

Understanding Obama's Energy Plan



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Executive Summary

Barack Hussein Obama II is the President-elect of the United States and the first African American to be elected President of the United States. Obama was the junior United States Senator from Illinois from 2005 until he resigned on November 16, 2008, following his election to the Presidency.

In his New Energy for America plan, Obama proposes to reduce overall U.S. oil consumption by at least 35%, or 10 million barrels per day, by 2030 in order to offset imports from OPEC nations. Obama voted in favor of the Energy Policy Act of 2005, which provided incentives (chiefly tax breaks) to reduce national consumption of energy and to encourage a wide range of alternative energy sources. It also resulted in a net tax increase on oil companies.

Some of the highlights of Barack Obama's Energy Plan include:

- Provide short-term relief to American families facing pain at the pump;
- Help create five million new jobs by strategically investing \$150 billion over the next ten years to catalyze private efforts to build a clean energy future; and
- Within 10 years save more oil than the U.S. currently imports from the Middle East and Venezuela combined.

This report takes a look at what energy changes Obama has in store for the United States of America.

Getting to Know Barack Obama

Introduction

Barack Hussein Obama II is the President-elect of the United States and the first African American to be elected President of the United States. Obama was the junior United States Senator from Illinois from 2005 until he resigned on November 16, 2008, following his election to the Presidency.

He is a graduate of Columbia University and Harvard Law School, where he was president of the Harvard Law Review. Obama worked as a community organizer and practiced as a civil rights attorney before serving three terms in the Illinois Senate from 1997 to 2004. He also taught constitutional law at the University of Chicago Law School from 1992 to 2004. Following an unsuccessful bid for a seat in the U.S. House of Representatives in 2000, he announced his campaign for the U.S. Senate in January 2003, won a primary victory in March 2004, and was elected to the Senate in November 2004. Obama delivered the keynote address at the Democratic National Convention in July 2004.

As a member of the Democratic minority in the 109th Congress, he helped create legislation to control conventional weapons and to promote greater public accountability in the use of federal funds. He also made official trips to Eastern Europe, the Middle East, and Africa. During the 110th Congress, he helped create legislation regarding lobbying and electoral fraud, climate change, nuclear terrorism, and care for U.S. military personnel returning from combat assignments in Iraq and Afghanistan.

2008 Presidential Campaign

Barack Obama, the junior United States Senator from Illinois, announced his candidacy for the presidency of the United States in Springfield, Illinois, on February 10, 2007. On August 27, 2008 he became the nominee of the Democratic Party for the 2008 presidential election. He is the first African American in history to run on a major party ticket. On August 23, 2008 Barack Obama's campaign confirmed earlier reports that Senator Joe Biden of Delaware would be the Vice Presidential nominee.

On November 4, 2008, projections indicated that Obama won the election, making him the president-designate. His constitutional election to the office occurs on the meeting of the Electoral College on December 15, 2008, and the subsequent certification of the

college's vote by the United States Congress on January 6, 2009. Upon taking office, Obama will become the third sitting Senator, after Warren G. Harding and John F. Kennedy to ascend to the presidency.

On June 3, 2008, after the Montana and South Dakota primaries, Barack Obama secured enough delegates to clinch the nomination of the Democratic Party for President of the United States. His opponent, Republican John McCain, passed the delegate threshold to become the presumptive nominee of his party on March 4. On June 7, Hillary Rodham Clinton, Obama's remaining opponent in the quest for the Democratic nomination, conceded defeat at a rally in Washington, D.C. and urged her supporters to back Obama. After a June 26 dinner at which Obama encouraged his fundraisers to donate to Clinton's debt-addled campaign, Obama and Clinton ran their first post-primary event together in Unity, New Hampshire on June 27. Over the first two weeks of July, the campaign ran a heavier schedule of fundraising events, drawing from former donors to Clinton's campaign.

In July 2008 Obama traveled to Kuwait, Afghanistan, Iraq, Jordan, the West Bank, Israel, Germany, France, and United Kingdom. During the course of this trip he met with assorted international leaders, including President Hamid Karzai of Afghanistan, Prime Minister Nouri al-Maliki of Iraq, King Abdullah II of Jordan, Palestinian President Mahmoud Abbas, Prime Minister of Israel Ehud Olmert, Chancellor Angela Merkel of Germany, President Nicolas Sarkozy of France, and Prime Minister Gordon Brown of the United Kingdom, as well as former British Prime Minister Tony Blair and Conservative opposition leader David Cameron.

On July 24, 2008 he gave a speech at the Victory Column in Berlin before a crowd of estimated 200,000 to 240,000 people.

Barack Obama's vice presidential running mate had been a subject of speculation since the end of the primaries. As of August 2008, some of the most popular choices for VP included, but were not limited to, New York Senator Hillary Rodham Clinton, Delaware Senator Joe Biden, Indiana Senator Evan Bayh, Kansas Governor Kathleen Sebelius, Virginia Governor Tim Kaine, Colin Powell, New Mexico Governor Bill Richardson, and retired General Wesley Clark.

On Thursday, August 21, 2008, Obama announced that he had made a selection for the VP spot, but would not reveal until Saturday, August 23 who it was. Obama's campaign encouraged supporters to sign up for a text messaging system that would alert them the

moment he announced his choice. On Friday, August 22, KMBC News of Kansas City spotted bumper stickers of an Obama/Bayh '08 ticket that were being printed in Lenexa, Kansas. Three sources close to a local printing plant reported that such material was being produced. The image of the bumper sticker circulated on the internet. However, NBC News later quoted sources stating that Bayh had been informed by Obama's campaign that he was not the pick. According to an Associated Press report that same evening, Joe Biden was selected as Obama's candidate. The Associated Press report was confirmed several hours later, on August 23, on Barack Obama's official campaign website and by a mass text message to supporters.

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According to reports filed with the Federal Election Commission, Obama's campaign raised more money in the first quarter of 2008 (\$133,549,000) than it had raised in all of 2007 (\$103,802,537). The campaign had a relatively small total of \$21.9 million in May, but went on to raise \$52 million in June, after Obama had secured the nomination.

On June 19, Obama became the first major-party presidential candidate to turn down public financing since the system was created in the aftermath of Watergate. Obama was expected to raise \$265 million between the time of the announcement and Election Day. By rejecting the funds in favor of private donations, the campaign put itself in a position to outspend John McCain prior to the election. Had he signed on to the plan, the campaign would only have been able to spend \$84.1 million between the party convention in August and the general election in November.

After McCain was nominated as the Republican presidential candidate, there were three presidential debates between Obama and McCain in September and October 2008. In

November, Obama won the presidency with 53% of the vote and a wide Electoral College margin. His election sparked street celebrations in numerous cities in the United States and abroad.

Presidential Transition of Barack Obama

The presidential transition of Barack Obama began when he won the United States presidential election on November 4, 2008, and became the President-elect. He will be inaugurated on January 20, 2009, after being formally elected by the Electoral College on December 15, 2008, and having the results certified by a joint session of Congress on January 6, 2009.

The Obama transition organization is called the Obama-Biden Transition Project. The transition team was convened during the height of the campaign, well before the outcome could be known, to begin making preparations for a potential administration. It is co-chaired by John Podesta, who was Bill Clinton's fourth and last White House Chief of Staff and the president/chief executive officer of the Center for American Progress, Valerie Jarrett, who is one of Obama's longest-serving advisers, and Pete Rouse, former Senate chief of staff for Tom Daschle and more recently for Obama.

On November 5, the General Services Administration declared that Obama was the "apparent winner," making him eligible to receive transition funding and other government services, and granting him access to their 2008 Presidential Transition Headquarters in Washington, D.C. Podesta estimated that the transition would employ approximately 450 people and have a budget of about \$12 million: \$5.2 million would be paid by the federal government and the remaining \$6.8 million would be funded by private sources, with each contribution limited to \$5,000. The transition project will not accept money from political action committees or federal lobbyists.

The transition team's website, www.change.gov, includes a blog and jobs page. It also has a section that allows visitors to share stories or their visions for the country. Individuals applying for work within the Obama administration via this site are required to go through intensive consumer and criminal background checks performed by the ChoicePoint Corporation.

On November 5, Obama announced his complete transition team, which is organized as a nonprofit tax-exempt organization under U.S. federal tax code 501(c)(4). Podesta will be assisted by Jarrett and Pete Rouse to organize the effort. The advisory board consists of

Carol Browner, William M. Daley, Christopher Edley, Michael Froman, Julius Genachowski, Donald Gips, Janet Napolitano, Federico Peña, Susan E. Rice, Sonal Shah, Mark Gitenstein, and Ted Kaufman. Two journals reported on November 6 that Robert Gibbs might be selected as Obama's Press Secretary.

Members of the transition team's senior staff include:

- Chris Lu – Executive Director;
- Dan Pfeiffer – Communications Director;
- Stephanie Cutter – Chief Spokesperson;
- Cassandra Butts – General Counsel;
- Jim Messina – Personnel Director;
- Patrick Gaspard – Associate Personnel Director;
- Christine A. Varney - Personnel Counsel;
- Melody Barnes – Co-Director of Agency Review;
- Lisa Brown – Co-Director of Agency Review;
- Phil Schiliro – Director of Congressional Relations;
- Michael Strautmanis – Director of Public Liaison and Intergovernmental Affairs;
- Katy Kale – Co-Director of Operations; and
- Brad Kiley – Co-Director of Operations.

Joshua Gotbaum and Michael Warren will head the transition of the Treasury Department. In addition, Thomas Donilon and Wendy Sherman will oversee the transition of the State Department. Finally, John P. White and Michele Flournoy will lead the transition of the Defense Department.

President Bush invited Obama to attend a world economic summit at the White House between November 15 and 20. He is expected to address a United Nations global warming summit in Poland in December or allow a representative such as Al Gore to present his policies.

On November 10, Obama traveled to the White House and met with President Bush to discuss transition issues while First Lady Laura Bush took his wife Michelle on a tour of the mansion. NBC News reports that Obama advanced his economic agenda with Bush, asking him to attempt to pass a stimulus package in a lame duck session of Congress before the inauguration. He also urged Bush to accelerate the disbursement of U.S.\$25billion in funds to bail out the automobile industry and expressed concern about additional Americans losing their homes as mortgage rates increase again.

The Bush administration has reportedly gone out of its way to make the transition as seamless as possible for the incoming administration, earning accolades from Obama staff members and outside experts alike. According to nearly all accounts, the Bush administration has streamlined the process for new officials to obtain security clearances and has planned training exercises for the incoming national security team, to ensure that they will be ready to face a possible crisis on the first day in office. Part of this enhanced cooperation is required by laws passed at the behest of the 9/11 Commission, while part is attributed to the difficulty that the Bush administration had with its own transition, which lasted only five weeks and was felt to have had a deleterious effect on Bush's ability to govern.

Political Position of Obama

A method that some political scientists use for gauging ideology is to compare the annual ratings by the Americans for Democratic Action (ADA) with the ratings by the American Conservative Union (ACU). Based on his years in Congress, Obama has a lifetime average conservative rating of 7.67% from the ACU, and a lifetime average liberal rating of 90% from the ADA.

Obama was an early opponent of the Bush administration's policies on Iraq. On October 2, 2002, the day President George W. Bush and Congress agreed on the joint resolution authorizing the Iraq War, Obama addressed the first high-profile Chicago anti-Iraq War rally in Federal Plaza, speaking out against the war. On March 16, 2003, the day President Bush issued his 48-hour ultimatum to Saddam Hussein to leave Iraq before the U.S. invasion of Iraq, Obama addressed the largest Chicago anti-Iraq War rally to date in Daley Plaza and told the crowd that "it's not too late" to stop the war.

Obama stated that if elected he would enact budget cuts in the range of tens of billions of dollars, stop investing in "unproven" missile defense systems, not "weaponize" space, "slow development of Future Combat Systems," and work towards eliminating all nuclear weapons. Obama favors ending development of new nuclear weapons, reducing the current U.S. nuclear stockpile, enacting a global ban on production of fissile material, and seeking negotiations with Russia in order to take ICBMs off high alert status.

In November 2006, Obama called for a "phased redeployment of U.S. troops from Iraq" and an opening of diplomatic dialogue with Syria and Iran. In a March 2007 speech to AIPAC, a pro-Israel lobby, he said that the primary way to prevent Iran from developing

nuclear weapons is through talks and diplomacy, although he did not rule out military action. Obama has indicated that he would engage in "direct presidential diplomacy" with Iran without preconditions. Detailing his strategy for fighting global terrorism in August 2007, Obama said "it was a terrible mistake to fail to act" against a 2005 meeting of al-Qaeda leaders that U.S. intelligence had confirmed to be taking place in Pakistan's Federally Administered Tribal Areas. He said that as president he would not miss a similar opportunity, even without the support of the Pakistani government.

In a December 2005, Washington Post opinion column, and at the Save Darfur rally in April 2006, Obama called for more assertive action to oppose genocide in the Darfur region of Sudan. He has divested \$180,000 in personal holdings of Sudan-related stock, and has urged divestment from companies doing business in Iran. In the July–August 2007 issue of *Foreign Affairs*, Obama called for an outward looking post-Iraq War foreign policy and the renewal of American military, diplomatic, and moral leadership in the world. Saying "we can neither retreat from the world nor try to bully it into submission," he called on Americans to "lead the world, by deed and by example."

In economic affairs, in April 2005, he defended the New Deal social welfare policies of Franklin D. Roosevelt and opposed Republican proposals to establish private accounts for Social Security. In the aftermath of Hurricane Katrina, Obama spoke out against government indifference to growing economic class divisions, calling on both political parties to take action to restore the social safety net for the poor. Shortly before announcing his presidential campaign, Obama said he supports universal health care in the United States. Obama proposes to reward teachers for performance from traditional merit pay systems, assuring unions that changes would be pursued through the collective bargaining process.

In September 2007, he blamed special interests for distorting the U.S. tax code. His plan would eliminate taxes for senior citizens with incomes of less than \$50,000 a year, repeal income tax cuts for those making over \$250,000 as well as the capital gains and dividends tax cut, close corporate tax loopholes, lift the income cap on Social Security taxes, restrict offshore tax havens, and simplify filing of income tax returns by pre-filing wage and bank information already collected by the IRS. Announcing his presidential campaign's energy plan in October 2007, Obama proposed a cap and trade auction system to restrict carbon emissions and a ten year program of investments in new energy sources to reduce U.S. dependence on imported oil. Obama proposed that all pollution credits must be auctioned, with no grandfathering of credits for oil and gas companies, and the spending of the revenue obtained on energy development and economic transition costs.

Obama has encouraged Democrats to reach out to evangelicals and other religious groups. In December 2006, he joined Sen. Sam Brownback (R-KS) at the "Global Summit on AIDS and the Church" organized by church leaders Kay and Rick Warren. Together with Warren and Brownback, Obama took an HIV test, as he had done in Kenya less than four months earlier. He encouraged "others in public life to do the same" and not be ashamed of it. Addressing over 8,000 United Church of Christ members in June 2007, Obama challenged "so-called leaders of the Christian Right" for being "all too eager to exploit what divides us."

Obama's Energy Policy History

Introduction

In his New Energy for America plan, Obama proposes to reduce overall U.S. oil consumption by at least 35%, or 10 million barrels per day, by 2030 in order to offset imports from OPEC nations. Obama voted in favor of the Energy Policy Act of 2005, which provided incentives (chiefly tax breaks) to reduce national consumption of energy and to encourage a wide range of alternative energy sources. It also resulted in a net tax increase on oil companies.

