of their customers. They're helping their customers come up with plans to cut consumption and to finance the implementation over 20 to 30 years, as if efficiency gains were mini-power plants.

It works like this: the installation of solar power and cold resistant glass and other improvements cut your utility bill 30%. The utility pays the upfront cost of those improvements and then a portion of the efficiency savings goes to you to cut your bills, and the other goes to the utilities to pay off the cost of the improvement.

You get a lower utility bill, they get more power with no more CO2 emissions. In the process a lot of jobs are created - installing the new product, manufacturing, distributing and selling. The system is user friendly, faster, cheaper and more labor-intensive than building a new power plant.

A lot of people who build things for a living, say 'well, but if we don't keep building power plants, we're going to lose jobs.' It's just the contrary. If we're building millions of mini-power plants we're going to create more jobs. That's what I want to see for us. Once we have nationwide decoupling, every utility should implement this type of system and maximize efficiency before building any new power plants.

And that's just the beginning. At your office, you probably have a desktop computer, a thousand times more powerful and half the price than computers available 20 years ago. An i-pod can hold more songs than you can listen to in a month. We can talk to anyone, anywhere, at any time using 21st century information technology, which has transformed our economy. But all of this depends on a power grid all but unchanged in half a century. It is time to start building a 21st century grid.

Right now the system runs on auto-pilot. The only connection between your home and the grid is the power you draw. But what if we harnessed all of the advances in information technology?

Imagine if you could time your air conditioner, or your dishwasher or your dryer to...
turn on when demand for power was less and the cost lower. Imagine if you could charge your car in your garage at night, and sell power back to the utility when your car is parked at work during the hours of peak energy demand. Imagine if you could sell back the excess power you generate with solar panels on your roof. Imagine if the system could manage the stresses on the grid continuously, cutting peak demand to avoid brown outs, conserve power and save money.

Just a 5% drop in peak demand would save $35 billion in energy costs over 10 years. We can harness this technology. As President I will fund ten "Smart Grid Cities," provide smart grid tax incentives to utilities and encourage state utility commissions to provide incentives as well. We will also make appliances more efficient, saving consumers $54 billion between now and 2030.

You know the EPA's successful Energy Star program provides valuable information to consumers about how to save energy and save money by purchasing more efficient products. Let's take it further and create a Climate Star initiative, to provide consumers with information to compare the carbon footprints of products that they buy.

We will also phase out the incandescent light bulb -- the technology that Thomas Edison pioneered. I think Thomas Edison would support this idea. In fact, he'd probably be there helping us develop the replacements -- from L.E.D.s to compact fluorescents. Compact florescent bulbs -- they may look funny -- they use a quarter the amount of energy and last 5 to 10 times longer than the typical incandescent bulb. If we move to compact fluorescent, or other equally energy saving alternatives, we will cut our national electric bill by more than $10 billion over just 8 years.

I also want to launch a Green Building Fund to invest $1 billion per year into energy efficiency in public buildings like schools, police stations, firehouses, and offices. We'll help 20 million low-income families modernize their homes to be more energy efficient. Buildings account for 40% of America's carbon emissions -- and there are so many simple, cost effective steps we can take to reduce heating bills, light bills, save taxpayers' money, and cut pollution. In the process we can create hundreds of thousands of new jobs.

I will also create a program called "Connie Mae," that stands for the Carbon Neutral Mortgage Association. This is a great idea that Vice President Gore has championed. The extra cost of thicker insulation and efficient window coatings, for example, are often shunned by builders and buyers looking to save money -- even though these green products actually pay for themselves in lower utility bills. Connie Mae will make it easier for families to secure affordable loans from private lenders to improve the efficiency in their own home. It's a win for the bankers, homebuyers and the planet.

Yesterday night I was at the Great River Medical Center. It's in West Burlington, and I learned it is the most energy efficient hospital in America. This is happening in Iowa right now. It's just happening so rarely and on such an individual basis that we don't realize all of the benefits that we can get. The Great River Medical Center is powered by the world's largest lake-coupled geothermal heating and cooling system. I thought that was pretty neat. Right here in Iowa. The most energy efficient hospital in America.

