



Powering America's Future: Hillary Clinton's Plan to Address the Energy and Climate Crisis

Hillary understands that we face two immense energy and environmental challenges: a growing climate crisis, and an increasing reliance on foreign oil that is driving up energy costs for Americans. She also knows that Americans have always demonstrated the will and the ingenuity to confront the problems of their times, from the New Deal, to the Cold War, to the Space Race. Today, global warming and dependence on foreign oil are two of the biggest challenges of our time, and as President, Hillary will set three big goals to meet them:

- Reduce greenhouse gas emissions 80% from 1990 levels by 2050 – the level necessary to avoid the worst impacts of global warming.
- Cut foreign oil imports by two-thirds from projected levels by 2030.
- Transform our carbon-based economy into an efficient green economy, creating at least 5 million jobs from clean energy over the next decade.

Hillary Clinton's plan to promote energy independence, address global warming, and transform our economy includes:

- A new cap-and-trade program that auctions 100% of permits alongside investments to move us on the path towards energy independence;
- An aggressive, comprehensive energy efficiency agenda to reduce electricity consumption 20% from projected levels by 2020 by changing the way utilities do business, catalyzing a green building industry, enacting strict appliance efficiency standards, and phasing out incandescent light bulbs;
- A \$50 billion Strategic Energy Fund, paid for in part by oil companies, to fund investments in alternative energy. The SEF will finance one-third of the \$150 billion ten-year investment in a new energy future contained in this plan;
- Doubling of federal investment in basic energy research, including funding for an ARPA-E, a new research agency modeled on the successful Defense Advanced Research Projects Agency
- Aggressive action to transition our economy toward renewable energy sources, with renewables generating 25% of electricity by 2025 and with 60 billion gallons of home-grown biofuels available for cars and trucks by 2030;
- 10 "Smart Grid City" partnerships to prove the advanced capabilities of smart grid and other advanced demand-reduction technologies, as well as new investment in plug-in hybrid vehicle technologies;

- An increase in fuel efficiency standards to 55 miles per gallon by 2030, and \$20 billion of “Green Vehicle Bonds” to help U.S. automakers retool their plants to meet the standards;
- A plan to catalyze a thriving green building industry by investing in green collar jobs and helping to modernize and retrofit 20 million low-income homes to make them more energy efficient;
- A new “Connie Mae” program to make it easier for low and middle-income Americans to buy green homes and invest in green home improvements;
- A requirement that all publicly traded companies report financial risks due to climate change in annual reports filed with the Securities and Exchange Commission; and
- Creation of a “National Energy Council” within the White House to ensure implementation of the plan across the Executive Branch.

The Challenge

Our reliance on foreign oil raises prices for families, contributes to the climate crisis, and leaves us more vulnerable to unstable regimes: Since 2001, gasoline prices have increased 105%, and energy costs are now consuming nearly one-fifth of after-tax income for the majority of low and middle-income families—double the percentage of 10 years ago. And today, with oil prices at all-time highs near \$100 a barrel, foreign oil now accounts for 60% of the almost 21 million barrels of crude oil that we consume each day. In order to meet this demand, we send \$20 billion each year to the Middle East. Our investment has filled the coffers of corrupt regimes in developing countries, many of whom do not share our interests. In the next twenty years, if American oil dependence continues to grow as rapidly as it has in recent years, we will send more than \$5 trillion out of the United States economy.

Our planet is warming, with potentially cataclysmic results: The scientific community has established beyond doubt that global warming is occurring; the 20th century's last two decades were the hottest in 400 years. The IPCC has further predicted that the average temperature will rise by three to nine degrees by the end of the century, and as a result sea levels will rise between 7 and 23 inches, dramatically affecting the one hundred million people who live within 3 feet of the mean sea level. Security experts believe that these impacts will pose a serious national security threat by increasing instability in some of the world’s most volatile regions.

The Costs of Inaction are Rising: The failure to address the climate crisis will put the United States economy in jeopardy. A recent University of Maryland study of the economic costs of continued climate change in the United States documented hundreds of billions of dollars of increased costs in all regions of the country due to the heightened risk of forest fires in the West and Northwest; increased frequency and severity of flooding and drought events in the Great Plains and Midwest; and more frequent and intense heat waves like the 1995 Chicago heat wave, which resulted in 600 deaths. A recent U.N. report on the state of the global environment suggests that the costs of inaction in the face of climate change and other global environmental problems exceeds the cost of acting to reduce pollution.