Obama and other Senators introduced the BioFuels Security Act in 2006. "It's time for Congress to realize what farmers in America's heartland have known all along - that the U.S. has the capacity and ingenuity to decrease our dependence on foreign oil by growing our own fuel," Obama said. In a May 2006 letter to President George W. Bush, he joined four other Midwest farming state Senators in calling for the preservation of a \$0.54-per-gallon tariff on imported ethanol.

In an interview with NBC's Tim Russert on May 4, 2008, Obama said, "...we've got a serious food problem around the world. We've got rising food prices here in the United States." "There's no doubt that biofuels may be contributing to it. And what I've said is my top priority is making sure that people are able to get enough to eat. And if it turns out that we've got to make changes in our ethanol policy to help people get something to eat, then that's got to be the step we take."

On the issue of nuclear power, in 2005, Obama stated, "... as Congress considers policies to address air quality and the deleterious effects of carbon emissions on the global ecosystem, it is reasonable – and realistic – for nuclear power to remain on the table for consideration. Illinois has 11 nuclear power plants – the most of any State in the country – and nuclear power provides more than half of Illinois' electricity needs." Regarding McCain's plans for 45 new nuclear power plants, Obama said that it's not serious, it's not new, it's not the kind of energy policy that will give families the relief they need.[30] Obama declared himself flatly opposed to building the Yucca Mountain nuclear waste repository in Nevada.

In 2006, in response to Illinois residents' concerns about unreported radioactive leaks by Exelon Corporation, Obama introduced a Senate bill to effect mandatory disclosure of such leaks. In 2008, The New York Times, which had endorsed Hillary Rodham Clinton,

charged that, in revising his bill, Obama had "removed language mandating prompt reporting and simply offered guidance to regulators". In response, the Obama campaign cited a National Journal analysis of the revised bill, showing that "Obama's bill would require that any leak of radioactive materials exceeding the levels set by the Nuclear Regulatory Commission and the EPA be reported to state and local authorities and to the NRC within 24 hours."

Obama and other Senators introduced a bill in 2007 to promote the development of commercially viable plug-in hybrids and other electric-drive vehicles in order to shift away from petroleum fuels and "toward much cleaner – and cheaper – electricity for transportation". Similar legislation is now in effect in the Energy Independence and Security Act of 2007. Obama proposes that the U.S. Government invest in such developments using revenue generated from an auction-based cap-and-trade or emissions trading program to reduce greenhouse gas emissions.

Obama stresses innovation as a means to improve energy efficiency, calling for a 50% improvement by 2030. He has called for a 50 miles per U.S. gallon (21 km/l/60 mpg-imp) rule, proposing tax credits to automakers in order to ease the transition.

He also opposes drilling in the Arctic National Wildlife Refuge. On June 22, 2008 Obama proposed tightening regulations on oil speculators in an effort to ease record high prices of oil. "My plan fully closes the Enron loophole and restores common-sense regulation," Obama said.

What will Obama's Energy Plan Achieve?

Obama's comprehensive plan to combat global warming and achieve energy security will:

- Implement an economy-wide cap-and-trade program to reduce greenhouse gas emissions to the level recommended by top scientists to avoid calamitous impacts;
- Invest \$150 billion over the next ten years to develop and deploy climate friendly energy supplies, protect our existing manufacturing base and create millions of new jobs;
- Dramatically improve energy efficiency to reduce energy intensity of the U.S. economy by 50% by 2030;

- Reduce the U.S.' dependence on foreign oil and reduce oil consumption overall by at least 35%, or 10 million barrels of oil, by 2030; and
- Make the U.S. a leader in the global effort to combat climate change by leading a new international global warming partnership.

Obama's Energy and Environment Team

On December 16, 2008, President-elect Obama announced his new energy and environment team. This team includes Steven Chu, Lisa Jackson, and Carol Browner.

Steven Chu, Secretary of Energy, Department of Energy



Steven Chu, Energy Secretary

A Chinese-American, was born in St. Louis, Missouri. Chu received his bachelor's degree from the University of Rochester in 1970. In 1976, Chu received his doctorate from the University of California, Berkeley. Chu worked as a postdoctoral researcher at Berkeley prior to joining Bell Labs. After leaving Bell Labs in 1987, Chu became a professor of physics at Stanford University. While at Stanford, Chu served as the chair of the Physics Department from 1990 to 1993 and from 1999 to 2001. At Stanford, Chu was involved with the Bio-X program. He also assisted in securing the funding of the Kavli Institute for Particle Astrophysics and Cosmology. Chu's research at Stanford involved polymer physics and biophysics.

In 1997, Chu earned the Nobel Prize in Physics in 1997 for his research on the cooling and trapping atoms with laser light.

In 2004, Chu was appointed as director of the Lawrence Berkeley National Laboratory, a position he still holds. Also, in 2004, Chu accepted a position as a Professor of Physics at the University of California, Berkeley. Chu currently remains at the University of California, Berkeley as a Professor of Physics and Molecular and Cellular Biology. Chu's current research focuses on the study of biological systems at the single molecule level.

Chu is a proponent of alternative energy and nuclear power. Chu contends that shifting away from fossil fuel use is essential in the fight against global warming. Chu joined the Copenhagen Climate Council.

Coal

"Coal is my worst nightmare," he said repeatedly in a speech earlier this year. He says "clean coal" technologies would need to be developed in order to keep the fossil fuel in the energy portfolio in a carbon-constrained world, but notes, "It's not guaranteed we have a solution for coal."

As energy secretary, Chu will address the issue of government funding for coal research. The Department of Energy has been a major funder of projects to turn coal into liquid fuel, as well as the controversial FutureGen pilot program that was supposed to build the nation's first zero-emission, "clean coal" power plant in Illinois. The Bush administration abandoned the effort after the price tag ballooned to \$1.8 billion, moving the money to other projects and aiming to get carbon-capture-and-sequestration technologies in place at other power plants. But supporters (including President-elect Barack Obama) have sought to keep it alive.

Nuclear power

Chu's comments on nuclear power have drawn fire from both nuke opponents and supporters. In a 2005 interview, he said he "absolutely" thinks the role of nuclear in the country's energy portfolio should be increased -- alarming the anti-nuke crowd.

But he's also cautious about expanding nuclear without developing better waste-disposal systems. "The waste and proliferation issues still haven't been completely solved," he has said. To make nuclear power a viable option, "we've got to recycle the waste," he says, as there is not enough capacity at Yucca Mountain, the site in Nevada currently being developed for long-term storage. "[I]f you take all the waste we have now from our civilian and military nuclear operations, we'd fill up Yucca Mountain. So we need three or four Yucca Mountains. Well, we don't have three or four Yucca Mountains."

Climate change

Chu says his realization that climate change is among the most pressing issues of our era developed over time, as did the realization that a price on carbon is needed. "In the last five or six years, I was following this as an interested citizen," he told PBS last year. "And it became more and more apparent to me that the dangers, the potential risks of climate change were looking like they were more and more likely, and that ... as a scientist, a responsible scientist, you really have to think of what you can do to help with this problem."

Chu has stressed the importance of curbing greenhouse-gas emissions. "These are serious predictions," he said in another interview last year, discussing the latest climate science. "It's prudent risk management. It's like saying, 'Your house will burn down in the next 10 years -- 50 percent probability. By the way, do you want fire insurance?'"

Chu is now a member of the Copenhagen Climate Council, an international effort to "create global awareness of the importance of the U.N. Climate Summit, in Copenhagen, in December 2009."

"We need new technologies"

In recent years, Chu has become an outspoken advocate for carbon-neutral energy sources and policies that support their development. "I think political will is absolutely necessary," he said in a speech at the National Clean Energy Summit in August 2008. "But we need new technologies."

In 2007, he formed a research collaboration between the Lawrence Berkeley lab, UC-Berkeley, and energy giant BP, through which BP agreed to fund a \$500 million biofuels institute at the school. The partnership was controversial both within the scientific community and on the Berkeley campus. One student group staged a mock graduation ceremony with oil-stained diplomas. The lab also secured a \$125 million grant from the Department of Energy to found the Joint BioEnergy Institute.

Chu's work at the Lawrence Berkeley lab has focused largely on advanced biofuels, artificial photosynthesis, and solar technologies. The lab has in recent years worked on creating photovoltaic cells that can be painted on to surfaces, sometimes called "solar paint," and on technology that can convert solar energy to liquid fuel by mimicking plant photosynthesis. Through its Helios Project, the lab has worked on developing methods to "store" solar energy in the form of renewable transportation fuels derived from algae and other biomass. (See this Tom Philpott post for more on Chu's ideas about cellulosic ethanol.)

Chu has frequently noted the importance of energy efficiency in weaning the country off fossil fuels. He has lobbied for the creation of an Advanced Research Projects Agency-Energy (ARPA-E) at the Department of Energy to fund innovative, high-tech methods to address the energy crisis. And he has advocated for an interstate electricity transmission system, paid for by ratepayers, to address the access problems associated with many renewable energy sources.

If confirmed by the U.S. Senate, Chu will be the first Chinese American to hold the office of Energy Secretary and the second Chinese American to be a member of the President's Cabinet. He would also be the first person appointed to the Cabinet after having won a Nobel Prize.



Lisa Jackson, Administrator, Environmental Protection Agency

Jackson, a native of New Orleans, attended Tulane University on a scholarship from Shell Oil Co., earning a degree in chemical engineering and anticipating a career in the petrochemical industry. But Jackson went on to earn a master's degree in chemical engineering from Princeton University in 1986, where she became inspired to use her engineering skills to prevent pollution.

Jackson worked with the United States Environmental Protection Agency for 16 years. While employed with EPA, Jackson worked in the federal Superfund site remediation program. She later served as deputy director and acting director of the region's enforcement division.

In 2002, after leaving EPA, Jackson joined the New Jersey Department of Environmental Protection (NJDEP) as Assistant Commissioner of Compliance and Enforcement. While at the NJDEP, Jackson headed numerous programs including Land Use Regulation, Water Supply, Geological Survey, Water Monitoring and Standards, and Watershed Management. She focused on developing a system of incentives for stimulating the right growth in the right places. Under her leadership, the NJDEP crafted regulatory standards for implementing the landmark Highlands Water Protection and Planning Act. During 2005, Jackson served as Assistant Commissioner for Land Use Management during 2005.

In 2006, Jackson was appointed to the Governor of New Jersey, Jon S. Corzine's cabinet. She currently serves as Chief of Staff to the Governor. If confirmed she'll be the first African American to serve as EPA Administrator.

Jackson is currently vice president of the executive board of the Regional Greenhouse Gas Initiative, the cap-and-trade program created by northeastern states to reduce greenhouse-gas emissions that kicked off in September.

New Jersey, a hub for the chemical manufacturing industry, is one of the most polluted states in the nation, with some 16,000 contaminated sites, including 115 Superfund sites. Early in her tenure, Jackson promised to reform the department's \$60 million toxic-site cleanup program.

"I firmly believe that additional changes in how the DEP manages and cleans up contaminated sites are definitely needed," Jackson said in a hearing before the state Senate Environment Committee in October 2006, nine months after she took the helm at the agency. She said then that one of her key objectives would be prioritizing the sites in order to get the most dangerous cleaned up first. But critics lambaste her for never getting around to completing that ranking.

New Jersey's biggest environmental groups praise her work on climate change and celebrate her nomination to head the U.S. Environmental Protection Agency. But she also has a passionate and vocal group of detractors, mainly people who have worked on toxics in the state, both within the DEP and outside it. Her critics say she's a political player who has undermined science within the department.

Jackson has earned much praise, however, for her work on the state's climate change and energy plans, and on clean-water protections. During her tenure, more than 900 miles of state waterways were given the highest level of protection under the Clean Water Act, limiting development and requiring buffer zones.

Green groups say Jackson also pushed Corzine toward tougher measures on climate and energy. The Global Warming Response Act, which the governor signed into law in July 2007, aims to reduce the state's greenhouse-gas emissions to 1990 levels by 2020 and to 80 percent below 2006 levels by mid-century.

Jackson's critics in the state say her record there does not portend great things at the federal level. Yet her supporters think she'll be able to accomplish a lot under Obama, who has set forth an ambitious environmental agenda.



Carol Browner, Assistant to the President for Energy and Climate Change

Carol Browner was born in Miami, Florida. Browner received her bachelor's degree in English from the University of Florida in 1977.

She received her juris doctor degree from the University of Florida College of Law in 1979.

In 1980 and 1981, Browner worked for the Florida House of Representatives Committee on Government Operations. In 1983, she began work for Citizen Action. From 1986 to 1988, Browner served as chief legislative assistant to Senator Lawton Chiles from Florida. While employed with Senator Chiles, she negotiated the expansion of Florida's Big Cypress National Preserve, as well as worked to ban offshore drilling near the Florida Keys. During 1989, Browner served as legal counsel for the Senate Committee on Energy and Natural Resources. Browner then worked as Legislative Director for Senator Al Gore. Her work for Gore included preparing amendments to the Clean Air Act.

From 1991 to 1993, Browner headed the Florida Department of Environmental Protection. After the 1992 presidential election, Browner served as transition director for Vice President-elect Al Gore. On December 11, 1992, President-elect, Bill Clinton announced her as his choice to head the United States Environmental Protection Agency at the age of 37.

After the Clinton Administration, Browner became a founding member of the Albright Group, a global strategy firm lead by former Secretary of State Madeline Albright, which assists businesses and other organizations with the challenges of operating internationally, including the challenges of complying with environmental regulations and climate change. She's also a principal of Albright Capital Management, an investment advisory firm that concentrates on emerging markets.

Currently, Browner serves as the chair of the Audubon Society. She is also on the board of the Alliance for Climate Protection, Center for American Progress, and the League of Conservation Voters. She is also one of the 14 leaders of a socialist group's Commission for a Sustainable World Society, which calls for rich countries to shrink their economies to address climate change.

Much of Browner's time at the EPA was spent beating back attempts by Newt Gingrich and congressional Republicans to weaken the Clean Water Act and other environmental laws, yet she also racked up some notable progress during those eight years. Under her tenure, EPA issued new air-pollution control rules for diesel fuels, cutting sulfur content by 97 percent, and enacted stronger emissions limits on diesel engines. The agency updated federal standards for particulate matter and ozone, better-known as "soot" and

"smog," respectively. In 1994, Browner oversaw the expansion of the Toxic Release Inventory, nearly doubling the number of chemicals whose emissions must be reported to the public.

She was a key figure in enacting rules to strengthen the Safe Drinking Water Act in 1996 and the Food Quality Protection Act in 1997. In 1999, two pesticides that cause nervous system damage and other problems were banned under her watch, though environmentalists criticized her for not outlawing some of the most dangerous chemicals and accused her of bowing to industry pressure.

Browner was unsuccessful in her efforts to rally support for legislative reform of the Superfund program, but she was able to accelerate the pace of Superfund-site cleanups, completing 400 in the administration's first term.

On December 15, 2008, President-elect Obama officially nominated Browner to the position of Assistant to the President for Energy and Climate Change. In this position, she will act as a so-called "climate czar" and coordinate environmental, energy, climate, transport and related matters for the federal government. Ms Browner's deputy assistant will be Heather Zichal, a former legislative director for Senator John Kerry.



Ken Salazar, Secretary of the Interior

Ken Salazar, Obama's choice to head the Department of the Interior, is provoking controversy in the environmental community. Many activists, particularly among grassroots conservation groups in the West, are criticizing the pick, while some industry interests and big, mainstream green groups are praising Salazar.