[Applause]

The second piece of my agenda asks the national government to set the rules and lead the way. As President, I will put in place a market-based cap and trade system to reduce carbon pollution. Here's how it will work: the federal government auctions permits for 100% of the nation's carbon dioxide emissions. Companies purchase those allowances but they can be traded, borrowed, banked, bought, and sold. The market will determine the cost of carbon pollution and companies will be rewarded for cutting emissions.

In combination with efficiency, fuel economy standards and other proposals, this system will ensure we meet our goal of reducing our contribution to global warming below 1990 levels by 80%. We know this can work. It was exactly what we did in the 1990s to reduce acid rain, cutting sulfur dioxide emissions by 10 million tons below
1980 levels. While setting down the rules, the federal government will also set an example. All new federal buildings designed after noon January 20, 2009, when I become President, will have to be carbon neutral -- that is zero emissions. No new federal buildings that don't meet that standard.

[Applause]

I will ask the Department of Housing and Urban Development to strengthen energy efficiency standards for public housing and develop model standards for all new construction. And we will make energy efficiency a core mission for the Government Services Administration, which manages federal buildings.

I also want to help local governments go green. More than 700 mayors have signed a pledge to cut their city’s contribution to climate change and meet the standards set by the Kyoto Protocol.

Third, I will ask automakers to play a role. Today, your car may have a CD player, a navigation system and GPS. We have front and side impact airbags, anti-lock brakes, technology that senses tiny changes in road conditions. Henry Ford would be dumbfounded until he opened the hood. Because he would recognize the internal combustion engine underneath. It is the same basic concept that he put in to the Model T almost a century ago. In fact, that Model T got better gas mileage than your typical SUV does today.

We can't continue this. It's time for a change. For two decades, U.S. fuel economy has stagnated. Cars and light trucks account for 40% of the 21 million barrels of oil consumed every day in America. I believe America should do what we do best: lead the innovation race. Imagine if over the past century, we'd advanced as far in powering our cars as we have in keeping our cars safe. As President, I will raise the fuel efficiency standards to 40 miles per gallon by 2020 and 55 by 2030.

[Applause]

That will save consumers more than $180 billion dollars in fuel bills each year and save us 4.5 million barrels of oil each day.

But I'm not going to ask the auto companies to do it alone. I want to be a partner, a good partner, to help them transition to a clean energy future. I'll provide $20 billion in "Green Vehicle Bonds" to help domestic automakers retool their older plants to manufacture new, more efficient cars and trucks. We've also got to invest more in new batteries, transmissions and other technologies. I will create a tax credit to help auto makers cover the legacy health care and retirement costs they face.

Next, we'll accelerate the production of plug-in hybrids. These are vehicles that can be filled up at the gas station and charged up in a standard outlet. A vehicle powered by electricity releases one-third less global warming pollution, even if the electricity comes from coal. These cars can offer the promise of 100 miles to the gallon. And if the plug-in is a flex-fuel vehicle running on E85 ethanol, it could potentially travel 500 miles for every gallon of gas consumed.

[Applause]

Now, the good news is, Detroit is already embracing this existing technology. It is poised to be a world leader. General Motors plans to bring a plug-in hybrid to market in 2010, and Ford is looking at plug-ins as well. But the plug-in revolution can't happen fast enough. As President, I will invest $2 billion in research and development to reduce the cost, improve the capacity and the lifespan of lithium-ion batteries. I will offer consumers a tax credit of up to $10,000 for purchasing a plug-in hybrid. And I want to add 100,000 plug-in hybrids to the federal fleet by 2015.