Hillary Clinton’s Plan: Turning the Challenges of Energy Dependence and Global Warming into an Economic Opportunity

Meeting the challenge of reducing our nation's energy dependence and staving off the threat of global climate change will require the leadership of the President and the cooperation of the private sector and all Americans:

- Our *government* has a responsibility to provide a framework, incentives and investments to move us on the path towards energy independence; lead again in the international arena; and reform its organizational structure to address this new energy challenge.
- *Oil companies* must help develop a thriving alternative energy industry in America by investing more in alternative energy or by funding such investments through a windfall profits fee.
- *Utilities* have a responsibility to fundamentally reshape how they do business; transitioning from outdated systems that reward excess energy production to market-based approaches that reward efficiency, distributed generation, and conservation.
- *Auto companies* need to improve fuel efficiency in their cars and trucks.
- *Businesses* large and small should strive to make their operations and products more energy efficient, which will help them save money and be more competitive.
- *Individuals* have a responsibility to lower their own energy consumption and hold their leaders accountable for reducing greenhouse gas emissions.

GOVERNMENT'S ROLE:

***Setting the Rules of the Road, And Leading the Way
by Reforming Itself to Meet New Energy Challenges***

Reducing Global Warming Pollution 80% by 2050, Protecting Consumers, and Supporting Clean Energy – A fundamental cornerstone of Hillary's plan is reducing greenhouse gas emissions to 1990 levels by 2020 and to 80% below 1990 levels by 2050—the level necessary to avoid the most dire consequences of global warming. Hillary will achieve this aggressive reduction by maximizing our energy efficiency; creating market mechanisms to efficiently reduce greenhouse gas emissions; and promoting renewable, carbon-free energy sources.

Creating a Market-Based Cap and Trade Program, and Auctioning 100% of Greenhouse Gas Permits – Hillary will establish a market-based “cap and trade” system to provide an overall framework for reducing greenhouse gas emissions. The system would auction 100% of allowances to ensure that utilities and other companies do not obtain a windfall. The system would also provide flexibility for companies to bank, borrow and trade allowances. The proceeds from the sale of allowances would be used to provide tax benefits for working and middle-class families and energy intensive industries, as well as incentives for energy efficiency and renewable technologies. The cap and trade approach was used successfully to limit sulfur dioxide and reduce levels of acid rain in 1990s to reduce annual sulfur dioxide emissions by 7 million tons below 1980 levels.

Restoring Federal Leadership In Energy Efficiency – The federal government is the country's largest energy consumer. About half of the energy used by the federal government goes to heat, cool and power the more than 500,000 federal buildings around the country, costing taxpayers \$5.6 billion per year. Hillary would restore federal energy leadership by:

- Making all new federal buildings designed after January 20, 2009 carbon neutral;
- Requiring the Department of Housing and Urban Development and other agencies to bring energy efficiency standards for public housing up to date with leading private sector standards;
- Strengthening national model building codes, while providing funding to help states and localities update their codes to meet the national standards;
- Making energy efficiency a core mission of the General Services Administration, and directing GSA to lead a government-wide “energy audit” and install cost-effective retrofits in all federal buildings within 5 years; directing GSA to work more closely with the Federal Energy Management Program (FEMP) within DOE to install cutting-edge energy efficiency technology from both the national labs and private companies in federal buildings; and
- Requiring that all federally built housing in New Orleans and the Gulf Coast be built to tough energy efficiency standards.

Adapting to Climate Change: Hillary has an aggressive plan to address global warming, but she also recognizes that global warming is already occurring, and that we need to begin to prepare for global warming impacts that are on the horizon. She would direct federal agencies to work with state and local governments to begin planning and preparing for impacts on coastal areas from more intense storms and changes in sea level; for impacts on water supply from increased droughts and reduced snowpack; and for impacts on wildlife and other natural resources from climate-induced changes.

UTILITIES’ ROLE
Maximizing Efficiency, Ramping Up Use of Renewables,
and Modernizing the Grid

Utilities have a key role to play in helping to bring about a clean energy future. Hillary would set tough goals and provide utilities with the tools they need to meet them.

Reducing Electricity Demand 20% From Projected Levels by 2020: Since 1970, energy efficiency has met three-fourths of all new demand for energy services. California has pursued efficiency as an energy resource for decades, with the result that energy use per capita or per unit of economic output is about 30% lower in California than in the nation as a whole. Yet enormous energy efficiency potential remains. A 2000 Department of Energy report found that energy-efficiency policies and programs could cost-effectively reduce U.S. energy use in residential buildings by 20% by 2020. To spur greater investment in efficiency, Hillary would put policies in place to reduce electricity demand 20 percent from projected levels by 2020, and to flatten demand for natural gas. Achieving these efficiency goals would save consumers a total of more than \$272 billion dollars, reduce carbon dioxide emissions by more than 7.5 billion tons through 2030, and create millions of jobs.