Salazar has only been in the Senate since 2005. His lifetime score from the League of Conservation Voters is an 81 percent (in high-school terms, a "B-"). His scores for individual years have varied quite a bit, from 73 percent in 2007 to a perfect score in 2008. When he has parted ways with the environmental community, it's primarily been on water resources and agriculture issues. (Salazar serves on the Senate Agriculture Committee, as well as the Energy and Natural Resources Committee).

Salazar has been the Senate's staunchest opponent of the Bush administration's plans to rush forward with oil-shale development in Western states. "How is a federal agency to establish regulations, lease land and then manage oil shale development without knowing whether the technology is commercially viable, how much water the technology would need (no small question in the arid West), how much carbon would be emitted, the source of the electricity to power the projects, or what the effects would be on Western landscapes?" Salazar asked in an op-ed in *The Washington Post* this summer.

In the summer of 2008, Salazar signed on to the much-talked-of bipartisan energy plan in the Senate -- the one that started out as a "Gang of 10" effort, grew to a "Gang of 20," and then was shelved. This compromise plan merged tax incentives and funding for renewables with some offshore drilling. Enviro's were not thrilled with the plan's embrace of fossil fuels and nuclear energy.

In 2008, he cosponsored a bipartisan bill that called for more efficient use of water and more research into the effects of climate change on water supply, particularly in Western states. "Even if we move forward with significant increases in the use of renewable energies, we are learning that some adaptation measures are inevitable to reduce the harm from climate change that proves to be unavoidable," Salazar said at a hearing on the bill. "[M]any scientists are now saying the American West will experience the effects of climate change sooner and more intensely than most other regions. Our scarce snow and water of the West is already being impacted, much of it in ways that we do not clearly understand."

In 2005, his first year in Congress, Salazar cosponsored the Vehicle and Fuel Choices for American Security Act, which would have required the White House and federal agencies to develop an action plan to cut America's oil consumption by 2.5 million barrels of oil a day within a decade and 10 million barrels a day by 2031.

Last week, during a hearing of the Senate Energy and Natural Resources Committee, Salazar argued for an economic recovery plan that includes significant investments in energy infrastructure. "When Congress reconvenes in January, we must immediately pass a strong economic recovery package that gets our economy back on track in the near term, while also taking advantage of new opportunities that will drive economic growth down the road," said Salazar. "Investing in efforts to modernize our energy grid and develop new, clean energy technologies is a great way to accomplish both of these goals. By making these investments, we will create jobs, reduce energy costs for consumers, and lay the foundation for America's economic future."

In 2007, Salazar voted against an amendment to the Water Resources Development Act reauthorization bill that would have required the U.S. Army Corps of Engineers to consider the long- and short-term effects of climate change in their planning, and use the best available modern climate science when planning water projects. That amendment failed by a 51-42 vote. He also voted against another amendment to the act that would have created an independent commission to assess and prioritize Army Corps of Engineer water projects. The commission was supposed to direct funding away from "pork barrel" projects and help clear out the \$58 billion backlog of previously authorized water projects.

Salazar voted against a subsidy-reform amendment to the farm bill that would have boosted conservation funding by \$1.2 billion and made access to the funds more equitable. The amendment failed by a 37-58 vote. He also voted against an amendment to cap farm subsidies and redirect almost \$100 million of those funds to the Grasslands Reserve Program and the Farmland Protection Program. The amendment would have closed loopholes that provide giant subsidies to industrial-scale farms.

Jon Marvel, executive director of the Western Watersheds Project, called the appointment "a travesty" and said Salazar "will completely undermine Obama's message of change. He will not bring change to the public lands of the western United States."

"The Department of the Interior desperately needs a strong, forward-looking, reform-minded secretary," said Kieran Suckling, executive director of the Tucson-based Center

for Biological Diversity, in a statement yesterday. "Unfortunately, Ken Salazar is not that man. He endorsed George Bush's selection of Gale Norton as secretary of interior, the very woman who initiated and encouraged the scandals that have rocked the Department of the Interior. Virtually all of the misdeeds described in [this week's] Inspector General exposé occurred during the tenure of the person Ken Salazar advocated for the position he is now seeking."

Salazar has voted against raising fuel-economy standards for automobiles and repealing tax breaks for oil companies, and voted for offshore oil drilling along Florida's coast and subsidies for ranchers who use public lands. (More on Salazar's Senate voting record on environmental issues here.) Salazar also threatened to sue the U.S. Fish and Wildlife Service over the listing of the black-tailed prairie dog as endangered when he was attorney general of Colorado.

National Parks Conservation Association President Tom Kiernan issued a statement on Tuesday praising the news that Salazar will be nominated to head DOI. "Sen. Salazar has been an outstanding leader in national park protection in the U.S. Senate," said Kiernan. "He has championed the strengthening of the parks' management policies, advocated to address the parks' chronic funding needs, led the introduction of the National Park Centennial Challenge, and worked to harness the educational power of our national parks for our children and grandchildren. He has also championed appropriate expansion of the National Park System. Our national parks will be in great hands with Ken Salazar."



Tom Vilsack, Secretary of Agriculture

In 2007, Thomas Vilsack ended an eight-year stint as Iowa's governor. Before that, he had served as a state senator. During his time in Iowa politics, he promoted the interests of large agribusiness firms in several ways.

As a state senator, he voted for the infamous House File 519 in 1995, which stripped counties of the right to impose restrictions on CAFOs. In 2005, as governor, he signed into law House File 642, which barred local governments from regulating the planting of genetically modified seed.

In 2001, the Biotechnology Industry Organization named him "governor of the year" for his "support of the industry's economic growth and agricultural biotechnology research."

Vilsack also briskly promoted biofuels as governor; he served as chair of the Governors' Ethanol Coalition.

After stepping down after his second term in 2007, Vilsack ran for president. When that bid failed, he joined the Minneapolis-based corporate law firm Dorsey & Whitney. The firm's broad range of corporate clients include food giants Cargill and Conagra. According to Dorsey & Whitney's website, Vilsack was hired to focus on "strategic counseling and advising clients in the fields of energy conservation, renewable energy, and agribusiness development." He also serves as a distinguished fellow at Iowa State University's Biosafety Institute for Genetically Modified Agricultural Products, where he sits on the advisory board with representatives of Monsanto, Dupont's Pioneer Hi-Bred, and the World Bank.

Obama said that promoting biotech was part of Tom Vilsack's vision to "strengthen our farmers" and build the "agricultural economy of the future."

This was an explicit message to agribusiness saying that they can count on an Obama USDA to continue their agenda.

The biotech industry take-over of U.S. agriculture policy began in 1986. That was when the Reagan White House hosted Monsanto executives and began years of behind-the-scenes negotiations. Then, before any products were even on the market, the terms of the deal were announced. Even though this was a radical new technology and it would release artificial living organisms into the environment and our food supply, and even though federal agency scientists warned of potential health and safety risks, there would be no new laws and no government testing or monitoring. Instead, the industry would be trusted to report any problems they might find with their products.

This voluntary system is essentially what we still have today. As a result, our food is now widely contaminated with genetically modified organisms, and our farmers are using ever more herbicides and fossil fuels. And this technology locks them into dependency on corporations for all their inputs as well as massive public subsidies (agriculture's annual bailout) to produce commodity crops.

The only change mentioned for Obama's biotech policy is talk of labels for GMOs.



Nancy Sutley, Chair of Council on Environmental Quality

Sutley is widely described as reserved but is a dogged, thorough worker, with experience on a number of issues that will be critical during the next administration, from electricity transmission lines to water allocation. One source said the selection of Sutley sends a message that Obama will not use the CEQ chair as a "cheerleading" position to justify particular environmental stances, as both President Bill Clinton and President George W. Bush did, but rather as someone who can quickly and deftly handle the already mounting workload of dealing with lengthy reports and other requests for action from a wide spectrum of environmental and business groups.

Sutley has a long, varied track record in California and Washington, D.C., on environment, energy, and water policy. A native of South America who is now a U.S. citizen, she currently oversees climate change and energy policy for Los Angeles. She is also on the board of the Metropolitan Water District, which provides water to more than 25 million southern Californians. She has worked at the U.S. EPA, served as deputy secretary for policy and intergovernmental relations at California EPA, and was energy advisor to California Gov. Gray Davis (D).

While working at EPA during the Clinton administration, Sutley helped craft stronger public health regulations for air pollutants, battling industry opposition and entrenched D.C. politics, said Marcus. When California Gov. Pete Wilson refused to come up with a federally required plan for how California would clean up its badly polluted air, Sutley was flown out to San Francisco to help Marcus, then EPA's regional administrator, write the plan. She has also worked on California's water board, deciphering byzantine allocation policies.

When California was hit with rolling blackouts and skyrocketing energy prices in the early part of this decade, Gov. Gray Davis made Sutley his energy adviser, where she questioned the Federal Energy Regulatory Commission's oversight of California's electricity markets, and worked to keep dirty diesel generators from being used as substitute power.

Sutley is supposed to be the president's principal environmental advisor, according to the job description laid out by Congress when it created the CEQ, playing environmental sheriff over federal agencies, and taking the lead role on major environmental policy

initiatives. But under President George W. Bush, the council offices were moved out of the White House executive offices to a warren of nearby townhouses, staff and funding were slashed, and many say its current chair, James Connaughton, has been hamstrung in attempts to combat climate change and negotiate international agreements.

Two dozen environmental groups pressed Obama to restore CEQ to its historic stature as part of a mammoth, 391-page report submitted to his transition team recently. But Obama transition leader John Podesta co-authored a different report last year at the Center for American Progress, envisioning a powerful new energy czar in the White House who would address climate and energy issues.



Heather Zichal, Deputy Assistant to the President for Energy and Climate Change

On July 20, Obama added Heather Zichal to the team as policy director for energy, environment, and agriculture.

Before coming to the Obama campaign's Chicago headquarters, Zichal served as the legislative director for Sen. John Kerry (D-Mass.), running both his domestic and foreign policy. In 2004, she was responsible for energy and environmental policy in Kerry's presidential campaign. From 2001 to 2002, she was the legislative director for Rep. Frank Pallone (D-N.J.). Zichal, 32, is an Iowa native and a graduate of Rutgers University in New Jersey.

Even in the relatively short time she's been working in politics, she's observed a major shift in the way climate change is being approached.



Jane Lubchenco, NOAA Administrator

Jane Lubchenco is an accomplished marine scientist and long-time conservationist who has been vocal about the dangers posed by climate change. She is a prominent marine biologist at Oregon State University, and served as president of the American Association for the Advancement of Science between 1997-98.

Lubchenco has helped found several organizations designed to bridge the gap between scientists and public policy, including Climate Central, a climate change think tank launched earlier this year.



John Holdren, Science Advisor

Holdren is a Harvard physicist who has been outspoken about the need to fight climate change. He has defended the more strident calls for limits on carbon dioxide and other heat-trapping gases.

Holdren is well known for his work on energy, climate change, and nuclear proliferation. Trained in fluid dynamics and plasma physics, Holdren branched out into policy early in his career. He has led the Woods Hole Research Center for the past 3 years and served as president of the American Association for the Advancement of Science (which publishes Science) in 2006.

A crucial role for the science adviser is to help educate the public on climate science and solutions. A top adviser to the Obama campaign and international expert on energy and climate, Holdren would bolster Obama's team in those areas. The science adviser works out of the White House and oversees science and technology funding, analysis, and messaging for all federal agencies.



Hilda Solis, Secretary of Labor

Congresswoman Solis is expected to champion green jobs at the Labor Department. She will be charged with implementing the Green Jobs Act, which she helped to push through Congress in 2007. She's been a long-time advocate for environmental justice and ally of the labor movement.

Obama has stated that green jobforce training will be a key component of his massive stimulus package. As Labor Secretary, Solis would in fact be in charge of implementing the Green Jobs Act she fought to get through a hostile Congress and Bush administration in 2007.



Hillary Clinton, Secretary of State

During her years representing New York state in the U.S. Senate (2001 to the present), Hillary Clinton has earned an 87 percent lifetime voting score from the League of Conservation Voters.

She has tended to run with the Democratic pack on environmental policy, but in November 2007 she unveiled a comprehensive and ambitious climate and energy plan.

The Key Points are as Follows:

- Proposes a Strategic Energy Fund that would raise \$50 billion over 10 years by taxing the "excess profits" of oil companies and cutting their tax breaks. The money would be invested in "clean energy technologies," including renewable energy, energy efficiency, "clean coal," plug-in hybrids, cellulosic ethanol and other biofuels, and more. Clinton describes it as "an Apollo Project-like program dedicated to achieving energy independence."
- Calls for cutting U.S. carbon dioxide emissions 80 percent below 1990 levels by 2050. Would accomplish this through a cap-and-trade system that would auction off 100 percent of emissions permits, making polluters pay for the CO₂ they emit.
- Emphasizes the creation of "green-collar jobs" in the fields of clean energy and energy efficiency. Aims to create up to 5 million clean-energy jobs over the next decade.
- Made her campaign carbon-neutral in April 2007, one month after John Edwards did.
- Calls for the U.S. to cut its consumption of foreign oil by two-thirds of projected levels by 2030.
- Supports a goal to get 25 percent of the U.S. electricity supply from renewable sources by 2030.
- Supports raising fleet-wide fuel-economy standards to 40 miles per gallon by 2020 and 55 mpg by 2030.

- Has advocated for a summer "gas-tax holiday" to ease consumer prices at the pump. The proposal would suspend the 18-cent federal gasoline tax and 24-cent diesel tax from Memorial Day to Labor Day, to be paid for by a tax on oil-company profits.
- Supports coal-to-liquid fuels if they emit 20 percent less carbon over their lifecycle than conventional fuels. On June 19, 2007, voted in favor of an amendment that would provide loans for coal projects, including liquefied coal; the amendment did not pass.

Obama's Proposals

Reducing CO2 Emissions by 2050

Barack Obama is a champion of the national effort to cut greenhouse gas emissions. Obama supports implementation of a market-based cap-and-trade system to reduce carbon emissions by the amount scientists say is necessary: 80% below 1990 levels by 2050. Obama will start reducing emissions immediately in his administration by establishing strong annual reduction targets, and he'll also implement a mandate of reducing emissions to 1990 levels by 2020.

In contrast to other approaches like a carbon tax, cap-and-trade programs provide maximum assurances that emissions will decline to desired levels by the targeted dates. A cap-and-trade program draws on the power of the marketplace to reduce emissions in a cost-effective and flexible manner. Under the program, an overall cap on carbon emissions is established. The emissions allowed under the cap are divided up into individual allowances that represent the permission to emit that amount.

Because the emissions cap restricts the amount of pollution allowed, allowances that give a company the ability to pollute take on financial value. Companies are free to buy and sell allowances in order to continue operating in the most profitable manner available to them. Those that are able to reduce pollution at a low cost can sell their extra allowances to companies facing high costs. Each year the number of allowances will decline to match the required annual reduction targets.

- **100% Allowance Auction:** Without a profit motive or incentive to innovate, corporations do not spend time or money to develop new clean ways of doing business. Obama's cap-and-trade system will require all pollution credits to be auctioned. A 100% auction ensures that all polluters pay for every ton of emissions they release, rather than giving these emission rights away for free to coal and oil companies; and
- **Invest Revenue for a Clean Energy Future:** Some of the revenue generated by auctioning allowances will be used to support the development and deployment of clean energy, invest in energy efficiency improvements and address transition costs, including helping American workers affected by this economic transition and helping lower-income Americans afford their energy bills by expanding the

Low Income Home Energy Assistance Program, expanding weatherization grants for low-income individuals to make their homes more energy efficient, and establishing a dedicated fund to assist low-income Americans afford higher electricity and energy bills.