At the same time, we've got to increase access to public transportation. For every mile you travel on a subway, a bus or a train instead of in a car, you produce 95% less carbon monoxide and half as much carbon dioxide. If we have clean buses, more efficient locomotives, the reductions could even be greater. I want to increase funding for public transit by more than $1.5 billion each year and link that to smart policies that discourage sprawl and congestion.
Fourth, we’ll ask the oil companies to do their part. I have proposed a $50 billion Strategic Energy Fund to invest in the clean energy technologies of the future. Here's how we’ll pay for it -- by ending the tax breaks that oil companies receive to maintain the existing oil dependence economy.

[Applause]

Oil is now over $90 a barrel. A lot of folks think it's going to get to over $100 a barrel. The oil companies don't need your tax dollars to help them. We’re going to give these companies that have made the highest profits in the history of the world a choice: pay into the strategic energy fund or invest more in renewable energy.

We cannot let the middle class pay twice to solve the energy crisis, in higher prices at the pump and in bearing the largest burden of transitioning to a green economy. A portion of the oil companies’ profits should also be used to spark the R&D that will help America the world's leader in exporting that technology. I will also require oil companies and other major gasoline retailers to install E85 pumps at half of their stations in the next five years and all of their stations in ten. It's time for the oil companies to become energy companies. That's good for our country and they must begin to do it.

Fifth, we will support the innovative companies, the skilled workers, the creative entrepreneurs and the path-breaking researchers who are driving the next great discovery. Germany, Japan and other countries have surpassed us in the production of solar, wind, geothermal and other vital technologies. We've always been the innovation nation, and it's time for us to lead again. Tomorrow, I will be in Newton outlining my energy jobs agenda. But we need look no further than Clipper Windpower.

[Applause]

In a few short years, Clipper Windpower has set an example of how creating clean energy can create good jobs. This is a 330,000 square foot facility. You employ more than 250 people helping to develop and deploy the next generation of wind technology. Just one of the turbines that will be fueled by these great generators, which is really the brain of the windpower, can power 800 homes without producing any pollution at all.

[Applause]

As President, I will be a good partner for Clipper and for other companies and innovators who are not only contributing to their bottom line and creating jobs, but I think being real patriots.

This is the new challenge. What does it mean to be a patriot for America in the 21st century? End our dependence on foreign oil and an old energy system that undermines our growth and our future.

[Applause]

I will also increase the goal for biofuels to 60 billion gallons by 2030, with almost half of that coming from advanced biofuels like cellulosic ethanol. We will accelerate the production of advanced coal technology. Coal currently provides 50% of our electricity in America, but it comes at a high price in greenhouse gases and other pollutants. We need to accelerate the development and deployment of technology that can safely capture and store carbon dioxide emissions. That is why I will provide funding immediately for 10 large-scale projects.

At the same time, we need to stop building coal plants the way we have in the past. I will require utility commissions to evaluate whether the energy efficiencies that decoupling makes possible can meet expected demand before permitting any new coal plant. In any event, I will require all new coal plants to be built so that capture and storage technology can be added as soon as it is available. I will strongly support a renewable portfolio standard, with 25% of electricity coming from wind, solar, and other renewable sources by 2025.

[Applause]
We have lost so much time in the last years. Today America produces between 2% and 3% of our power through renewable sources. Meanwhile, Denmark plans to meet one half of its energy needs with wind by 2025. Last year, Germany produced half of the world’s solar electricity. While these countries provide incentives for energy independence, their companies are exporting new technologies around the world, boosting their economies and creating new jobs. In just the last two years, the German economy added 85,000 new jobs in renewable energy. As a point of comparison, since we have almost four times the population they have; they have 82 million, we have a little over 300 million, we could have added some 300,000 good jobs from the same sources if we had been leading the way instead of dragging our feet.

And clean energy will also improve both the health of our families. Asthma rates are soaring in part because of the way we produce energy. No one, can any longer, ignore the health affects of dirty energy. The International Olympic Committee is considering canceling some events at the 2008 Olympics in Beijing due to poor air quality. So China is now rushing to institute tougher emissions standards to clean up the air before the games begin.

As President, to help us reach 25% by 2025, I will make the production tax credit for wind and solar permanent. No more guessing what you’re going to get as you move forward with your production.