Changing the Way Utilities Do Business: The current model for electric and natural gas utilities puts customers and utilities at odds on efficiency investments. Consumers benefit by spending less on electricity, while utilities actually lose money from every electron or cubic foot of gas saved through energy efficiency. As a result, utilities lack incentives to implement

programs that would reduce demand, even if those efficiency programs are more cost-effective than building new power plants. Breaking this model would enable consumers and utilities to share in the benefits of efficiency, and when combined with a requirement that utilities take steps to reduce demand, would unleash tens of billions of dollars of investments in energy efficiency technology. To put this process in motion, Hillary would set binding energy efficiency targets for utilities at the national level. She would then encourage states to establish rate rules for utilities that both decouple electricity sales from utility profits and enable utilities to profit from investments in energy efficiency.

Modernizing the Grid for the 21st Century Using “Smart Grid” Technology: Our electricity grid is antiquated, resulting in costly blackouts, the overbuilding of generation capacity, and large losses in energy during transmission. We need to move aggressively toward a smart grid -- a web-enabled, digitally controlled, intelligent power delivery system that efficiently distributes electricity and protects against blackouts, brown-outs and excess energy use. With smarter two-way communications, utilities and consumers can get more control over consumption and save money. A recent study found that using demand reduction programs, which would be greatly facilitated by an interactive smart grid, can reduce “peak demand” by 5 percent and save \$35 billion in energy costs over a 10-year period. Other potential “smart grid” benefits include: more efficient power plants; smaller transmission infrastructure needs; more control and better incentives for consumers to save energy; net metering for solar and other distributed renewables; and the ability for consumers to sell power back into the grid. Hillary would realize the potential of the smart grid by:

- Funding 10 “Smart Grid Cities.” These public-private partnerships between states, cities, utilities, automakers and battery makers will deploy smart grid technology and plug-in hybrid vehicles on a large scale, as well as encourage other technological options to discourage consumption during peak cost periods like time of use meters and pricing, real time demand response, visual price meters, and “prepaid” service models. The projects will enable testing and refinement of advanced capabilities, such as the ability of plug-in hybrid vehicles to communicate with the smart grid to sell power back to utilities when utilities most need the power. Some experts believe that providing such “vehicle to grid” power at times when the utilities need it most could be worth \$2,000-4,000 dollars per vehicle per year, slashing the cost of owning a plug-in hybrid;
- Establishing interoperability standards to enable smart grid systems to be integrated seamlessly;
- Requiring state utility commissions to consider incentives to deploy smart grid technology;
- Providing tax incentives, such as accelerated depreciation, to utilities that install smart grid technology; and
- Directing the Federal Energy Regulatory Commission to identify areas where transmission investments are most needed in order to meet a goal of 25% renewable electricity by 2025.

Producing 25 Percent of Electricity from Wind, Solar, Biomass, Geothermal and Other Renewable Sources by 2025: Wind, solar and other non-hydro renewables accounted for only 2.3 percent of electricity generation in 2005. Hydropower added another 6.6 percent. However, a recent study using Department of Energy models found that getting to 20% renewable electricity by 2020 would save consumers \$10.5 billion, reduce carbon dioxide emissions by 223 million

metric tons per year, spur \$66.7 billion in new capital investment and increase income to farmers, ranchers and rural landowners by \$25.6 billion. Hillary would establish a national target of producing 25% of our electricity from renewable sources by 2025. In addition to setting this target, Hillary would:

- Encourage investment in wind, solar and other renewable energy production by making permanent the 1.9 cent per kilowatt-hour tax credit for producing electricity from renewable sources;
- Provide tax incentives for families and businesses to install small-scale renewable energy such as rooftop solar panels; and
- Establish national “net metering” standards to ensure that families and businesses who install solar panels or other renewable energy resources can sell power back to the grid on fair terms.

Addressing Nuclear Power: Hillary believes that energy efficiency and renewables are better options for addressing global warming and meeting our future power needs, because of significant unresolved concerns about the cost of producing nuclear power, the safety of operating plants, waste disposal, and nuclear proliferation. Hillary opposes new subsidies for nuclear power, but believes that we need to take additional steps to deal with the problems facing nuclear power. She would strengthen the Nuclear Regulatory Commission and direct it to improve safety and security at nuclear power plants; terminate work at the flawed Yucca Mountain site and convene a panel of scientific experts to explore alternatives for disposing of nuclear waste; and continue research, with a focus on lower costs and improving safety.