Investing in a Clean Energy Economy

Barack Obama will use some of the revenue generated from the cap-and-trade permit auction to invest in climate-friendly energy development and development. This will transform the economy and create millions of new jobs. Obama will invest \$150 billion over 10 years to advance the next generation of biofuels and fuel infrastructure, accelerate the commercialization of plug-in hybrids, promote development of commercial scale renewable energy, invest in low emissions coal plants, and begin transition to a new digital electricity grid. A principal focus of this fund will be devoted to ensuring that technologies that are developed in the U.S. are rapidly commercialized in the U.S. and deployed around the globe.

There are three critical steps in achieving the necessary revolution toward low carbon energy production: 1) Basic Research; 2) Technology Demonstration and 3) Aggressive Commercial Deployment and Clean Market Creation. Obama has specific plans to enhance each of these critical steps in the technology development process:

(1) Increase Investment in Basic Research and Human Capital.

- **Invest in Basic Research:** Obama will federal double science and research funding for clean energy projects including those that make use of U.S. biomass, solar and wind resources. At present, the federal government spends over \$3 billion per year on all energy innovation efforts. While this may seem like a significant sum, it is much less than what the U.S. spent in the late 1970's when adjusted for inflation, and is less than the pet food industry invests in its own products. Obama will double the nation's commitment to energy R&D and rely more heavily on the tremendous resources and ability of national laboratories, universities and land grant colleges which have significant expertise in rural sources of renewable energy; and
- **Invest in a Skilled Clean Technologies Workforce:** Transitioning to a clean energy economy represents a tremendous opportunity for American workers. Barack Obama will use proceeds from the cap-and-trade auction program to

invest in job training and transition programs to help workers and industries adapt to clean technology development and production. Obama will increase funding for federal workforce training programs and direct these programs to incorporate green technologies training, such as advanced manufacturing and weatherization training, into their efforts to help Americans find and retain stable jobs.

Barack Obama also believes the transition to a clean energy economy holds special promise for low-income communities and families, which are poised to shoulder a disproportionate share of the burden of global climate change. To combat this problem, Obama will create an energy focused youth jobs program to invest in disconnected and disadvantaged youth. This program will provide youth participants with energy efficiency and environmental service opportunities to improve the energy efficiency of homes and buildings in their communities, while also providing them with practical skills and experience in important career fields of expected high growth employment. The program will engage private sector employers and unions to provide apprenticeship opportunities. Participants will not only be able to use their training to find new jobs, but also build skills that will help them move up the career ladder over time.

(2) Invest in Key Technology Development

- **Develop the Next Generation of Biofuels:** Barack Obama will work to ensure that advanced biofuels, including cellulosic ethanol, are developed and incorporated into our national supply as soon as possible. Corn ethanol is the most successful alternative fuel commercially available in the U.S. today, and it should fight the efforts of big oil and big agri-business to undermine this emerging industry. But it represents only a drop in the bucket of our energy demands and making ethanol from corn has some significant limitations. Today the U.S. produces about 5 billion gallons of corn-based ethanol per year while the U.S. uses about 140 billion gallons of gasoline. Even if the nation is able to double – or even triple – production of ethanol from corn this will still offset only about 10% of our gasoline demand. There are also real concerns about bringing set aside lands into corn production as well as concerns about an increase in the use of pesticides, water use and upward pressure on the cost of food for people and livestock alike. These constraints reveal the scope and scale of our energy and environmental challenges. Obama will invest federal resources, including tax incentives, cash prizes and government contracts into developing the most promising technologies with the goal of getting the first two billion gallons of cellulosic ethanol into the system by 2013. Obama will also work to improve the national supply of

advanced biodiesel. From here the Clean Technologies Deployment Venture Fund will speed the deployment of multiple facilities:

- Expand Locally-Owned Biofuel Refineries: Less than 10% of new ethanol production today is from farmer owned refineries. New ethanol refineries help jumpstart rural economies. For example, it has been estimated that a 40 million gallon ethanol refinery will add up to 120 jobs, expand a local tax base by \$70 million per year and boost local household income by \$6.7 million annually. The economic development opportunities for advanced cellulosic ethanol technologies hold potential to revitalize rural communities across the country. Barack Obama believes that the U.S. must ensure that local investment continues to play a significant role as the biofuels industry continues to expand and evolve. Obama will create a number of incentives for local communities to invest in their biofuels refineries, including expanding federal tax credit programs and providing technical advice to rural communities that are in a strong position to open their own refineries. Obama will also provide an additional subsidy per gallon of ethanol produced from new facilities that have a minimum of 25% local capital, and he will provide additional loan guarantees for advanced ethanol facilities with local investment;
- Develop and Deploy Clean Coal Technology: Coal is our nation's most abundant energy source and is a critical component of economic development in China, India and other growing economies. Obama believes that the imperative to confront climate change requires that the U.S. prevents a new wave of traditional coal facilities in the U.S. and work aggressively to transfer low-carbon coal technologies around the world. In the U.S. Senate, Obama successfully increased funding by \$200 million for carbon storage in the fiscal year 2008 budget resolution. As president Obama will significantly increase the resources devoted to the commercialization and deployment of low carbon coal technologies. Implementing these technologies as soon as possible is vital to the transition to a clean energy economy and will help other nations dependent on coal reduce their emissions as well. In addition to addressing new facilities, Obama will work to ensure that existing coal facilities are retrofitted with carbon capture and sequestration technology as soon as it is commercially available. Obama will use whatever policy tools are necessary, including standards that ban new traditional coal facilities, to ensure that the U.S. moves quickly to commercialize and deploy low carbon coal technology. Obama's stringent cap on carbon will also make it

uneconomic to site traditional coal facilities and discourage the use of existing inefficient coal facilities; and

- **Safe and Secure Nuclear Energy:** Nuclear power represents more than 70% of the U.S.' non-carbon generated electricity. It is unlikely that the U.S. can meet its aggressive climate goals if the U.S. eliminates nuclear power from the table. However, there is no future for expanded nuclear without first addressing four key issues: public right-to-know, security of nuclear fuel and waste, waste storage, and proliferation. Barack Obama introduced legislation in the U.S. Senate to establish guidelines for tracking, controlling and accounting for spent fuel at nuclear power plants.

To prevent international nuclear material from falling into terrorist hands abroad, Obama worked closely with Sen. Dick Lugar (R – IN) to strengthen international efforts to identify and stop the smuggling of weapons of mass destruction. As president, Obama will make safeguarding nuclear material both abroad and in the U.S. a top anti-terrorism priority. Obama will also lead federal efforts to look for a safe, long-term disposal solution based on objective, scientific analysis. In the meantime, Obama will develop requirements to ensure that the waste stored at current reactor sites is contained using the most advanced dry-cask storage technology available. Barack Obama believes that Yucca Mountain is not an option. The U.S. government has spent billions of dollars on Yucca Mountain, and yet there are still significant questions about whether nuclear waste can be safely stored there.

(3) Invest in Key Technology Deployment

- **Clean Technologies Deployment Venture Capital Fund:** Barack Obama will create a Clean Technologies Deployment Venture Capital Fund to fill a critical gap in U.S. technology development. This Fund will partner with existing investment funds and our National Laboratories to ensure that promising technologies move beyond the lab and are commercialized in the U.S. The risks and associated costs of commercializing a new energy technology often prevent critically important technologies from ever seeing the light of day. The gap between the lab and the marketplace is sometimes referred to as the 'Valley of Death,' because many technologies enter but few ever make it out the other side because of the prohibitive costs of building the first commercial-scale facility that processes that energy source. Currently, U.S. venture capital funding is doing an effective job promoting research and development stage, but far too often,

technologies invented here in the U.S. such as wind turbines, solar panels, and compact fluorescent bulbs are commercialized overseas and then sold back to American consumers;

- The Clean Technologies Deployment Venture Capital Fund will be modeled on the highly successful Central Intelligence Agency In-Q-Tel program. In-Q-Tel is a non-profit, independently-managed venture capital fund led by seasoned venture capital professionals to develop new intelligence technologies for the CIA. The first five years of In-Q-Tel funding led to 22 new technologies being used in 40 government programs. Coupled with an Obama Administration's increased investment in renewable energy research and development, this Fund's efforts to quickly deploy new technologies like cellulosic ethanol, carbon capture and sequestration, and other clean technologies like bio-based plastics will help ensure that the American economy and environment benefit from clean technologies in the next few years, as opposed to the next several decades. Obama will invest \$10 billion in this fund for five years, and reinvest profits back into the fund;
- Production Tax Credit: Obama will also extend the federal Production Tax Credit (PTC) for 5 years to encourage the production of renewable energy; and
- Convert Manufacturing Centers into Clean Technology Leaders: America boasts the highest-skilled manufacturing workforce in the world and advanced manufacturing facilities that have powered economic growth in America for decades. Barack Obama believes that America is at a competitive advantage when it comes to building the high-demand technologies of the future, and he will help nurture America's success in clean technology manufacturing by establishing a federal investment program to help manufacturing centers modernize and help Americans learn the new skills they may need to produce green products. Along with the increased federal investment in the research, development and deployment of advanced technologies, this investment will help spur sustainable economic growth in communities across the country.

Setting Market Standards to Allow Investment and Innovation

Obama will also establish new national standards to ensure less carbon intensive energy is used in the U.S. energy supply. He will:

- **Establish a National Low Carbon Fuel Standard:** Barack Obama will establish a National Low Carbon Fuel Standard (LCFS) to speed the introduction of low-carbon non-petroleum fuels. The standard, which Obama introduced in the U.S. Senate with Tom Harkin (D-IA), requires fuels suppliers to reduce the carbon their fuel emits by 10% by 2020. The Obama plan will help incentivize increased private sector investment in advanced biofuels and has a sustainability provision to ensure that this boom in U.S. biofuels production does not come at the expense of environmental conservation. The standard will reduce lifecycle greenhouse gas emissions 10% by 2020. The LCFS is an important mechanism in ensuring that our efforts to reduce our oil dependence also reduce carbon emissions.
- **Require 25% of Electricity to Come from Renewable Sources by 2025:** Barack Obama will establish a 25% federal Renewable Portfolio Standard (RPS) to require that 25% of electricity consumed in the U.S. is derived from clean, sustainable energy sources, like solar, wind and geothermal by 2025. This requirement will spur significant private sector investment in renewable sources of energy and create thousands of new American jobs, especially in rural areas. As an Illinois state senator, Obama cosponsored a measure to create an RPS in Illinois. And recently, Illinois signed into law a 25% RPS by 2025 measure modeled on Obama's state senate RPS efforts:
 - **Ensure the Federal Government Uses Renewable Sources of Electricity:** Currently, there is a federal goal to obtain 7.5% of federal government electricity demands from renewable sources by 2013. Barack Obama believes that the federal government, the nation's largest consumer of energy, must do better. As president, Obama will ensure that at least 30% of the federal government's electricity comes from renewable sources by 2020. This effort will help create a reliable demand for renewable energy production, thereby incentivizing the private sector to increase its investment in renewable energy production.

Investing in Energy Efficiency

Improving energy efficiency is the fastest, cheapest most cost-effective method to reducing greenhouse gas emissions, and it results in significant savings for our government, economy and consumers. For example, since DuPont implemented an energy efficiency program in 1990, it has cut its energy bills by \$3 billion, reduced pollution by 72% and increased production activities by over 30%. Barack Obama will set a bold national goal of reducing the energy intensity of the U.S. economy 50% by 2030.

Make the Federal Government the Leader in Saving Electricity: As the nation's largest consumer of electricity, Barack Obama believes that the federal government should take the lead in reducing its energy consumption. Obama will:

- **Make Federal Buildings More Efficient:** Obama will ensure that all new federal buildings are zero emissions by 2025, and to help reach that goal, he will ensure that all new federal buildings are 40% more efficient within the next five years. Obama will also place retrofitting existing federal buildings at a top priority, and seek to improve their efficiency by 25% within five years; and
- **Overhaul Federal Efficiency Codes:** The current Department of Energy has missed 34 deadlines for setting updated appliance efficiency standards, which has cost American consumers millions of dollars in unrealized energy savings. Obama will overhaul this process for appliances and provide more resources to his Department of Energy so it implements regular updates for efficiency standards. He will also work with Congress to ensure that it continues to play a key role in improving the U.S. national efficiency codes.

Use Innovative Measures to Dramatically Improve Efficiency of Buildings: Buildings account for nearly 40% of carbon emissions in the United States today and carbon emissions from buildings are expected to grow faster than emissions from other major parts of our economy. It is expected that 15 million new buildings will be constructed between today and 2015. Barack Obama believes that the U.S. has both an opportunity and a responsibility to make new and existing buildings more efficient consumers of electricity.

- **Set Building Efficiency Goals:** Barack Obama will establish a goal of making all new buildings carbon neutral, or produce zero emissions, by 2030. He'll also

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- establish a national goal of improving new building efficiency by 50% and existing building efficiency by 25% over the next decade to help us meet the 2030 goal;
- **Establish a Grant Program for Early Adopters:** Obama will create a competitive grant program to award those states and localities that take the first steps in implementing new building codes that prioritize energy efficiency, and provide a federal match for those states with leading-edge public benefits funds that support energy efficiency retrofits of existing buildings;
 - **Flip Incentives to Energy Utilities:** Obama will work to “flip” incentives to state and local utilities by ensuring companies get increased profits for improving energy efficiency, rather than higher energy consumption. Currently, utilities make profits when consumers purchase more energy, and when consumers purchase energy at peak times when energy prices are higher because of greater demands on the system. This decoupling of profits from increased energy usage will incentivize utilities to partner with consumers and the federal government to reduce monthly energy bills for families and businesses. Obama will provide early adopter grants and other financial assistance from the federal government to states that implement this energy efficient policy; and
 - **Expand Federal Efficiency Grants:** Obama will also expand federal grant programs to help states and localities build more efficient public buildings, including libraries, schools and police stations that adopt aggressive green building provisions like those provided by the Leadership in Energy and Environmental Design (LEED) program of the U.S. Green Buildings Council. Obama will also partner with the private sector to ensure that more companies and building contractors are aware of the short-term and long-term benefits of building “green.”

Phase out Traditional Inefficient Light Bulbs: For over 125 years, Americans have used the same incandescent light bulb technology, which consumes much more energy for the same results as newer lighting technologies. Barack Obama supports the effort led by Senate Energy and Natural Resources Chairman Jeff Bingaman (D-NM) to update federal lighting efficiency standards to ensure that new lighting technologies are phased into the marketplace. As president, Obama will implement legislation that phases out traditional incandescent light bulbs by 2014. This measure alone will save American consumers \$6 billion per year on monthly electricity bills and will save 88 billion

kilowatt hours of electricity per year. By 2030, this change will result in greenhouse gas reductions of nearly 28 million tons of carbon.

Invest in a Digital Smart Grid: Like other pieces of infrastructure, such as roads and bridges our energy grid is outdated and inefficient, resulting in \$50-100 billion dollar losses to the U.S. economy each year. The 2003 East Coast blackout alone resulted in a \$10 billion economic loss. Like President Eisenhower did with the interstate highway system, Barack Obama will pursue a major investment in our national utility grid to enable a tremendous increase in renewable generation and accommodate 21st century energy requirements, such as reliability, smart metering, and distributed storage. Obama will invest federal money to leverage additional state and private sector funds to help create a digitally connected power grid. Creating a smart grid will also help insulate against terrorism concerns because our grid today is virtually unprotected from terrorists. Installing a smart grid will help consumers produce electricity at home through solar panels or wind turbines, and be able to sell electricity back through the grid for other consumers and help consumers reduce their energy use during peak hours when electricity is more expensive. Obama will direct federal resources to the most vulnerable and congested areas and rural areas where significant renewable energy sources are located, as well as work toward national transformation of our energy grid in partnership with states and utilities.