[Applause]

I will also provide tax incentives for homes and businesses to install technologies, and establish a national net metering standard -- so, families and companies that install these new technologies can sell power back to the grid for a fair price all over the country.

That happens in some states, but it stops at the border. We need to make it national. Finally, the Strategic Energy Fund I’ve proposed will double investment in energy research and invest in a new initiative called the Energy Advanced Research Projects Agency. I want to bring together the best minds in the public and private, and academic sectors to think outside the box. If we have the best minds thinking about an alternative to the internal combustion engine, who knows what we would create? We need to be doing this. The agency that helped us win the space race, that literally creating the internet, can be the way we deal with our new energy challenges.

America can lead the world’s green revolution. Our entrepreneurial capacity, our capital markets, our research institutions and our skilled workforce are unmatched. We are the best in the world, let’s start acting like we’re the best again.

[Applause]

This will create at least 5 million jobs. You’ve heard of white collar jobs. You’ve heard of blue collar jobs. These will be new “green collar” jobs all across America.

[Applause]

Think about it. Entry level jobs insulating houses and installing green roofs on buildings. High-wage construction jobs modernizing our grid and building green buildings. Farm jobs planting and harvesting bio-energy crops. High-tech bioengineering jobs in cellulosic ethanol. Management jobs in new, clean energy companies. High tech jobs developing new, affordable forms of clean energy. And last but not least, manufacturing jobs building wind turbines, solar panels and other products, just like here at Clipper.

[Applause]

Sixth, shaping our own clean energy future will enable America to play an indispensable role in shaping the world’s clean energy future. We can’t meet these challenges alone. We could be as clean as all of us hope to be in 10, 15, 20 years, if other countries like China and India are polluting the atmosphere, all of their pollution will get up in the wind currents and fall right down on us. We can’t just act like the world doesn’t need our leadership the way we have for the last 6 and half years. Other countries like China and India, they see we've done nothing. They feel free,
therefore, to do very little. That is not the way we can lead. We have to prove that moving away from a carbon economy is good for growth and lead the world to a new binding agreement to reduce emissions dramatically.

The President’s failed unilateral energy policy is a part of our failed unilateral foreign policy. It’s deprived us of the credibility and the leverage we need to solve the climate crisis. I’ll change that by leading the process to develop a new treaty to replace the Kyoto Protocol, which is set to expire in 2012.

One of the worst messages the President sent was when he took office and rejected completely Kyoto. He could have said we don’t like Kyoto but we're immediately starting a new process. But that didn’t happen.

Well, come January 2009, I’m sending a different message. I want to act quickly to help develop a new treaty. I will engage in high level meetings with leaders around the world every three months, if that’s what it takes to hammer out a new agreement. My goal will be to secure a deal by 2010. We can't wait for two more years.

I will establish an E8 that’s modeled on the G8 which is where the big industrial economies come together. We need the world’s major carbon-emitting nations to come together to tackle these challenges.

I want to focus on international attention to solve the problem of global deforestation. We're losing our forests dramatically. They play such an important role in removing carbon dioxide from the atmosphere and we need to figure out how to have a win-win strategy for that.

We've seen how good leadership can make a difference in solving global climate and environmental problems. Former Prime Minister Margaret Thatcher understood the urgency of ozone depletion, called a meeting in London and was a driving force in banning ozone-depleting chemicals worldwide.

Seventh, every single American will have a role to play. Everywhere I go, I meet people, and particularly young people and children, who ask me what they can do to fight global warming. What they can do to be more energy independent. Now, I always tell them about my late father who turned off every light before he left any room and he used to turn off the thermostat when we went to bed at night. As he used to say, ‘I'm not paying to heat the house, so get more covers.' That sounds kind of funny, but that's what our parents and our grandparents used to do. We've got to be more conscious of how we live today.