Phasing Out Incandescent Bulbs: Compact fluorescent light bulbs use 75% less energy than traditional light bulbs and can last as much as 10 times longer. Hillary will phase out traditional light bulbs, beginning with 40-watt bulbs in 2012. By 2020, all light bulbs would be 300% more efficient, cutting the national electric bill by more than \$10 billion. Hillary will also help to jumpstart the market for advanced “LED” lighting technology by requiring that it be used in federal parking lots.

OIL AND ENERGY INDUSTRY'S ROLE **Investing in Alternative Energy and Supporting Biofuels**

Creating a \$50 Billion Strategic Energy Fund and Demand that Oil Companies Invest in Clean Energy – In 2005, Exxon Mobil's CEO told Congress that his company's investment in alternative energy technologies over the prior decade was “negligible.” Hillary believes it is time for oil companies to do their share in funding clean energy technologies. She would give oil companies a choice: invest more in renewable energy technology or pay into a Strategic Energy Fund. The Strategic Energy Fund would also eliminate oil company tax breaks and make sure that oil companies pay their fair share in royalties when drilling on public lands. This fund would jumpstart a clean energy future by injecting \$50 billion over ten years into research, development and deployment of renewable energy, energy efficiency, clean coal technology, ethanol and other homegrown biofuels.

Increasing production of biofuels to 60 billion gallons by 2030: Home-grown biofuels can reduce our dependence on foreign oil and cut greenhouse gas emissions. Rapid growth of corn ethanol production capacity in recent years and emerging technology that will enable production of ethanol and other biofuels from a range of biomass sources indicate the potential of biofuels to displace a significant amount of gasoline. To spur increased production of ethanol and other renewable fuels, Hillary would raise the national renewable fuels goal from the current level of 7.5 billion gallons by 2012 to 36 billion gallons per year by 2022 and to 60 billion gallons by 2030. “Advanced biofuels,” such as cellulosic ethanol, would comprise an increasing share of that target over time. Hillary will set a greenhouse gas emissions target for cellulosic and other advanced biofuels to ensure that they move over time towards a standard of emitting at least 80% less greenhouse gas as compared to gasoline. In addition, she would provide loan guarantees to spur the first two billion gallons of cellulosic ethanol capacity.

AUTO INDUSTRY’S ROLE
New Technologies to Help Cut Oil Imports 66% by 2030

Transportation accounts for nearly 70% of U.S. oil consumption. Hillary’s plan to cut oil imports by two-thirds—or more than 10 million barrels per day—by 2030 centers on setting tough new fuel efficiency standards for cars and trucks and providing retooling assistance to the automakers to help them meet these standards. Her plan also reduces oil demand by increasing biofuels production and improving the efficiency of industrial oil use.

Increasing Vehicle Fuel Economy Standards to 55 Miles Per Gallon: Hillary would raise fleet-wide fuel economy standards from the current level of 25 miles per gallon (mpg) to 40 mpg in 2020 and 55 mpg in 2030. By 2030, these tough CAFE standards will save consumers more than \$180 billion per year and reduce carbon dioxide emissions by more than 730 million metric tons. In addition, Hillary would reform the fuel economy system while ensuring that it encourages the continued production of small cars here in the United States. Cars and light trucks account for about 40 percent of the 21 million barrels of oil consumed every day in the United States. Yet the average fuel economy of American cars has stagnated for the last 15 years. And as our country and economy have grown, flat fuel economy has meant increasing dependence on foreign oil, and an untenable foreign trade situation in which the United States transfers funds that are borrowed from China to Saudi Arabia.

Helping Automakers Meet the Energy Challenge: Domestic automakers face serious competitive challenges due to higher labor costs, older equipment, and higher health care costs than their competition. But they are demonstrating the vision to meet our future energy needs by proposing to build plug-in hybrid vehicles that can run on electricity and flex-fuel vehicles that can run on ethanol. Hillary would authorize \$20 billion in low-interest “Green Vehicle Bonds” in order to provide immediate help to retool the oldest auto plants to meet her strong efficiency standards. She will address retiree health legacy costs by providing a tax credit for qualifying private and public retiree health plans to offset a significant portion of catastrophic expenditures that exceed a certain threshold.

