Thank you. I appreciate the chance to be here at the Center for Hydrogen Research and to talk with you about a great and urgent challenge - breaking our nation's critical dependence on foreign sources of oil, and making America safer, stronger and more prosperous by modernizing the way we generate and employ energy. South Carolina has been a leader in making America more energy secure, particularly in the area of nuclear power. For over fifty years the Savannah River Site was critical to our national security. In the future this site will be an integral part of our move toward energy security.

Oil is often called the lifeblood of our economy - the indispensable commodity that keeps commerce humming and America on the move. But, in today's world, our dependency on foreign oil and the way we use hydrocarbons is a major strategic vulnerability, a threat to our security, our economy and the well being of our planet.

Great nations don't leave the 'lifeblood' of their economy in the hands of foreign cartels or bet their future on a commodity located in countries where authoritarians repress their people and terrorists find their main support. Terrorists understand the seriousness of our vulnerability. Al Qaeda plans for attacks on oil facilities in the Middle East to destroy the American economy. A little over a year ago, a suicide attack at a major Saudi Arabian oil refinery came close to disabling its target.

We're one successful attack away from an economic crisis. The flow of oil has many chokepoints - pipelines, refineries, transit routes, and terminals; most of them outside our jurisdiction and control. Our enemies understand the effects on America of a significant disruption in supply - a crippled transportation system, gasoline too expensive for many Americans to purchase, businesses closed.

Al Qaeda must revel in the irony that America is effectively helping to fund both sides of the war they caused. As we sacrifice blood and treasure, some of our gas dollars flow to the fanatics who build the bombs, hatch the plots, and carry out attacks on our soldiers and citizens. Iran made over $45 billion from oil sales in 2005, and it is the number one state sponsor of terrorism.

The transfer of American wealth to the Middle East helps sustain the conditions on which terrorists prey. Some of the most oil-rich nations are the most stagnant societies on earth. As long as petro-dollars flow freely to them those regimes have little incentive to open their politics and economies so that all their people may benefit from their countries' natural wealth. The Middle East's example is spreading to our own hemisphere. Venezuela's Hugo Chavez is using his country's oil revenues to establish a dictatorship, bully his neighbors and succeed Castro as Latin America's leading antagonist of the United States. In Russia, Vladimir Putin is using oil as a geopolitical weapon and the sales proceeds to fund a rollback of democracy. The politics of oil impede the global progress of our values, and restrains governments from acting on the most basic impulses of human decency. There is only one reason China has opposed sanctions to pressure Sudan to stop the killing in Darfur: China needs Sudan's oil. We should hasten the day when America can wield its power at the table of diplomacy in the Middle East with an understanding that we are not dependent on their oil.

The burning of oil and other fossil fuels is contributing to the dangerous accumulation of...
greenhouse gases in the earth's atmosphere, altering our climate with the potential for major social, economic and political upheaval. It is a serious and urgent economic, environmental and national security challenge.

Is it too big a challenge for America to tackle? No, it is not. No people have ever been better innovators and problem solvers than Americans. The people of South Carolina provide an example for us to follow in developing energy security. It is in our national DNA to see challenges as opportunities; to conquer problems beyond the expectation of an admiring world. America, relying as always on the industry and imagination of a free people, and the power and innovation of free markets, is capable of overcoming any challenge from within and without our borders. Our enemies believe we're too weak to overcome our dependence on foreign oil. Even some of our allies think we're no longer the world's most visionary, most capable country or committed to the advancement of mankind. I think we know better than that. I think we know who we are and what we can do. Now, let's remind the world.

As President, I'll propose a national energy strategy that will amount to a declaration of independence from the fear bred by our reliance on oil sheiks and our vulnerability to the troubled politics of the lands they rule. When we reach the limits of military power and diplomacy to contain the dangers of that cauldron of burning resentments and extremism, energy security is our best defense. We won't achieve it tomorrow, but we must achieve it in our time.

The strategy I propose won't be another grab bag of handouts to this or that industry and a full employment act for lobbyists. It will rely on the genius and technological prowess of American industry and science. Government must set achievable goals, but the markets should be free to produce the means. Those means are within our reach.

Energy efficiency by using improved technology and practicing sensible habits in our homes, businesses and automobiles is a big part of the answer, and is something we can achieve right now. Flexible-fuel vehicles aren't futuristic pie in the sky. We can easily deploy such technology today for less than $100 per vehicle; and we develop the infrastructure necessary to take full advantage.

Alcohol fuels made from corn, sugar, switch grass and many other sources that could benefit that rural farm economy of South Carolina and other states, fuel cells, biodiesel derived from waste products, natural gas, and other technologies are all promising and available alternatives to oil. I won't support subsidizing every alternative or tariffs that restrict the healthy competition that stimulates innovation and lower costs. But I'll encourage the development of infrastructure and market growth necessary for these products to compete, and let consumers choose the winners. I've never known an American entrepreneur worthy of the name who wouldn't rather compete for sales than subsidies.

America's electricity production is for the most part petroleum free, and the existing electric power grid has the capacity to handle the added demand imposed by plug-in hybrid vehicles. We can add more capacity and improve its reliability in the years ahead. I'll work to promote real partnerships between utilities and automakers to accelerate the deployment of plug-in hybrids.