On Wednesday, I will outline in greater detail the ways individuals, communities, colleges, schools, all of us can play our role. It starts by asking every American who wishes to sign a pledge to do so to reduce your personal contribution to global warming -- encourage your neighbors to do the same. If every home replaced - this is astonishing and I kept saying are you sure this is true, listen to this - if every single one of our homes replaced just one 60-watt incandescent light bulb with one compact fluorescent, it would save enough energy to light more than 3 million homes and prevent the greenhouse gas emissions equal to the amount produced by 800,000 cars in a year. So when people say well we've got to wait for the government, we got to wait for great companies like Clipper, that’s not true. There's something every one of us can do.

I’m going to challenge individuals and businesses to set their own energy saving goals. I’m going to challenge schools, colleges, and universities and students to do the same. And give awards so we can really hold up the best leaders. I’m going to challenge communities to do the same as well. We’re going to invest in new management tools so that cities and communities can keep track of what they emit.

And when I’m President, the United States Treasury will issue "Energy Independence Bonds" dedicated to the Strategic Energy Fund. During World War II, Americans purchased more than $33 billion worth of war bonds. More than 6 million Americans volunteered to participate in bond drives. I have no doubt that we can appeal to that same sense of duty and patriotism today. As Vice President Gore says, political will is a renewable resource.
Eighth and lastly, I am outlining more than a plan. I have a strategy to make this real. I have tried throughout this campaign not to just to make speeches about what I want to do, but to tell you how I will pay for it and how I will do it.

One of the biggest problems facing those countries that did sign the Kyoto Protocol was turning good intentions into actual, economically beneficial results. As President, I will create a National Energy Council, modeled on the National Economic Council and the National Security Council, to bring together all the relevant players in the federal government to ensure that we all have the same priorities and we follow a rigorous implementation plan. For example, the Energy Department will work more closely with the Education Department on good models for school construction. The Transportation Department will work more closely with the EPA on highway congestion.

The Council will be led by a National Energy Adviser with a direct line to the President to coordinate our government-wide efforts and maintain accountability.

I will also reform the Department of Energy. This energy today is focused primarily on carbon-based fuels and nuclear power, with much less attention to renewables like wind. I will focus the mission of the Department of Energy on moving us toward energy independence, with a new approach to solar and wind and biofuels and hydropower and geothermal and other renewables. This is a transformational challenge for our nation and our government. I will start meeting it on day one.

In one of America's darkest hours - soon after the attack on Pearl Harbor, long before victory was assured - President Roosevelt addressed the nation in one of his Fireside Chats. The President did not mince words. He spoke honestly and in great detail about the scale and scope of the threats we faced. He even asked Americans to take out a map of the world so they could follow along what he was talking about.

The President said, 'the task that we Americans now face will test us to the uttermost. Never before have we been called upon for such a prodigious effort. Never before have we had so little time in which to do so much.' Americans were up to that task. While young brave troops served, and bled and died overseas, here at home Americans did their part. Men and women went to work in factories to build ships and planes. Americans grew victory gardens, purchased war bonds and conserved fuel and electricity. The task before us commands the same urgency and demands the same resolve. Tackling the energy crisis is the calling of our time. And when I am President, it will be the calling of our nation.

And it will involve all of us. And just as the Greatest Generation rose to the occasion, I believe the Greenest Generation will do the same.

[Applause]

In my campaign, I have defined the four big goals for our country: restore our leadership in the world, rebuild a strong and prosperous middle class, reform our government and reclaim the future for our children. Meeting the energy and climate change challenge is essential to reaching every one of those. I do not want to be part of the first generation to leave America and the world in worse shape than when we found them. It will not happen on my watch.

[Applause]

If you want America to be in the solutions business again, if you want to end the destructive partisanship, if you want to bring people together -- join with me in embracing one of the greatest challenges we've ever faced.

It will be an exciting, noble, and rewarding adventure, taking us to places we can't even imagine today. Just like those Clipper ships opened up the world to America, we're going open up the future to our children and grandchildren. And if we do it right they will look back with pride on this moment when Americans came together to turn a threat to our future into the triumph of this new century.

[Applause]

Thank you and God bless you.