Accelerating the Production of “Plug-In” Hybrid Electric Vehicles: - A Plug-In Hybrid Electric Vehicle (PHEV) is a hybrid gas-electric vehicle with a more powerful battery that can be

plugged into any regular outlet. It can be filled up at the gas station, and it can be “filled up” at home by plugging it into a standard outlet. Half the cars on America’s roads are driven 25 miles a day or less, so a plug-in with a 25-mile range battery could eliminate gasoline use in the daily commute of tens of millions of Americans. A recent study showed that a vehicle powered by electricity releases one-third less global warming pollution into the environment than a gasoline-powered vehicle, even if the electricity comes mostly from coal-fired power plants. PHEVs offer the promise of achieving more than 100 miles per gallon of gasoline consumed; and a flex-fuel PHEV running on E85 can potentially get 500 miles per gallon of gasoline. Hillary would invest in research and stimulate demand for the first commercial PHEVs by:

- Investing \$2 billion in research and development to reduce the cost and increase the longevity and durability of batteries;
- Offering consumers tax credits of up to \$10,000 for purchasing a plug-in hybrid; and
- Adding 100,000 PHEVs to the federal fleet by 2015.

INDUSTRY’S ROLE **Dramatically Increasing Efficiency**

Making Appliances More Energy Efficient: Energy efficiency standards for appliances have been very effective. Today’s refrigerator uses about a third of the energy that a refrigerator did in the 1970s. Yet there are more than 15 appliance types with significant energy savings opportunities that have no federal efficiency standards. Adopting efficiency standards for these 15 products alone could save consumers \$54 billion in energy costs between now and 2030. Hillary would direct the Department of Energy to update existing standards and set tough new standards for appliances that do not have them today.

Establishing a “Connie Mae” to Help Homeowners Improve the Energy Efficiency of Their Houses: Builders often neglect to make energy efficient investments because they add to the purchase price, even though they save money down the road. As President, Hillary will establish a “Carbon Reduction Mortgage Association,” or “Connie Mae,” by directing Fannie Mae and Freddie Mac to facilitate the origination of energy efficiency improvement loans in order to subsidize the additional costs of investing in energy efficiency from the outset. Fannie and Freddie could guarantee some loans, securitize others, or hold loans in their own portfolios. Individual loans will be capped at the greater of 5% of the property’s value (up to \$10,000) or \$5,000, and tough efficiency standards would apply. An energy audit of the home will determine the size of the improvement loan needed, and the energy bill savings that will result. Borrowers will not be required to make down payments on the loans. And the energy bill savings will ultimately offset the cost of the loan. Hillary would commit up to \$1 billion per year to the program, assisting upwards of 100,000 homeowners annually. The program will target lower- and middle-income homebuyers.

Requiring Corporate Disclosure of Financial Risks Posed by Global Warming: Global warming presents both risks and opportunities for companies. Investors need and deserve information about the risks that companies face due to global warming, and what their plans are to address them. Companies are required to disclose to shareholders major threats they are facing in other areas. Yet, the potential costs of global warming are not incorporated into most

firms' financial projections. Some companies have stepped forward, forming a voluntary "Carbon Disclosure Project," a voluntary program that works with shareholders and corporations to disclose the greenhouse gas emissions of many major corporations. Hillary would build on this work by requiring the Securities and Exchange Commission to adopt disclosure obligations for all companies that are potentially impacted by climate change-related risks.

LOCAL COMMUNITIES' ROLE

Helping Develop New Jobs of the Future by Pushing Efficiency

Green Cities, Green Buildings, Green Homes – Buildings account for 40 percent of U.S. greenhouse gas emissions nationwide and as much as 80% in densely populated urban areas like New York City. Indeed, cities cover just 2 percent of the planet's land but are responsible for three-quarters of its greenhouse gas emissions — and therefore present the greatest opportunity for reducing those emissions. There are many ways to save energy and save money by reducing energy use in buildings, particularly in these urban areas:

Modernizing 20 Million Low-Income Homes to Improve Energy Efficiency. On average, energy bills account for about 14% of a low-income family's gross income, and for many they account for 20% or more. Economists estimate that more than 80% of energy expenses leave low-income communities, and thus do not generate additional economic activity inside those communities. By weatherizing homes, we can reduce heating bills by 31% and overall energy bills by \$358 per year, savings that are significant for many low-income families. Hillary will weatherize 20 million low-income homes over 8 years, creating good jobs that cannot be outsourced.

Creating a Green Building Fund. Through the fund, the federal government would allocate \$1 billion annually to states to make grants or low-interest loans to improve energy efficiency in public buildings, such as schools, police stations, firehouses and offices. The GBF will create more than 100,000 new "green collar" jobs. To be eligible for funding, projects would need to meet tough energy efficiency standards, such as the EPA Energy Star standard for buildings. The cost of this program would be split between the federal government and states and localities.