Strengthening of Oil Security and Ensuring Energy Independence

Not since the 1970s has America's national security been so threatened by its energy insecurity, and, as the nation has learned the hard way over the past seven years, achieving energy security in the 21st century requires far more than simply expending our economic and political resources to keep oil flowing steadily out of unstable and even hostile countries and regions.

Rather, energy security requires stemming the flow of money to oil rich regimes that are hostile to America and its allies; it requires combating climate change and preparing for its impacts both at home and abroad; it requires making international energy markets work for us and not against us; it requires standing up to the oil companies that spend hundreds of millions of dollars on lobbying and political contributions; it requires that the U.S. address nuclear safety, waste, and proliferation challenges around the world; and more.

Obama will halt this dangerous trend, and take the necessary steps to achieving energy independence. Obama will make it a top priority of his climate change and energy independence agenda to reduce oil consumption by at least 35%, or 10 million barrels per day, by 2030. This will more than offset the equivalent of oil the U.S. is expected to import from OPEC nations in 2030. To meet this goal, the Obama plan will establish a National Low Carbon Fuel Standard, deploy advanced biofuels, repeal tax breaks for the oil and gas industry, and implement the following policies:

Increase Fuel Economy Standards: Obama has developed an innovative approach to double fuel economy standards within 18 years while protecting the financial future of domestic automakers. His plan, which will save nearly a half trillion gallons of gasoline and 6 billion metric tons of greenhouse gases by 2028, will establish concrete targets for annual CAFE increases while giving industry the flexibility to meet those targets. Obama's innovative approach broke through a 20 year deadlock in Congress and is the basis for bipartisan legislation that passed the Senate this year.

- **Provide Support for Domestic Automakers:** Obama's plan to raise fuel efficiency standards will also provide retooling tax credits and loan guarantees for domestic auto plants and parts manufacturers, so that the new fuel-efficient cars can be built in the U.S. rather than overseas. This measure will strengthen the U.S. manufacturing sector and help ensure that American workers will build the high-demand cars of the future.

Invest in Developing Advanced Vehicles: As a U.S. senator, Barack Obama has led efforts to jumpstart federal investment in advanced vehicles, including combined plug-in hybrid/flexible fuel vehicles, which have the capability of getting well over 250 miles per gallon of gasoline. As president, Obama will continue this leadership by investing in advanced vehicle technology that utilizes advanced lightweight materials and new engines. The increased federal funding will leverage private sector funds to bring plug-in hybrids and other advanced vehicles to American consumers. Obama will also expand consumer tax incentives by lifting the 60,000-per-manufacturer cap on buyer tax credits to allow more Americans to buy ultra-efficient vehicles.

Build Biofuel Distribution Infrastructure: As the percent of biofuels in gasoline increases over 10%, conventional fueling equipment will need to be replaced with pumps and tanks capable of handling higher biofuel blends. Barack Obama has been one of the strongest proponents in Congress for increasing the national supply of home-grown American ethanol and biodiesel. Obama is the only Democratic presidential candidate to cosponsor and actively campaign to establish the nation's first federal Renewable Fuel Standard, which is now law. Obama also led the successful effort to make gas stations eligible for a tax credit to cover 30% of the costs of installing E85 ethanol refueling pumps. Obama will build on those efforts to improve the production, supply and distribution of advanced biofuels like cellulosic ethanol and biodiesel.

- **Mandate All New Vehicles are Flexible Fuel Vehicles:** Barack Obama believes that all new vehicles sold in the U.S. should be flexible fuel vehicles (FFVs), which mean they can run on biofuel blends like E85. Obama will work with Congress and auto companies to ensure that all new vehicles have FFV capability by the end of his first term in office; and
- **Increase Renewable Fuel Standard:** As a leader in the effort to establish the nation's first Renewable Fuel Standard, Obama understands firsthand the importance of continuing to increase the supply of biofuels in our national fuel supply. Obama believes it is imperative that Congress adopt the Senate-passed proposal to increase the RFS to 36 billion gallons by 2022. As president, Obama will seek to surpass these targets and establish a requirement to produce at least 60 billion gallons of biofuels, including cellulosic ethanol and biodiesel, by 2030.

Build More Livable and Sustainable Communities: Over the longer term, we know that the amount of fuel we will use is directly related to our land use decisions and

development patterns, much of which has been organized around the principle of cheap gasoline. Barack Obama believes that we must move beyond our simple fixation of investing so many of our transportation dollars in serving drivers and that we must make more investments that make it easier for us to walk, bicycle and access other transportation alternatives.

- **Reform Federal Transportation Funding:** As president, Barack Obama will re-evaluate the transportation funding process to ensure that smart growth considerations are taken into account. Obama will build upon his efforts in the Senate to ensure that more Metropolitan Planning Organizations create policies to incentivize greater bicycle and pedestrian usage of roads and sidewalks, and he will also re-commit federal resources to public mass transportation projects across the country. Building more livable and sustainable communities will not only reduce the amount of time individuals spent commuting, but will also have significant benefits to air quality, public health and reducing greenhouse gas emissions;
- **Require States to Plan for Energy Conservation:** Current law simply asks governors and their state Departments of Transportation to “consider” energy conservation as a condition of receiving federal transportation dollars. As president, Obama will require governors and local leaders in our metropolitan areas to make “energy conservation” a required part of their planning for the expenditure of federal transportation funds; and
- **Level Employer Incentives for Driving and Public Transit:** The federal tax code rewards driving to work by allowing employers to provide parking benefits of \$205 per month tax free to their employees. The tax code provides employers with commuting benefits for transit, carpooling or vanpooling capped at \$105 per month. This gives drivers a nearly 2:1 advantage over transit users. Obama will reform the tax code to make benefits for driving and public transit or ridesharing equal.

Combat Climate Change around the World

The United States has historically been the largest emitter of greenhouse gases in the world —accounting for about one-fifth of the global total — but emissions are growing fastest among the rapidly developing countries. Just this year, China may have passed the U.S. as the world’s largest greenhouse gas emitting nation. Unfortunately, the Bush

administration has failed to engage the developing world just as it has failed to adopt a meaningful policy at home. Making the U.S. a leader in combating climate change will require the United States to get its own house in order; re-engage and re-energize international agreements to reduce greenhouse gas pollution; and most importantly do so with the urgency this brewing crisis demands.

Re-Engage with the U.N. Framework Convention on Climate Change (UNFCCC):

As the world prepares for the post-2012 phase of the UNFCCC, the United States must regain its leadership role in multiple forums to negotiate effective climate agreements. This requires re-engagement with the diplomatic efforts under the U.N. Framework Convention on Climate Change. The UNFCCC process is the main international forum dedicated to addressing the climate problem and an Obama administration will work constructively within it.

Create New Forum of Largest Greenhouse Gas Emitters: President Bush recently invited world leaders of the 15 largest emitters of greenhouse gases to a two-day conference, yet he failed to show up with any binding domestic commitments or funding for international efforts to combat climate change. Not surprisingly, these world leaders criticized the U.S. commitment to climate change and missed an opportunity to join other countries with a serious plan to tackle this challenge.

Barack Obama will take seriously the U.S.'s leadership role in combating climate change. Obama will signal to the world the U.S. commitment to climate change leadership by implementing an aggressive domestic cap-and-trade program coupled with increased investments in clean energy development and deployment. Obama will build on our domestic commitments by creating a negotiating process that involves a smaller number of countries than the nearly 200 countries in the current Kyoto system. Obama will create a Global Energy Forum – based on the G8+5, which included all G-8 members plus Brazil, China, India, Mexico and South Africa – of the world's largest emitters to focus exclusively on global energy and environmental issues.

Maintaining a standing international body focused on these issues will give a forum for all of the major emitters – past, present and future – to discuss efforts to combat climate change. In addition, it will give the U.S. and its allies regular opportunities to exert maximum pressure on China and India to do their part and make real commitments of their own. Obama believes it is important to make clear that the current Bush voluntary approach allows the biggest emitters to escape all international pressure to be a “responsible stakeholder” in the global environment.

This Global Energy Forum will complement – and ultimately merge with – the much larger negotiation process underway at the UN to develop a post-Kyoto framework. On a technical level, it will also allow facilitate technology transfer, joint international research, and, importantly, the numerous large scale international demonstration projects that must be embarked upon immediately in order to make these technologies economically appealing alternatives.

Transfer American Technology to the Developing World to Fight Climate Change:

As nations around the world come together to combat global warming, the market for low-carbon energy products will grow significantly. Obama will create a Technology Transfer program within the Department of Energy dedicated to exporting climate-friendly technologies, including green buildings, clean coal and advanced automobiles, to developing countries to help them combat climate change. Obama will allow U.S. emitters subject to the cap-and-trade mandates to offset some of their emissions by investing in low carbon energy projects in the developing world. This will help ensure that emissions in both the U.S. and the developing world are reduced.

Cooperate with Oil Importers to Reduce Demand: As new large oil importers come on the market, the United States is at the mercy of an ever more volatile oil market. Obama believes the U.S. should use existing organizations, like NATO, to make energy security a shared global goal. We should take steps to engage the largest new consumers, China and India, including by inviting them to join the International Energy Agency. Though they are not OECD countries, a formalized relationship – where we work together on common analysis and emergency response mechanisms – for them with the International Energy Agency (IEA) is imperative. China has completed the first stage of its strategic petroleum reserves and it is in our interest to see them complete that process so that they no longer can freeload on the strategic reserves of IEA members in times of tight oil markets, as was the case after Hurricane Katrina.

Ensure the United States Works with Developing Countries on Climate Change: The world's poorest countries are already suffering the impact of climate change through drought, famine and water scarcity, even though they are not responsible for the greenhouse gas pollution causing the climate to change. The Obama Administration will permit international offsets under the carbon cap to promote the transfer of low carbon energy to developing countries. An Obama administration will also ensure that U.S. foreign assistance is wisely invested in projects designed to help developing countries adapt to a changing climate.

Confront Deforestation and Promote Carbon Sequestration: A comprehensive strategy to combat global warming must address tropical deforestation which accounts for approximately 20% of global greenhouse gas emissions. As forests are cut down, burned and converted to other uses, carbon stored in wood, leaves, and soils are released into the atmosphere. Reducing rates of tropical deforestation will not only slow greenhouse gas emissions but will also protect the livelihoods of local people and the abundance of biodiversity inextricably linked to those forests. By offering incentives to maintain forests and manage them sustainably, the United States can play a leadership role in dealing with climate change. In addition we must develop domestic incentives that reward forest owners, farmers, and ranchers when they plant trees, restore grasslands, or undertake farming practices that capture carbon dioxide from the atmosphere. Encouraging these efforts will also provide improve water quality and restore natural areas for wildlife and recreation.

Boosting the Developments of Hybrid Vehicles

The transportation sector accounts for two-thirds of United States oil consumption. Wide scale deployment of hybrid and advanced fuel efficient vehicles could slash U.S. demand for overseas oil. As the demand for fuel efficient cars increases globally, foreign manufacturers are filling the orders by increasing production of efficient cars overseas while the U.S. industry continues to suffer from disappointing sales.

The U.S. automotive industry cannot afford not to adapt. Yet, with record losses it cannot afford to make the investments that are required to adapt. The answer is not to sit idly by.

The Big 3 automakers rightly argue that their retiree health care costs, expected to be \$6.7 billion in 2005, hurt their ability to invest and compete. Health care costs account for \$1,500 of every GM car. This is a direct result of our inefficient and outdated health care system.

The U.S. government should pay a portion of the automakers' retiree health care costs in exchange for those companies' manufacturing fuel efficient cars in the United States. A new trust fund would reinsure a portion of legacy health care costs of domestic manufacturers. The Secretary of Health and Human Services would design a reinsurance or stop loss program, focused on the pre-Medicare population, that would reduce overall spending on retiree health care by 10% from 2006-2010 when those costs are expected to peak. The companies that participate in the program would invest at least 50% of their

health care savings into manufacturing fuel efficient cars, such as hybrids and advanced diesel vehicles in the United States, or helping domestic parts suppliers retool their manufacturing plants to produce advanced parts. These investments will help domestic auto manufacturers and parts suppliers meet the growing demand for fuel efficient vehicles and prepare them for strengthened CAFÉ standards.

COST: \$670 million per year through trust fund. Funds would be paid for by clarifying, codifying and enforcing the economic substance doctrine as introduced in S.1565.

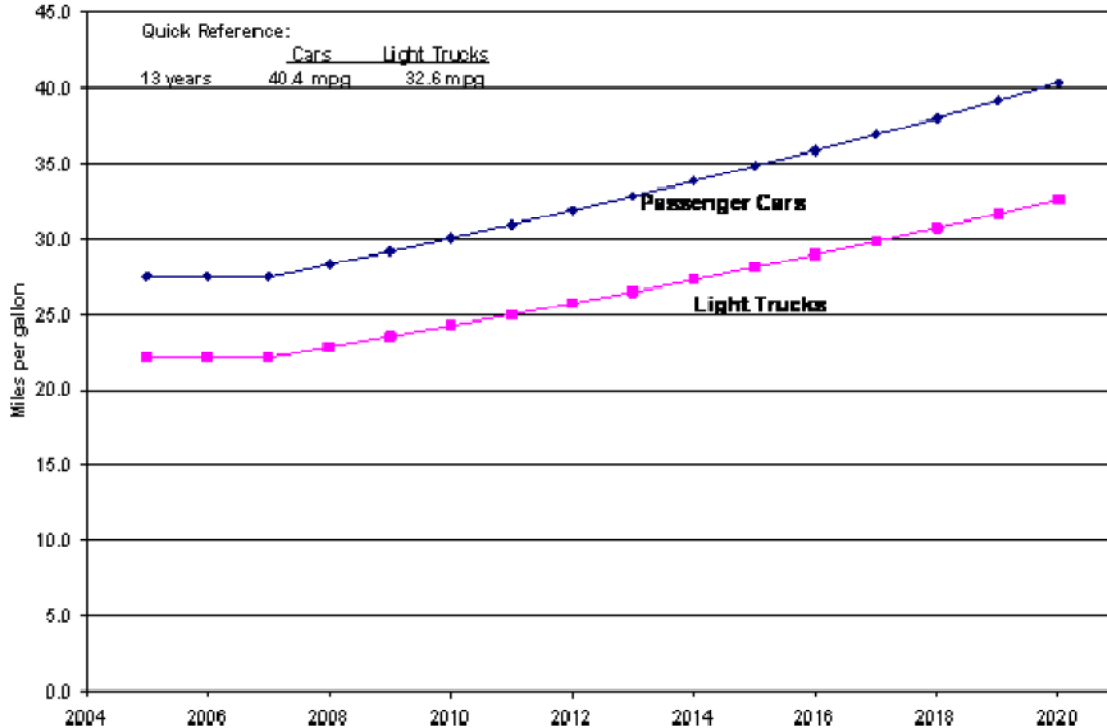
Adopting a New Size-based Classification System for Fuel Economy Standards

CAFE standards have essentially remained unchanged since 1985 despite significant gains in technology that allow for thousands of highly fuel-efficient vehicles to be on American roads today. Senator Obama calls for strengthening existing CAFÉ standards and extending CAFÉ requirements to larger light trucks, such as Hummers, that are currently exempt from federal fuel economy standards.