We have in use today a zero emission energy that could provide electricity for millions more homes and businesses than it currently does. Yet it has been over twenty-five years since a nuclear power plant has been constructed. The barriers to nuclear energy are political not technological. We've let the fears of thirty years ago, and an endless political squabble over the storage of nuclear spent fuel make it virtually impossible to build a single new plant that produces a form of energy that is safe and non-polluting. The Savannah River Site has been instrumental in the development of new reactor technology that is more fuel efficient and safe. If France can produce 80 percent of its electricity with nuclear power, why can't we? Is France a more secure, advanced and innovative country than we are? Are France's scientists and entrepreneurs more capable than we are? I need no answer to that rhetorical question. I know my country well enough to know otherwise.

Let's provide for safe storage of spent nuclear fuel, and give host states or localities a proprietary interest so when advanced recycling technologies turn used fuel into a
valuable commodity, the public will share in its economic benefits. The Savannah River Site would be an ideal location to demonstrate that recycling spent nuclear fuel is possible in the United States. Other countries, such as France and Japan, already recycle spent fuel. We should do the same.

And South Carolina’s MOX program reminds us that the expansion of the use of nuclear power will enable us to turn our swords into plowshares and make the world safer through the conversion of weapons grade material that can be used by terrorists or rogue nations into fuel for commercial nuclear reactors for peaceful uses.

There is much we can do to increase our own oil production in ways that protect the environment using advanced technologies, including those that use and bury carbon dioxide, to recover the oil below the wells we have already drilled, and tap oil, natural gas, and shale economically with minimal environmental impact. The United States has coal reserves more abundant than Saudi Arabia’s oil reserves. We found a way to cut down acid rain pollutants from burning coal, and we can find a way to use our coal resources without emitting excessive greenhouse gases.

We can also find ways to use new sources of power like hydrogen. My energy policies will rely on setting good incentives for firms, entrepreneurs, and households. But they will not shortchange the need for basic research to provide the pathway for new sources of energy, better materials, improved batteries, and other advances in knowledge that will be central to rising to this great challenge. The research being performed at Clemson University and the International Center for Automotive Research is unlocking the possibilities for hydrogen fueled automobiles. And research at the University of South Carolina and the Savannah River National Laboratory is advancing the potential for other hydrogen technologies.

America competes in a global economy where innovation and entrepreneurship are the pillars of prosperity. The competition is stiff and the stakes are high. We have the opportunity to apply America’s technological supremacy to capture the export markets for advanced energy technologies, reaping the capital investment and good jobs it will provide. Our innovators, scientists, entrepreneurs and workers have the knowledge, resources, and drive to lead the way on energy security, as we have in so many other world-changing advancements. The race has always been to the swift, and America must be first to market with innovations that meet mankind’s growing energy and environmental needs.

I have proposed a bipartisan plan to address the problem of climate change and stimulate the development and use of advanced technologies. It is a market-based approach that would set reasonable caps on carbon and other greenhouse gas emissions, and provide industries with tradable credits. By reducing its emissions, a utility or industrial plant can generate credits it may trade on the open market for a profit, offering a powerful incentive to drive the deployment of new and better energy sources and technologies; for automakers to develop new ways to lower pollution and increase mileage; for utilities to generate cleaner electricity and capture carbon; for appliance manufacturers to make more efficient products, and for the nation to use energy with maximum efficiency - building conservation into the economy in a manner that produces financial and environmental benefits.

As it always does, the profit motive will attract the transformational power of venture capital, and unleash the market to move clean alternative fuels and advanced energy technologies from the margins into the mainstream.

Some urge we do nothing because we can’t be certain how bad the problem might become or they presume the worst effects are most likely to occur in our grandchildren’s lifetime. I’m a proud conservative, and I reject that kind of live-for-today, ‘me generation,’ attitude. It is unworthy of us. Americans have never feared change. We make change work for us.

Climate change is a global problem that requires a global solution. America has both an obligation and a compelling national interest in fulfilling our historic leadership role. China’s carbon emissions will soon exceed ours. As President, I will invite a collaborative relationship with China to make coal use cleaner and climate friendly. But, we should address the problem on our terms, and bring others into the fold of a

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common sense effort to solve it, while we sell to the world the technologies needed to do it.

Answering great challenges is nothing new to America. It's what we do. We built the rockets that took us to the moon not because it was easy but because it was hard. We've sent space probes into the distant reaches of the universe. We harnessed nuclear energy, mapped the human genome, created the Internet and pioneered integrated circuits that possess the computing power of Apollo spacecraft on a single silicon chip you can barely see. We can solve our oil dependence and become more energy secure. We can leave a cleaner planet for the next generation. You can't sell me on hopelessness. You can't convince me the problem is insurmountable. I know my country. I know what we're capable of. We're capable of unimaginable progress, unmatched prosperity, and vision that sees around the corner of history. We've always understood our times, accepted our challenges and made from our opportunities, another better world. My people are Americans. Our time is today. That is the country I ask to lead.