Training "Green Collar" Workers: Hillary would create a "Green Collar" jobs training program to provide the people who most need work with the skills to do the energy work that most needs doing. The program would target at-risk youth, veterans, displaced workers, and would teach them skills to install and maintain energy efficiency and renewable energy technology. When combined with Hillary's major investments in energy efficiency retrofits and renewable energy technologies, this training program would create a pathway out of poverty for many Americans.

Improving Public Transportation -- Increased public transit usage is one of the best strategies for addressing the energy and environmental costs of transportation. For every passenger mile traveled, public transportation produces only a fraction of the harmful pollution of private vehicles: only 5 percent as much carbon monoxide, less than 8 percent as many volatile organic compounds, and nearly half as much carbon dioxide and nitrogen oxides. As President, Hillary

will increase federal funding for public transit, including buses, light rail and subways, by \$1.5 billion per year. She will also link federal public transit funds to local land use policies that encourage residential developments that maximize public transit usage and discourage sprawl. She will also invest an additional \$1 billion in intercity passenger rail systems. Intercity passenger rail is an environmentally efficient alternative to highway driving and short flights; it relieves congestion on roads and airports; reduces the emission of automotive pollutants; and it stimulates economic growth by linking metropolitan areas.

Getting More Farmers, Ranchers and Foresters into the Fight Against Global Warming.

Farmers, ranchers and foresters can play an important role in confronting the challenge of climate change. Farm practices can help sequester carbon in the soil, offsetting emissions from other sources. And advances in energy efficiency can reduce the carbon footprint of working farms, contributing to an overall reduction in greenhouse gas emissions. Ranchers and foresters can make similar contributions. To encourage these activities, Hillary would provide incentives for carbon sequestration and improved energy efficiency on America's farms and ranches and in its forests.

COAL INDUSTRY'S ROLE

New Technology to Fight Greenhouse Gas Emissions

Efficiency First--Maximize Energy Efficiency to Address Coal Demand: A 2006 McKinsey Global Insight study of global energy efficiency potential found that all future energy service demand growth in North America can be met through cost-effective energy efficiency investments, such as greener building technologies and more efficient vehicles. Recent examples prove that efficiency can dramatically reduce the need to build new power plants. Earlier this year, investors acquired TXU and scrapped plans to build 8 of 11 planned coal-fired power plants in Texas. Part of the plan to replace the 8 planned power plants was a \$400 million increase in expenditures on customer efficiency. To maximize the potential for efficiency, Hillary would direct state utility commissions to ensure that before approving an application to build a coal plant, there is an evaluation of whether the energy services provided by that plant could be met by cost-effective investments in energy efficiency.

Accelerating the Development of Clean Coal

Coal plays a major role in America's energy mix, powering fifty percent of America's electricity generation, and we still have enormous coal reserves. At the same time, coal-fired power plants are the largest contributor to U.S. greenhouse gas emissions, and are responsible for emissions of mercury and other dangerous pollutants. Hillary understands that continuing to build new coal plants in the same way that we have in the past will make it extremely difficult to meet our climate change goals. Hillary's plan includes many components that would alleviate the need for additional coal plants in the coming years. For example, her strong efficiency measures will reduce the need for new power plants.

Hillary also believes that we need to take swift action to spur the development and deployment of technology and practices that will enable us to capture, store and safely sequester carbon dioxide from coal-fired power plants. To accelerate the development of this important technology, Hillary would put immediate funding towards 10 large scale carbon capture and

storage projects that utilize a range of coal types, power plant types, and storage locations. She will move quickly to develop the regulatory framework to ensure that carbon sequestration can be done safely and reliably. And she will require all new coal plants to be capable of adding capture and storage technology when it becomes commercially available.

INDIVIDUAL RESPONSIBILITY
Reducing Demand and Helping Create Accountability for Change

Challenging Individuals, Schools, Colleges, and Communities to Help Our Nation Address Global Warming: In sharp contrast to President Bush, who after 9/11 asked only that people go shopping, Hillary will ask individuals to take action to prevent cataclysmic climate change. She recognizes the significant and positive impact on carbon emissions that small but widespread changes in individual behavior can have. She is challenging every American to hold themselves and their local leaders accountable to reduce greenhouse gas emissions. She would also issue a challenge to all Americans to sign a pledge to take steps in their own life to reduce energy consumption in measurable ways. In order to facilitate local efforts, Hillary will invest in measurement tools that will enable individuals and local communities to understand how much global warming pollution they are emitting, and to measure the impact of their efforts to reduce their carbon footprint. She will also challenge colleges and schools to reduce emissions on campus and in their communities, and propose a set of awards through the Department of Energy to recognize the most outstanding climate achievers. And she will urge people to have their towns join the more than 600 mayors who have signed the US Mayors Climate Protection Agreement to advance greenhouse gas reduction goals through leadership and action.