The National Highway Traffic Safety Administration (NHTSA) has already taken an important step in reforming CAFÉ by adopting a new size-based classification for fuel economy standards. Senator Obama would build on that new approach and modestly increase CAFÉ standards annually by 3% from 2008 to 2020. Automobile manufacturers already increase horsepower annually on a percentage basis. This gradual, long-term approach would shift the industry's emphasis from increased horsepower to increased fuel economy (better mileage), producing significant oil savings for consumers and the American economy. A 3% annual increase in CAFÉ standards starting in 2008 would result in an average of 40.4 mpg for passenger vehicles by 2020, and for light trucks, an average mpg of 32.6 by 2020. Auto companies that are not able to meet the new CAFÉ requirements would be able to purchase compliance credits from NHTSA. NHTSA would also be directed to extend CAFÉ standards to include 8500 – 10,000 GVWR light trucks, a class that includes Hummers.

The Obama proposal for increasing CAFÉ standards:

Figure 1: U.S. Passenger Vehicle Fuel Economy with 3% Annual Improvement (2008-2020)



Increasing the Availability of Renewable Fuels

Senator Obama is committed to increasing the availability of renewable fuels grown by American farmers. The Senator has already worked to bring funding for E-85 (fuels blended with 85% ethanol and 15% gasoline) by sponsoring legislation to give up to a \$30,000 tax credit for gas stations to build E-85 pumps, and co-sponsoring legislation to create a federal Renewable Fuels Standard (RFS) and expand bio-fuels research.

In addition to those efforts, Senator Obama will:

- Encourage federal administrators to enforce the Energy Policy Act of 1992 and President Bush's Executive Order of 2001 requiring all federal agencies to use E-85 in government fleets where available;
- Introduce legislation that requires the auto companies to only get credit for producing flexible fuel vehicles if they let consumers know about the technology.

Many consumers do not even know their cars have the flexible fuel vehicle (FFV) capability and never fill up their cars with E-85. The Obama proposal would require that manufacturers only receive the CAFÉ credit if they publicize the alternative fuel capability of their product – through, for example, informational pamphlets, large stickers on the vehicles, and/or by selling the vehicle with a full tank of E-85;

- Require that all cars sold in the United States by 2010 are flexible fuel vehicles. The estimated cost of producing an FFV is only \$100/car and car companies receive CAFÉ credit for producing them. As a result, many car companies are already making their new product lines FFVs; and
- Pressure branded gas stations to install E-85 pumps in wake of reports that some industry leaders are actively dissuading E-85 sales.

Developing Clean Coal Technologies Further

Worldwide coal use expected to triple over the next 30 years, and the United States should lead the world in utilizing clean coal technology. Senator Obama believes that the Energy Policy Act of 2005 established an important federal commitment to helping U.S. scientists' further develop and deploy clean coal technologies. The Senator is committed to expanding those efforts to encompass not only integrated gasification combined cycle (IGCC) technology deployment, but also carbon sequestration and other innovative clean coal technology research and development.

Boosting the Role of the Low-Income Home Energy Assistance Program

In the wake of Hurricane Katrina and reduced oil refining capacity, the federal government must step up its commitment to assisting low-income families who will face an estimated 31% rise in home heating costs this winter. The federal Low-Income Home Energy Assistance Program (LIHEAP), which helps low-income households pay their home heating and cooling expenses, cannot afford to meet this year's increased electricity and natural gas prices. Senator Obama urges the President and Congressional leadership to include \$900 million dollars in emergency funding for LIHEAP, the Low Income Home Energy Assistance Program, to assist the neediest of American families.

Providing Emergency Energy Rebate

Barack Obama and Joe Biden will require oil companies to take a reasonable share of their record-breaking windfall profits and use it to provide direct relief worth \$500 for an individual and \$1,000 for a married couple. The relief would be delivered as quickly as possible to help families cope with the rising price of gasoline, food and other necessities. The rebates would be fully paid for with five years of a windfall profits tax on record oil company profits. This relief would be a down payment on the Obama-Biden long term plan to provide middle-class families with at least \$1,000 per year in permanent tax relief.

The Obama-Biden energy rebates will: offset the entire increase in gas prices for a working family over the next four months; or pay for the entire increase in winter heating bills for a typical family in a cold-weather state. In addition, Barack Obama and Joe Biden have proposed setting aside a portion of a second round of fiscal stimulus to ensure sufficient funding for home heating and weatherization assistance as we move into the fall and winter months.

Promoting the Supply of Domestic Energy

With 3% of the world's oil reserves, the U.S. cannot drill its way to energy security. But U.S. oil and gas production plays an important role in our domestic economy and remains critical to prevent global energy prices from climbing even higher. There are several key opportunities to support increased U.S. production of oil and gas that do not require opening up currently protected areas.

A “Use it or Lose It” Approach to Existing Leases: Oil companies have access to 68 million acres of land, over 40 million offshore, which they are not drilling on. Drilling in open areas could significantly increase domestic oil and gas production. Barack Obama and Joe Biden will require oil companies to diligently develop these leases or turn them over so that another company can develop them.

Promote the Responsible Domestic Production of Oil and Natural Gas: Barack Obama and Joe Biden will set up a process for early identification of any infrastructure obstacles/shortages or possible federal permitting process delays to drilling in:

- Bakken Shale in Montana and North Dakota which could have as much as 4 billion recoverable barrels of oil according to the U.S. Geological Survey;

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- Unconventional natural gas supplies in the Barnett Shale formation in Texas and the Fayetteville Shale in Arkansas; and
 - National Petroleum Reserve-Alaska (NPR-A) which comprises 23.5 million acres of federal land set aside by President Harding to secure the nation's petroleum reserves for national security purposes.

Prioritize the Construction of the Alaska Natural Gas Pipeline: Barack Obama and Joe Biden will work with stakeholders to facilitate construction of the pipeline. While this pipeline was proposed in 1976, and Congress authorized up to \$18 billion in loan guarantees for this project in 2004, there has been no progress in building this critical energy infrastructure under the Bush Administration. The planned pipeline would have a daily capacity of 4 billion cubic feet of natural gas, or almost 7% of current U.S. consumption. Not only is this pipeline critical to our energy security, it will create thousands of new jobs.

Getting More from our Existing Oil Fields: Nationally, experts believe that up to 85 billion barrels of technically recoverable oil remains stranded in existing fields. Enhanced oil recovery (EOR) using carbon dioxide offers an immediate- to medium-term opportunity to produce more oil from existing fields. And in the EOR process, large quantities of CO₂ can be sequestered underground, reducing global warming pollution. Under an Obama Administration, we will pass a carbon cap-and- trade-bill, which will incentivize emitters to send their CO₂ to old oil fields for EOR, thereby providing economic benefits while also stimulating additional domestic oil and gas production. To speed that process, we will map all stationary CO₂ sources and develop a database to help industry calculate the most cost-effective oil field destination for each source's CO₂.

Diversification of Energy Sources

There are no silver bullet solutions to the U.S.' energy crises. Our economy, security and environment will be best served through a sustained effort to diversify energy sources. Barack Obama and Joe Biden will:

Require 10% of Electricity to Come from Renewable Sources by 2012: Barack Obama and Joe Biden will establish a 10% federal Renewable Portfolio Standard (RPS) to require that 10% of electricity consumed in the U.S. is derived from clean, sustainable energy sources, like solar, wind and geothermal by 2012. Many states are already well on their way to achieving statewide goals and it's time for the federal government to provide

leadership for the entire country to support these new industries. This national requirement will spur significant private sector investment in renewable sources of energy and create thousands of new American jobs, especially in rural areas. And Barack Obama and Joe Biden will also extend the federal Production Tax Credit (PTC) for 5 years to encourage the production of renewable energy.

Develop and Deploy Clean Coal Technology: Carbon capture and storage technologies hold enormous potential to reduce greenhouse gas emissions as we power our economy with domestically produced and secure energy. As a U.S. Senator, Obama has worked tirelessly to ensure that clean coal technology becomes commercialized. An Obama administration will provide incentives to accelerate private sector investment in commercial scale zero-carbon coal facilities. In order to maximize the speed with which we advance this critical technology, Barack Obama and Joe Biden will instruct DOE to enter into public private partnerships to develop 5 “first-of-a-kind” commercial scale coal-fired plants with carbon capture and sequestration.

Safe and Secure Nuclear Energy: Nuclear power represents more than 70% of our non-carbon generated electricity. It is unlikely that we can meet our aggressive climate goals if we eliminate nuclear power as an option. However, before an expansion of nuclear power is considered, key issues must be addressed including: security of nuclear fuel and waste, waste storage, and proliferation. Barack Obama introduced legislation in the U.S. Senate to establish guidelines for tracking, controlling and accounting for spent fuel at nuclear power plants. To prevent international nuclear material from falling into terrorist hands abroad, Obama worked closely with Sen. Dick Lugar (R-IN) to strengthen international efforts to identify and stop the smuggling of weapons of mass destruction. As president, Obama will make safeguarding nuclear material both abroad and in the U.S. a top anti-terrorism priority. In terms of waste storage, Barack Obama and Joe Biden do not believe that Yucca Mountain is a suitable site. They will lead federal efforts to look for safe, long-term disposal solutions based on objective, scientific analysis. In the meantime, they will develop requirements to ensure that the waste stored at current reactor sites is contained using the most advanced dry-cask storage technology available.

Investing in a Smart Grid

Achieving these aggressive energy efficiency goals will require significant innovation in the way we transmit electricity and monitor its use. Barack Obama and Joe Biden will pursue a major investment in our national utility grid using smart metering, distributed storage and other advanced technologies to accommodate 21st century energy

requirements: greatly improved electric grid reliability and security, a tremendous increase in renewable generation and greater customer choice and energy affordability. They will establish a Grid Modernization Commission to facilitate adoption of Smart Grid practices across the nation's electricity grid to the point of general adoption and ongoing market support in the U.S. electric sector. They will instruct the Secretary of Energy to: (1) establish a Smart Grid Investment Matching Grant Program to provide reimbursement of one-fourth of qualifying Smart Grid investments; (2) conduct programs to deploy advanced techniques for managing peak load reductions and energy efficiency savings on customer premises from smart metering, demand response, distributed generation and electricity storage systems; and (3) establish demonstration projects specifically focused on advanced technologies for power grid sensing, communications, analysis, and power flow control, including the integration of demand-side resources into grid management.

Overall Improvements in the Electric Grid

Senator Obama would pursue improvements in the electric grid and has proposed using smart metering, distributed storage, and other technologies to improve electric grid reliability and security. He also has proposed establishing a Grid Modernization Commission to facilitate adoption of “Smart Grid” practices, as well as instructing the Secretary of Energy to establish a Smart Grid Investment Matching Grant Program that would reimburse one-fourth of qualifying investments in the “Smart Grid,” to deploy advanced techniques for managing peak load reductions and energy efficiency savings, and to establish demonstration projections focused on power grid sensing, communications, analysis, and power flow control, including integration of demand side resources into management of the grid. One specific regulatory change to implement electric grid improvements may be to strengthen Federal Energy Regulatory Commission (“FERC”) authority over transmission siting.

Energy Trading and Markets

As President, Senator Obama likely will take action to increase the level of regulation of energy trading and markets. These changes will include the appointment of like-minded Democrats to key roles at the FERC and other agencies. Senator Obama has proposed regulations to prevent and penalize speculation in the energy trading markets, including closing the so-called “Enron Loophole,” which exempts certain energy traders from Commodity Futures Trading Commission (“CFTC”) regulations applicable to exchange-traded commodities. Senator Obama has proposed requiring that all U.S. energy futures

be traded on regulated exchanges, that institutional investors participating in commodities futures markets provide disaggregated data, and that the CFTC investigate whether additional regulatory requirements (such as higher margin requirements and position limits) are necessary to eliminate excessive speculation. Senator Obama also has proposed working with other nations to harmonize trading regulations across borders and called on the Federal Trade Commission and Department of Justice to investigate manipulation in futures markets.

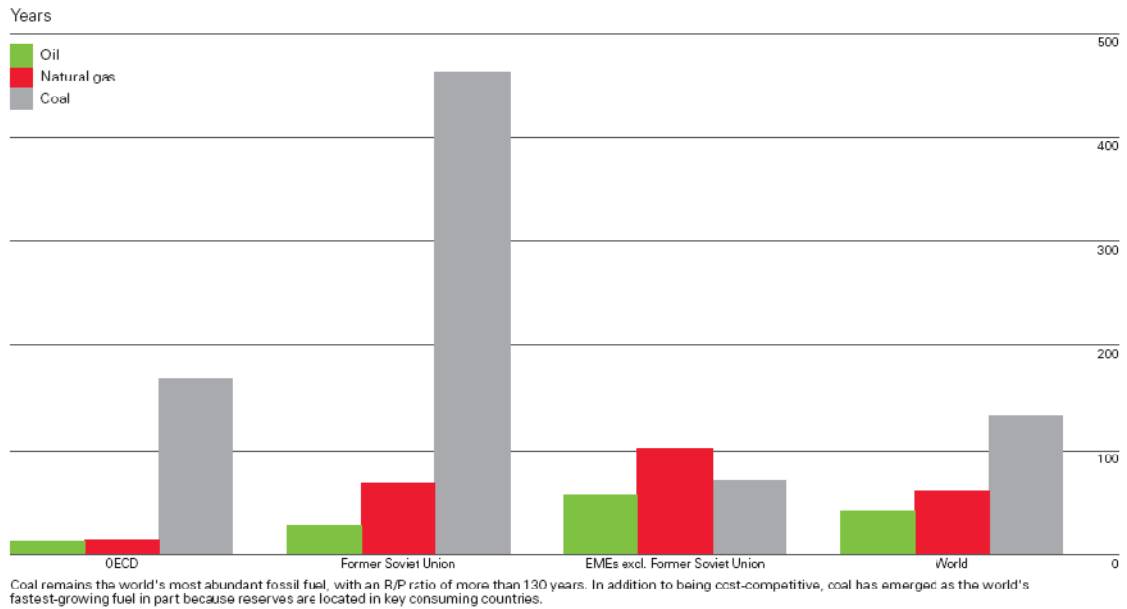
Obama vs. McCain Energy Plans Comparison

<u>Issue</u>	<u>Obama</u>	<u>McCain</u>	<u>21st Century Energy Initiative</u>
Renewable Energy Technology Development	Wants to invest \$15 billion / year into plug-in hybrids and other renewables - defined by government.	[1] \$2 billion / year into clean coal. [2] Tax credit approach. Remain in place to the point where renewable energy no longer merits the taxpayers' dollars	We must invest in our future in a project that is as large and strategic as the Manhattan, & Apollo Projects and Marshall Plan combined. This is a must-win, global game-changer!
Innovation	See above	\$300 million prize for battery technology development.	See above
Expand domestic oil & natural gas exploration and production	Wants Government to control where and how oil & gas companies explore and drill	Wants to lift restrictions - for oil and gas companies to drill where they can cost-effectively get at resources.	Short term: We must pull out all the stops and get off of Middle East and Venezeulan oil - ASAP!
ANWR Drilling	Same as above - in Alaska	Same as above - in Alaska	Same as above.
CAFÉ	For: Increase fuel economy standards 4% per year. Fund it with \$4 billion in re-tooling tax credits.	For: Addresses this through other means: Clean car challenge, battery technology innovation, flex-fuel vehicles & alcohol. No specifics.	
GHG reductions	Cap & trade: 80% below 1990 levels by 2050. Invest \$15 billion / year into renewables AND to federal land and wildlife managers to restore habitat, create wildlife corridors, etc., etc.	Cap & trade: 60% below 1990 levels by 2050	Implementing an increasing Carbon Tax over time will further encourage the deployment of low-carbon solutions.