Issuing new “Energy Independence Bonds”: In order to encourage broad citizen participation in the effort to move toward energy independence, Hillary will direct the U.S. Treasury to issue new “Energy Independence Bonds,” a limited-series of U.S. Savings Bonds. A large-scale, sustained advertising campaign will promote the Bonds, similar to the way war bonds were promoted during the Second World War. She will enlist community teams of volunteers to encourage people to reduce their carbon footprint and spend their energy savings on these Bonds. Hillary will set a goal of selling 50 million bonds over 10 years and will invest the proceeds in energy efficiency and renewable energy projects in communities across America through the Strategic Energy Fund.

RESTORING AMERICAN LEADERSHIP IN SOLVING INTERNATIONAL ENERGY
AND CLIMATE CHALLENGES

Hillary knows that the U.S. has to lead the way in addressing climate change, but she also knows that this is a global problem that requires a global solution.

Leading the Development of a Post-Kyoto Treaty: The Kyoto treaty is set to expire in 2012, and Hillary would act quickly in 2009 to restore U.S. leadership in the global warming arena by playing an active role in developing the post-Kyoto treaty. As a guide to the treaty, Hillary would propose a science-based goal to limit global warming to levels needed to avoid the most catastrophic consequences of climate change. She would re-engage in negotiations, work to

bring rapidly developing nations like China and India along, and convene high-level meetings every three months with the goal of getting a new deal in place by 2010, two years ahead of Kyoto's expiration.

Establishing an "E8" to Speed Global Action to Address Climate Change: Hillary would invite the G8 nations and key developing countries to join the United States in establishing an "E8." This group would be comprised of the world's major carbon-emitting nations, and would hold an annual summit devoted to international ecological and resource issues – global warming foremost among them. The E8 would not be a substitute for the United Nations effort to forge a global climate agreement, but rather would streamline negotiations among major emitters and would serve as a catalyst for the larger effort. The group would include the United States, Canada, Mexico, the European Union, China, Russia, Japan, India, South Africa, and Brazil.

Promoting Reforestation and Slow Deforestation Worldwide: Deforestation, particularly in tropical countries, accounts for twenty percent of annual global greenhouse gas emissions. Unless concerted action is taken, emissions reductions from industry could be replaced by accelerating emissions resulting from deforestation and the reduced capacity of forests to absorb carbon dioxide. Hillary would work to set more rigorous standards to ensure that offsets produce real carbon reductions. Hillary would also pursue debt-for-nature swaps, and would pursue trading incentives and penalties to reduce illegal logging in developing countries.

Taking Steps to Increase Energy Security: In the near term, the security of the U.S. and the global economy depends to a great extent on the uninterrupted production, shipping, and consumption of oil. To protect American interests and reduce volatility in the oil markets, Hillary would: reform the International Energy Agency to allow consuming states to more effectively pool intelligence and consumer power, and work to bring China and India into the International Energy Agency, so that we can better stand up to OPEC and encourage states other than Saudi Arabia to develop swing capacity – the ability to adjust production up or down to address price volatility.

OPERATIONALIZING THE PLAN

Establishing A New Focus in the White House: Hillary believes it takes much more than a good plan to move us towards energy independence and address global warming. That is why she has a clear plan for developing and implementing her policy proposals. She will create a National Energy Council modeled on the National Economic Council and the National Security Council. This new body will bring together disparate agencies in the federal government to put everyone on the same page and ensure that we all have the same priorities – much like the National Economic Council does for the economy. The National Energy Council would be headed by a National Energy Advisor who reports directly to the President, and who is charged with coordinating the implementation of Hilary's energy and climate agenda across the Executive Branch. This body will convene representatives from every government agency in order to drive towards achieving the goal of 80% reduction of global warming pollution by 2050. For the first time, the Secretaries of Education and Agriculture, for example, will be deeply involved in meeting our energy efficiency and renewable energy targets. Hillary will use this

body to break down bureaucratic barriers, encourage cross agency collaboration, and regularly reinforce that this issue is a top priority for her Administration. In addition, Hillary will focus the Department of Energy (DOE) on the challenge of transitioning from a carbon-based economy to a carbon-free economy. Hillary will choose a Secretary of Energy who both understands the traditional responsibilities of the DOE and can lead us to a clean energy future.

AN ECONOMY TRANSFORMED:
At Least 5 Million Clean Energy Jobs Over the Next Decade

Hillary believes that by transitioning from a carbon-based economy to a green, energy efficient economy, we have the potential to unleash a wave of private sector innovation and create at least 5 million new jobs from clean energy over the next decade. But it will only happen if we deploy the strength of America's entrepreneurs, our capital markets and the commitment and resolve of our citizens.

Hillary's plan lays the foundations of investment and incentives to encourage private sector innovation that can move us toward this jobs goal. The U.S. has an opportunity to lead in the development of new green technologies, creating new companies, spin-off enterprises, and entrepreneurs who are creating wealth while moving us toward a carbon free future. Hillary's plan will help catalyze an efficiency revolution in buildings, homes, appliances and utilities; spur rapid growth in the domestic renewables industries; and invest in energy innovation and R&D, all of which will drive productivity and additional job growth. And her plan will help the private sector create "green collar" jobs—in research and development, manufacturing, construction, engineering, consulting and a variety of other areas—that will help ensure strong growth of America's middle class over the next decade. Hillary's goal of at least 5 million new jobs over a decade is well within our reach, considering:

- **Recent Studies Suggests Dramatic Job Growth Potential from Energy Efficiency.**
Energy efficiency is the cheapest, cleanest, fastest way to reduce energy consumption and energy costs. Hillary's plan lays out an ambitious agenda to make this "fifth fuel" of energy efficiency a first priority—by changing the way utilities do business, catalyzing the green building industry, enacting stricter appliance standards, and phasing out incandescent light bulbs. A recent study by University of California Berkeley found that efficiency improvements drive innovation, productivity growth and consumer savings. Within an overall framework of reducing greenhouse gas emissions and transitioning to renewables, the benefits from efficiency improvements could help create more than a million new jobs in California alone over the next ten years. [U.C. Berkeley, *Economic Assessment for Climate Action in California*, 2007]. Based on conservative assumptions, this study suggests that the nationwide benefit from efficiency gains could help create well over 5 million jobs over a decade. Other studies that have analyzed the direct job impact from efficiency investments, find that the benefits would be substantial:
 - *Catalyzing a Green Building Industry*: Hillary's commitment to modernize 20 million homes, improve building efficiency through the Green Building Fund, and update the federal building stock will encourage the creation of more than 500,000 private sector "green collar" jobs. [Apollo Alliance, 2004; National Association for State

- Community Services Programs 2007]. Many of these jobs will be entry level construction jobs in America's inner cities. In addition, Hillary's Connie Mae program will expand private investment in energy efficient homes and buildings and help expand this burgeoning sector. The scale of this market is impressive – half of all new buildings in 2030 will have been built after 2000.
- *Green Jobs from Updating Our Energy Grid*: Hillary's smart-grid programs have the potential to catalyze significant private investment in modernizing our outdated energy grid. Such investment would create new jobs and drive efficiency improvements as well. This could help create more than 400,000 private sector jobs over a decade. [Apollo Alliance, 2004].
- **Transitioning to Renewable Energy Sources Can Drive New American Manufacturing and Create Millions of New Jobs.** A recent study by the University of Tennessee found that our economy could create about 2 million jobs from clean energy over 10 years if we get on a path to produce 25% of our electricity and motor fuel needs from renewables by 2025. [University of Tennessee, *25% Renewable Energy for the United States By 2025: Agricultural and Economic Impacts*, November 2006]. In addition, strengthening U.S. manufacturing in renewables will help create jobs from accelerated exports. A recent study found that “a renewable energy industry servicing the export market can generate up to *16 times more employment* than an industry that only manufactures for domestic consumption.” [Environment California Research and Policy Center, *Renewable Energy and Jobs*, 2003]. The export potential and related job benefits are substantial in a global renewables market that is projected to grow from \$55 billion in 2006 to \$226 billion in 2016. [Clean Edge, 2007]. Finally, supporting energy-intensive industries will help them remain competitive in a green economy. According to one study, an appropriately designed increase in fuel efficiency standards could help create about 240,000 new jobs in the U.S. - including 24,000 in the auto industry. [Union of Concerned Scientists, *Jobs, Energy, and Fuel Economy*, 2007] In addition, Hillary will use a portion of the auction revenue from the cap and trade program to provide tax benefits to energy-intensive industries.

A FISCALLY RESPONSIBLE PLAN

The total federal cost of the tax incentives and investments in Hillary Clinton's plan is approximately \$15 billion per year—or \$150 billion over ten years. This includes \$5 billion per year from the Strategic Energy Fund, which is financed internally by a windfall profits fee and removing special tax breaks for oil and gas companies. Hillary will finance the remaining \$10 billion per year without increasing the deficit by dedicating \$2.5 billion in additional savings from closing loopholes for oil and gas companies and dedicating a portion (about \$7.5 billion) of revenue from the cap and trade auction.