<u>Issue</u>	<u>Obama</u>	<u>McCain</u>	<u>21st Century Energy Initiative</u>
Tap the Strategic Petroleum Reserve (SPR)	Wants to tap the SPR.	Does NOT want to tap the SPR.	If Obama taps into the strategic oil reserve, what happens after this is depleted? It's called "strategic" for a reason: In case of a national emergency. Like we're being invaded. Not "Gas is getting to be almost as high as it is in Europe."
Windfall Profits Tax	For: Will use money to pay for the \$500 per person "rebate".	Against: Will hinder investment in domestic exploration.	WPT is not the answer. We tried it, it failed. Don't we learn?
Cracking down on speculators	For: Want to crack down on speculators.	Clarify regulations and provide oversight: "so that they are just as clear and effective as the rules applied to stocks, bonds, and other financial instruments."	Let the free-hand of the market prevail. Create a situation where oil prices drive significantly lower due to innovation, not regulation.
Financial Rebate / Tax Holiday	Give each citizen \$500 to offset high gas prices. \$1000 / year (permanent). Pay for heating bill increases	Before: "gas tax holiday". Now: See other areas	No incentives to make oil addiction worse: We need to go in the opposite direction from both Obama and McCain: As part of a comprehensive 21st Century Energy Initiative, where all the stops are pulled out, an "Energy Independence Fee" of the weekly gas price variance will dampen demand as well as provide a fund for energy independence.
Tax breaks for purchase of new fuel-efficient cars	Wants a \$7,000 (+) tax credit for each and every customer who buys advanced technology vehicles.	Wants a \$5,000 tax credit for each and every customer who buys a zero carbon emission car	No tax breaks. Focus all monies into renewable energy technologies that completely break oil addiction and imports: Let the market decide how to reallocate scarce resources
Understanding that Electric Vehicles will require DOUBLING the # of power plants and transmission lines.	Does not discuss it in his plan	Does not discuss it in his plan	Fully aware of the grand challenge. Plan to obviate this coming challenge

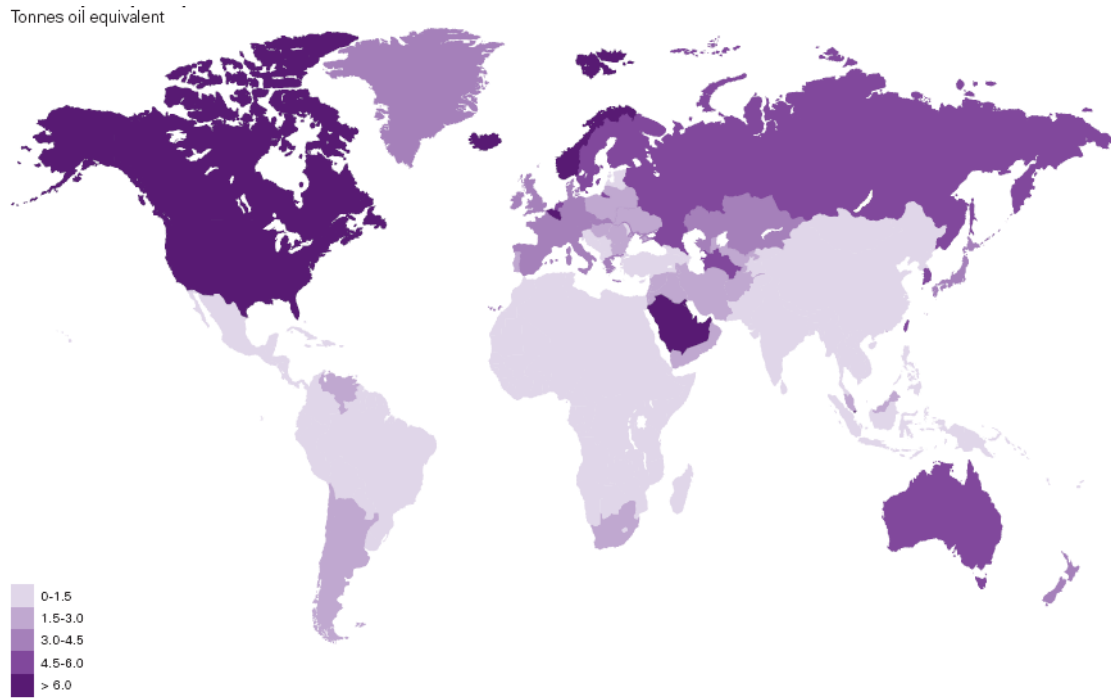
Appendix

Fossil Fuel Reserves-to-Production (R/P) Ratios at End of 2007



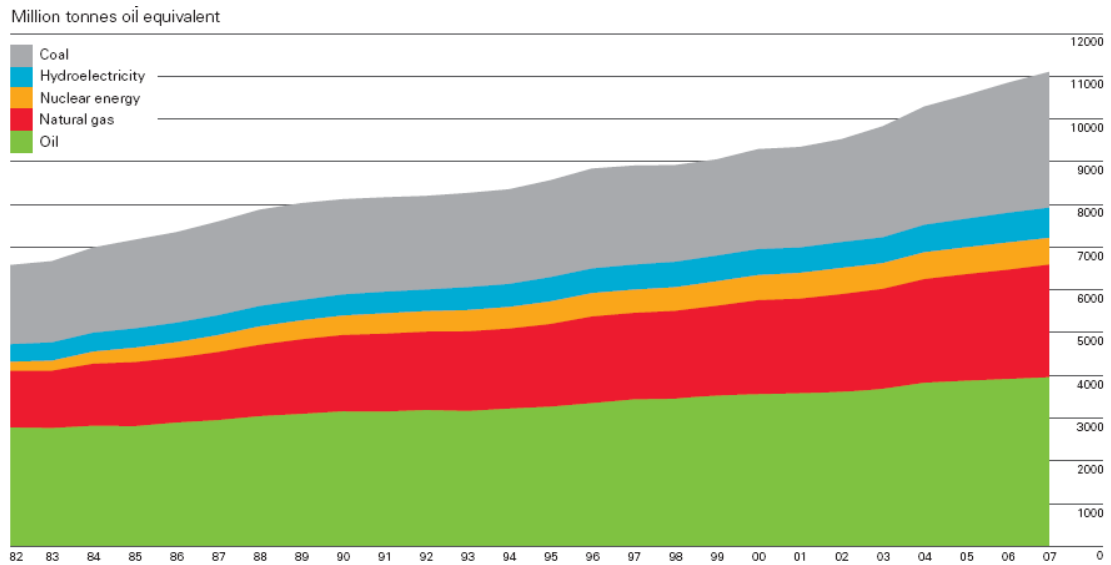
Source: BP Statistical Review of World Energy 2008

Global Oil Consumption per Capita in 2007



Source: BP Statistical Review of World Energy 2008

Global Energy Consumption 2007

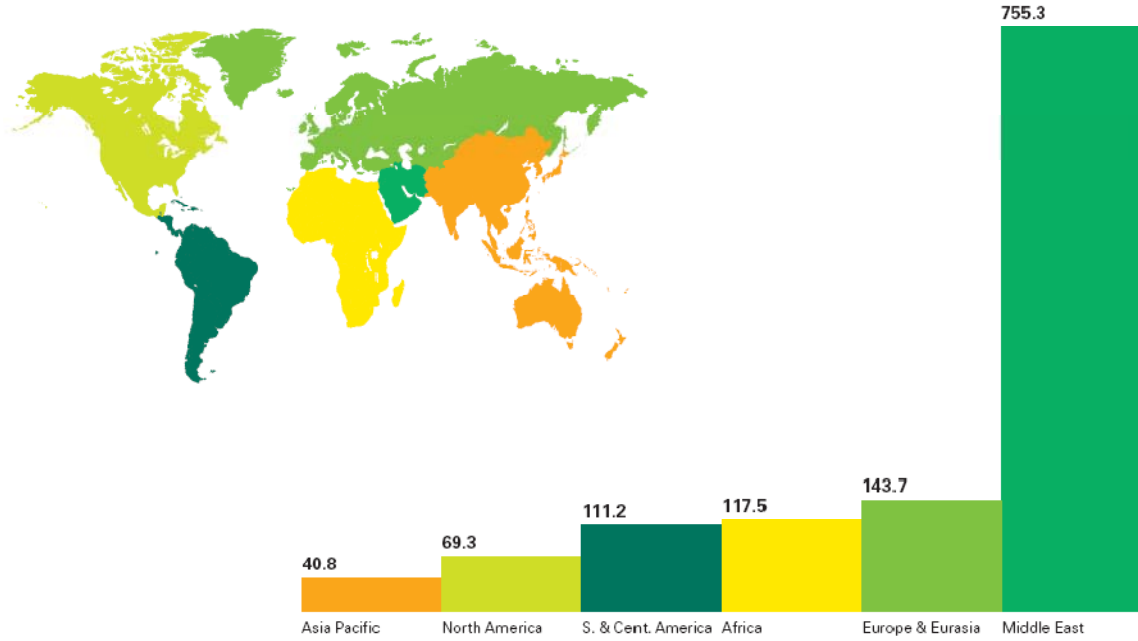


World primary energy consumption slowed in 2007, but growth of 2.4% was still above the 10-year average. Coal remained the fastest-growing fuel, but oil consumption grew slowly. Oil is still the world's leading fuel, but has lost global market share for six consecutive years, while coal has gained market share for six years.

Source: BP Statistical Review of World Energy 2008

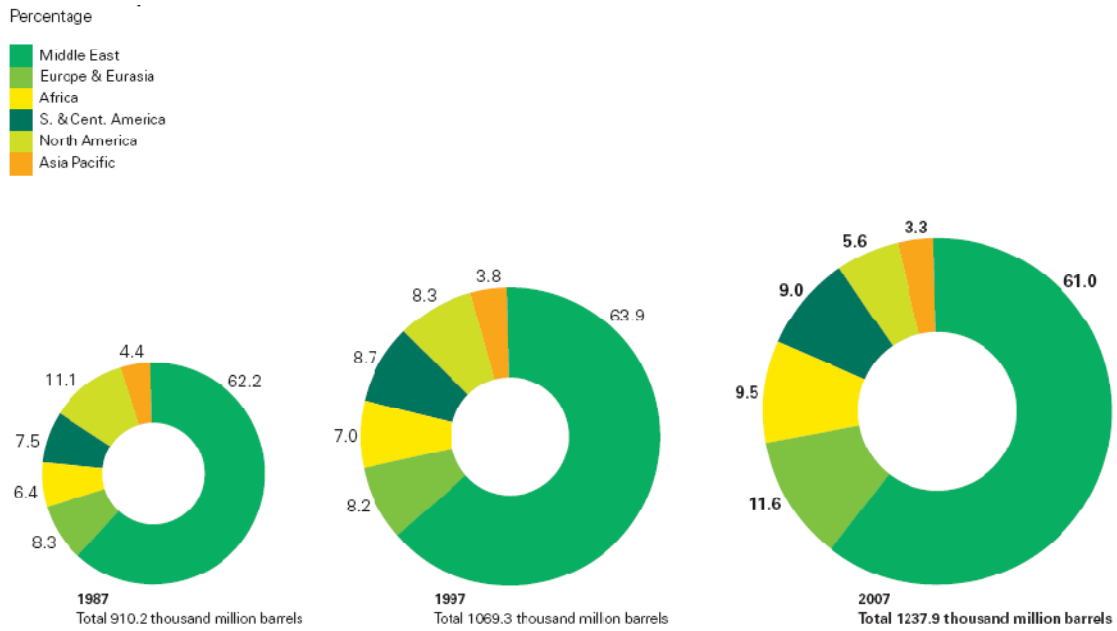
Proved Reserves of Oil at end of 2007

Thousand million barrels



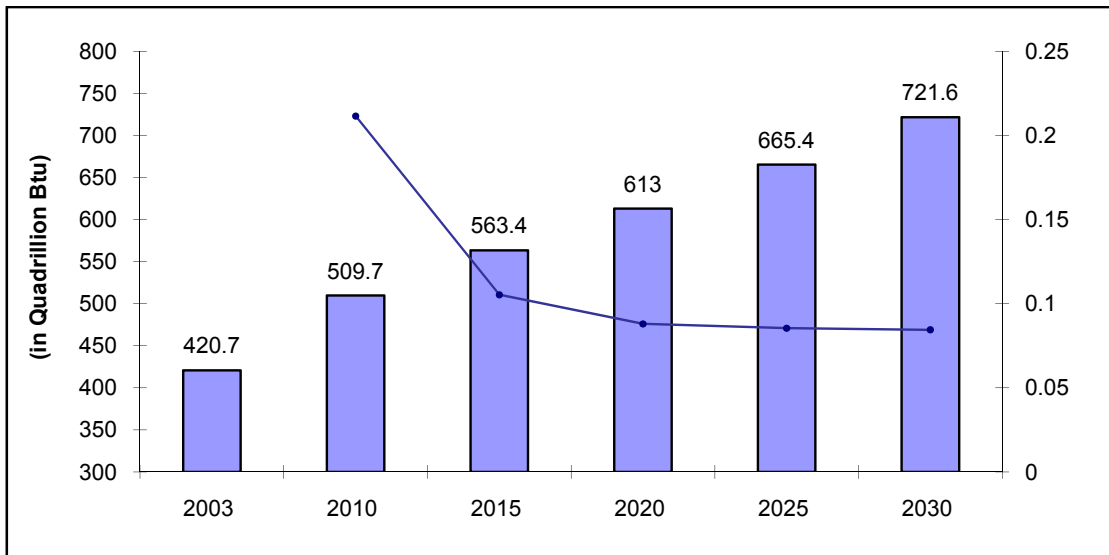
Source: BP Statistical Review of World Energy 2008

Distribution of Proved Reserves of Oil in 1987, 1997, and 2007



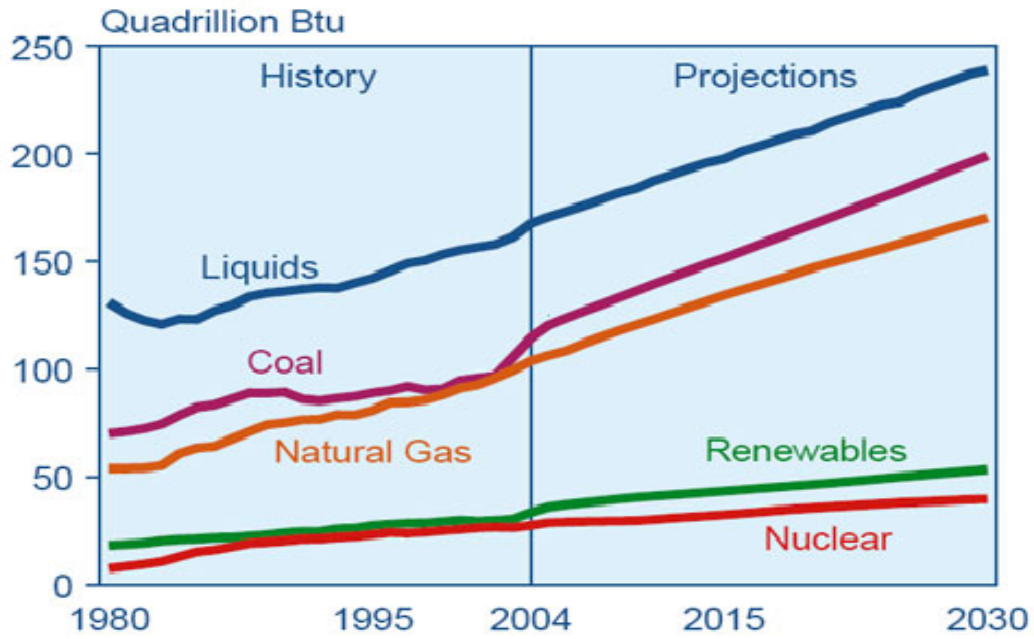
Source: BP Statistical Review of World Energy 2008

Global Energy Consumption Forecast (2003-2030)



Source: International Energy Agency

Global Energy Consumption Forecast by Fuel Type (1980-2030)



Source: Energy Information Administration, International Energy Agency

Glossary

Affirmative Action: The term used to describe a series of programs -- federal, state and local -- designed to compensate for discrimination. Most affirmative action programs pertain to employment, college admissions and contracting.

Ballot Initiative: A ballot initiative or measure, called "propositions" in some states, which allows voters to propose a legislative measure or state constitutional amendments. Ballot measures are an example of direct democracy in the United States. But they do not supercede the Constitution. Controversial ballot measures, in particular, are often litigated, and sometimes overturned by the courts.

Blanket Primary: A primary in which all the names of the candidates for all parties are on one ballot.

Blue Dog Democrat: Conservative, mostly Southern Democrats, who took their name from paintings by Louisiana artist George Rodrigue, who features a blue dog in a series of political situations.

Boll Weevil: Politically, a boll weevil is a term used to describe conservative Southern Democrats. The name derives from the boll weevil insect, a beetle that infests cotton plants in the South.

Buckley v. Valeo: Landmark 1976 Supreme Court decision on campaign finance law that upheld the Federal Election Campaign Act's disclosure requirements, contribution limits, and provision for public funding of presidential election campaigns. However, the court struck down spending limits in the law, except for the limits accepted voluntarily by presidential candidates who receive public funds. Thus, the ruling allowed for unlimited spending by congressional candidates (they do not receive public funds), and by persons or groups who campaign for or against a candidate, but who do not coordinate their activities with any candidate or campaign. The ruling also said that candidates who do not receive public money do not have to limit spending of their own personal funds on their campaigns.

Caucus: A meeting, in particular a meeting of people whose goal is political or organizational change. In American presidential politics, the word has come to mean a gathering of each party's local political activists during the presidential nomination process. In a "layered" caucus system, local party activists, working at the precinct level,

select delegates to county meetings, who in turn select delegates to state meetings. These state-level conventions select delegates to their party's national nominating convention. The purpose of the caucus system is to indicate, through delegate choice, which presidential candidate is preferred by each state party's members. Its effect is to democratize presidential nominations, since candidate preferences are essentially determined at the precinct level, at the beginning of the process.

Closed Primary: Only voters registered with a particular political party can vote in that party's primary. For example, if it is a Democratic primary, only registered Democrats can vote.

Coattails: An allusion to the rear panels ("tails") of a gentleman's frock coat. In American politics, it refers to the ability of a popular officeholder or candidate for office, on the strength of his or her own popularity, to increase the chances for victory of other candidates of the same political party. This candidate is said to carry others to victory "on his coattails."

Conservative: Any shade of political opinion from moderately right-of-center to firmly right-of-center. Of the two major parties in the United States, the Republican Party is generally considered to be the more conservative. "Political" conservatives in the United States usually support free-market economic principles and low taxes, and distrust federal, as opposed to state and local, government power. "Cultural" conservatives may be opposed to abortion or to the excesses of popular media.

Convention Bounce: An increase in a presidential candidate's popularity, as indicated by public-opinion polls, in the days immediately following his or her nomination for office at the Republican or Democratic national convention.

Debate: A discussion involving two or more opposing sides of an issue. In American politics in recent years, debates have come to be associated with televised programs at which all candidates for the presidency or the vice presidency present their own and their party's views in response to questions from the media or members of the audience. Debates may also be held via radio or at a meeting place for community members, and they may be held for elective office at all levels of government.

Divided Government: A term that generally refers to a situation where the president is a member of one political party and at least one chamber of Congress (either the Senate or the House of Representatives) is controlled by the opposite party. This situation can also

exist at the state level, with one party controlling the governorship, and another controlling the state legislature. Divided government frequently occurs in the U.S. political system. Its historical impact has been to discourage radical change and to motivate politicians of both parties to compromise on proposed legislation.

Dixiecrats (1948): The Dixiecrats led by Strom Thurmond, currently a Senator from South Carolina. The Dixiecrats were a group of dissident Democrats who opposed the racial integration policies of Democrat nominee Harry Truman. Thurmond garnered only 2.4% of the popular vote, but because he confined his campaign to the South, won four states there. Thurmond's purpose was not to win the presidency, but to deny victory to Truman by winning traditional Democratic states in the region. The effort failed, however. Truman won without the four Southern states.

Federal Election Campaign Act (FECA): The 1971 law that governs the financing of federal elections; it was amended in 1974, 1976, and 1979. The act requires candidates and political committees to disclose the sources of their funding and how they spend their money; it regulates the contributions received and expenditures made during federal election campaigns; and it governs the public funding of presidential elections.

Federal Election Commission (FEC): An independent regulatory agency charged with administering and enforcing federal campaign finance law. The FEC was established by the 1974 amendment of the Federal Election Campaign Act of 1971.

Front-loading: The practice of scheduling state party caucuses and state primary elections earlier and earlier in advance of the general election. By moving their primaries to early dates, states hope to lend decisive momentum to one or two presidential candidates and thus have disproportionate influence on each party's nomination. See also Rear-loading

Front-runner: A candidate in any election or nomination process who is considered to be the most popular or likely to win.

Gender Gap: In recent elections, American women have tended to vote in patterns different from those of men, often preferring Democratic to Republican candidates or candidates on the more liberal side of the political spectrum. The press has dubbed this phenomenon the "gender gap."

Gridlock: In politics, when one side in a political matter manages to stall things so there is no way to maneuver around and nothing can be accomplished.

Hard Money/Soft Money: Terms used to differentiate between campaign funding that is and is not regulated by federal campaign finance law. Hard money is regulated by law and can be used to influence the outcome of federal elections — that is, to advocate the election of specific candidates. Soft money is not regulated by law and can be spent only on activities that do not affect the election of candidates for national office — that is, for such things as voter registration drives, party-building activities, and administrative costs, and to help state and local candidates.

Hatch Act: The Hatch Act places restrictions on the political activities of employees of the U.S. federal government. The original 1939 Hatch Act was amended in 1993 to permit more political activity, but the following restrictions still apply:

- Federal workers cannot use official authority or influence to interfere with an election;
- Federal workers cannot solicit or discourage political activity of anyone doing business with a federal agency;
- Federal workers cannot solicit or receive political contributions;
- Federal workers cannot be candidates for public office in partisan elections;
- Federal workers cannot engage in political activity while on duty; and
- Federal workers cannot wear political buttons on duty.

Horse Race: Used as a metaphor for an election campaign, “horse race” conveys the feeling of excitement that people experience when watching a sporting event. The term also refers to media coverage of campaigns, which frequently emphasizes the candidates’ standings in public-opinion polls — as if they were horses in a race — instead of the candidates’ stands on the issues.

Liberal: In the U.S. political spectrum, “liberals” are said to be slightly left-of-center or somewhat left-of-center. Of the two main political parties, the Democrats are thought to be more liberal, as the term is currently defined. “Political” liberals tend to favor greater federal power to remedy perceived social inequities; “cultural” liberals tend to support a woman’s right to choose when to give birth, as well as feminism, homosexual rights, and similar freedoms of personal choice and behavior.

Matching Funds: Public money given to presidential candidates that “matches” funds they have raised privately from individuals. During the primary season, eligible candidates may receive up to \$250 in matching funds for each individual contribution they receive.

Midterm Election: An election for seats in the U.S. Senate and House of Representatives that occurs during a presidential term of office — that is, two years into the four-year presidential term. The results are sometimes interpreted as a popular referendum on that president’s performance for the first two years of his term. Midterm elections determine some members of the U.S. Senate and all members of the House of Representatives, as well as many state and local officials.

Negative Ads: Advertisements that try to persuade voters to vote for one candidate by making the opponent look bad, either by attacking the opponent’s character or record on the issues.

Open Primary: All registered voters may participate in the primary, whether they are registered as Democrats, Republicans, or independents.

Platform: In the context of U.S. presidential politics, this term refers to a political party’s formal written statement of its principles and goals, put together and issued during the presidential nomination process. While Democratic and Republican nominees for president have traditionally paid lip service to their party’s platform, these lofty, legalistic documents have become less important in recent years as television has focused more on each candidate’s appearance, personality, and perceived leadership ability.

Plurality Rule: A method of identifying the winning candidate in an election. A plurality of votes is the total vote received by a candidate greater than that received by any opponent but often less than a 50% majority of the vote. That is, if one candidate receives 30% of the votes, a second candidate also receives 30%, and a third receives 40%, the third candidate has a plurality of the votes and wins the election.

Political Action Committee (PAC): Political committees that are not the official committees of any candidate or political party. PACs may be affiliated with corporations, labor unions, or other organizations, and they contribute money to candidates and engage in other election-related activities. Most PACs have specific legislative agendas and are a dominant force in congressional elections. PACs have increased significantly in influence

and numbers in recent years: in 1976, there were 608 PACs, and in 1996, there were more than 4,000.

Primary: Closed primary and Open primary: An electoral contest held to determine each political party's candidate for a particular public office. Primaries may be held at all levels of government, including local contests for mayor, district races for the U.S. House of Representatives, statewide elections for governor or U.S. senator, and president of the United States. Primaries for presidential candidates are held at the state level to indicate who the people of that state prefer to be the parties' candidates. Depending on state law, voters cast ballots directly for the presidential candidate they prefer or for delegates who are "pledged" to support that presidential candidate at convention time. State primary elections, if early enough in the political season, can occasionally stop leading presidential candidates in their tracks and create a surge of support for a lesser-known candidate.

Progressive Movement: A term used to refer to a great era of reform in American life in the late 19th and early 20th centuries.

Proposition 187: Proposition 187 appeared on the ballot in California in the 1994 Congressional elections. It proposed that illegal aliens would be ineligible for social services throughout the state. Although the measure passed by 59% to 41%, it is currently under challenge in the courts.

Protest Vote: A vote for a third-party candidate made not to elect that candidate but to indicate displeasure with the candidates of the two major political parties.

Public Funding: The financing, in part, of presidential election campaigns from a fund maintained by the U.S. Treasury. The money in the fund comes exclusively from voluntary contributions made by U.S. taxpayers when they pay their annual federal income tax. (See Taxpayer checkoff system.)

Push Polling: A public-opinion polling technique that is used to test possible campaign themes by asking very specific questions about an issue or candidate. Some unscrupulous campaigns have used the technique to "push" voters away from their opponent by including false or misleading information in their questions.

Rear-loading: This refers to the intense campaign event and media activity at the end of the year-long cycle -- just prior to the election -- which includes a series of nationally

televised debates, a flurry of television ads and extensive campaign travel on the part of the presidential candidates. See also Front-loading.

Redistricting: The process of redrawing the geographic boundaries of congressional districts, the electoral districts within states from which members of the House of Representatives are elected. Both Democrats and Republicans at the state level compete to get hold of the legal and political mechanisms of redistricting — usually by controlling the state legislature. By doing so, they can redraw boundaries of congressional districts in ways that will lend an electoral advantage to their own party.

Referendum: A measure referred to voters by a state legislature proposing that specific legislation be approved or rejected. Oftentimes, the terms "ballot initiative," "referendum" and "proposition" are used interchangeably.

Regionalization: The 50 United States are unofficially grouped into about six regions in which states share certain geographic and cultural traits with each other that make them somewhat different from the other regions. During the presidential primary season, "regionalization" refers to the practice of states' joining with other states in their region to maximize the effect of the region on the electoral process, often by holding their primary elections on the same day.

Single-member District: The current arrangement for electing national and state legislators in the United States in which one candidate is elected in each legislative district; the winner is the candidate with the most votes. The single-member system allows only one party to win in any given district. This is directly opposite to the more common proportional system, in which much larger districts are used and several members are elected at one time based on the proportion of votes their parties receive.

Sound Bite: A brief, very quotable remark by a candidate for office that is repeated on radio and television news progra

Spin Doctor/Spin: A media adviser or political consultant employed by a campaign to ensure that the candidate receives the best possible publicity in any given situation. For example, after a debate between the presidential candidates, each candidate's "spin doctors" will seek out journalists so they can point out their candidate's strengths in the debate and try to convince the press, and by extension the public, that their candidate "won" the debate. When these media advisers practice their craft, they are said to be "spinning" or putting "spin" on a situation or event.

Straw Poll/Vote: An unofficial vote that is used either to predict the outcome of an official vote, or to gauge the relative strength of candidates for office in a future election. For example, long before the Republican caucuses took place in 1996 for the selection of a nominee for president, straw votes were conducted in various states. A good showing in a straw vote can give a candidate a boost, but does not necessarily predict later success.

Swing Voters: Voters not loyal to a particular political party, usually independents, who can determine the outcome of an election by "swinging" one way or the other on an issue or candidate, often reversing their choices the next time around.

Super Tuesday/Titanic Tuesday: Widespread use of the phrase "Super Tuesday" dates from 1988. On March 9 of that year, a group of southern states banded together to hold the first large and effective regional group of primaries in order to boost the importance of southern states in the presidential nomination process and lessen the impact of early votes in the New Hampshire primary and Iowa caucuses.

By now, in informal speech, the meaning of the phrase is blurred; a reflection of the fact that during the presidential primary season there may be several groups of state primaries in various regions falling on one or more Tuesdays. These regional or multi-region groupings, whatever they are called, are important because the weight of such a large, simultaneous vote tends to make or break would-be presidential nominees since so many convention delegates are selected at once.

During the 2000 U.S. presidential election, a large number of states (including California and New York) held their primary elections on March 7, one week before the date usually associated with Super Tuesday. Thus emerged the term "Titanic" Tuesday.

Taxpayer Checkoff System: A mechanism whereby U.S. taxpayers can choose to contribute \$3 of their annual federal income tax payment to a public fund for financing presidential elections. To contribute, taxpayers simply check a box on their tax return that says that they want to participate in this system. Making the contribution does not raise or lower an individual's taxes; it simply deposits \$3 of the tax payment into the presidential election campaign fund.

Third Party: Any political party that is not one of the two parties that have dominated U.S. politics in the 20th century — the Republican Party and the Democratic Party — and that receives a base of support and plays a role in influencing the outcome of an

election.

Ticket Splitting: Voting for candidates of different political parties in the same election — say, voting for a Democrat for president and a Republican for senator. Because ticket splitters do not vote for all of one party's candidates, they are said to “split” their votes.

Town Meeting: An informal gathering of an officeholder or candidate for office with a group of people, often local, in which the audience raises questions directly to the officeholder or candidate.

Tracking Survey: A type of public-opinion poll that allows candidates to follow, or “track,” voters' sentiments over the course of a campaign. For the initial survey, the pollster interviews the same number of voters on three consecutive nights — for example, 400 voters a night, for a total sample of 1,200 people. On the fourth night, the pollster interviews 400 more voters, adds their responses to the poll data, and drops the responses from the first night. Continuing in this way, the sample rolls along at a constant 1,200 responses drawn from the previous three nights. Over time, the campaign can analyze the data from the entire survey and observe the effect of certain events on voters' attitudes.