

Comparison of Presidential Candidates' Energy and Environmental Plans

The following comparison of Barack Obama's and John McCain's energy and environmental plans comes from the statements of their plans on their official web sites. The text first indicates what the respective plans say on each topic, and then provides IER's analysis of each topic within the program.

Nuclear Power

Obama: Acknowledges that nuclear power is needed to meet greenhouse gas emissions reduction goals. Says it is necessary to address the security of nuclear fuel and waste, waste storage, and proliferation before expansion of nuclear power can be considered. Does not believe that Yucca Mountain is a suitable site for waste storage. Will lead Federal efforts to look for safe, long-term disposal solutions based on objective, scientific analysis. Will develop requirements to ensure that the waste stored at current reactor sites is contained using the most advanced dry cask storage technology available.¹

McCain: Wants to construct 45 new nuclear power plants by 2030 with an ultimate goal of constructing 100 new plants. Does not want to be dependent on foreign suppliers for nuclear reactors or plant components, supporting their construction in the U.S.² Supports Yucca Mountain and research into nuclear-waste reprocessing.³

Analyses of climate change proposals by EIA, EPA, NAM/ACCF and others have shown that nuclear power is needed to meet greenhouse gas emission reduction goals.⁴ Nuclear power currently generates about 20% of the electricity in the U.S.⁵ but over 75% of the electricity in France.⁶ DOE has been working on Yucca Mountain as the waste disposal facility since 1987 but the process has been slowed because of opposition, and recently it was disclosed that it will not be opened before 2025. The Carter

¹ <http://my.barackobama.com/page/content/newenergy>

² <http://www.johnmccain.com/Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

³ <http://www.iht.com/articles/ap/2008/08/09/america/Energy-Next-President-Highlights.php>

⁴ Energy Information Administration, Energy Market and Economic Impacts of S.2191, the Lieberman-Warner Climate Security Act of 2007, <http://www.eia.doe.gov/oiaf/servicrpt/s2191/index.html>, Environmental Protection Agency, EPA Analysis of the Lieberman-Warner Climate Security Act of 2008, http://www.epa.gov/climatechange/downloads/s2191_EPA_Analysis.pdf, and American Council for Capital Formation/National Association of Manufacturers Study of the Economic Impact of the Lieberman-Warner Climate Security Act, <http://www.accf.org/nam.html>.

⁵ Energy Information Administration, Annual Energy Review 2007, <http://www.eia.doe.gov/emeu/aer/contents.html>.

⁶ Energy Information Administration, International Energy Annual, <http://www.eia.doe.gov/iea/>.

Administration banned reprocessing of waste, a “recycling” process. To require, as Senator Obama proposes, that waste storage and other issues be resolved before expansion of nuclear power can occur, would essentially remove the nuclear option from the generation mix in the near and mid-term period when technology options for mitigating greenhouse gas emissions are limited.

Windfall Profits Tax

Obama: Will require oil companies to take a reasonable share of their windfall profits and use it to provide a rebate to help pay for higher energy costs to U.S. consumers. The rebate would be \$500 per individual and \$1000 per married couple and would be paid for through 5 years of the “tax” on oil companies.⁷

McCain: Does not support a windfall profits tax, which he says “will hinder investment in exploration and new production.”⁸

President Carter enacted a windfall profits tax in 1980. The Congressional Research Service indicated that the tax, which was repealed by President Reagan in 1988, lowered domestic energy production by 1.2% to 4.8%, resulting in increased foreign oil imports.⁹ According to the Energy Information Administration, the major oil companies already pay a substantial amount of taxes, which in 2006, totaled \$90 billion.¹⁰

Renewable Electricity

Obama: Ensure that 10% of our electricity comes from renewable sources by 2012, and 25% by 2025. Extend the Federal production tax credit for 5 years to encourage the production of renewable energy.¹¹

McCain: Encourages the market for low carbon fuels such as wind, hydro, and solar. He believes in an even-handed system of tax credits that will remain in place until the market transforms sufficiently so that renewable energy no longer merits taxpayers’ dollars.¹² Does not believe in a Federal Renewable Portfolio Standard; believes targets for renewables are best adopted at the state level.¹³

⁷ <http://my.barackobama.com/page/content/newenergy>

⁸ <http://www.johnmccain.com/Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

⁹ Congressional Research Service, Energy Tax Policy: History and Current Issues, http://assets.opencrs.com/rpts/RL33578_20080917.pdf

¹⁰ EIA, Financial Reporting System, <http://www.eia.doe.gov/emeu/perfpro/btab02.html>

¹¹ <http://my.barackobama.com/page/content/newenergy>

¹² <http://www.johnmccain.com/Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

¹³ http://news.cnet.com/8301-11128_3-10031450-54.html

The production tax credit for wind and other renewables has been extended 6 times, and most recently by the “bailout” bill.¹⁴ Twenty-five states and the District of Columbia currently have renewable portfolio standards, but they differ widely on what they consider a renewable to be and the dates for the targets to be met.¹⁵ Only Texas has met its targets for renewable generation.¹⁶ There are areas, particularly in the south, which do not have good wind resources and would have a harder time meeting Federal targets.¹⁷ Their utilities would have to purchase credits to make up for the shortfall in renewable capacity.¹⁸

The “Renewable Portfolio Standard” is a semantic device, as it is not a standard so much as it is a *mandate*. By compelling utilities to produce or purchase a certain percentage of their electricity from renewable sources, laws and/or regulations may be requiring consumers ultimately to purchase more expensive energy than they would otherwise choose to do in a free market. Making energy more expensive deliberately is a matter that deserves more public debate. Moreover, making energy more expensive in the U.S. affects American competitiveness in trade and other matters.

Clean Coal Technology

Obama: Will provide incentives to accelerate private sector investment in commercial scale zero-carbon coal facilities, by instructing DOE to enter into public private partnerships to develop 5 “first-of-a-kind” commercial scale coal-fired plants with carbon capture and sequestration.¹⁹

McCain: Will commit \$2 billion annually to advance clean coal technologies. When commercialized will also export them to developing world economies to promote an international green economy.²⁰

¹⁴ Energy Information Administration, Federal Financial Interventions and Subsidies in Energy Markets 2007, <http://www.eia.doe.gov/oiaf/servicerpt/subsidy2/index.html>.

¹⁵ Energy Information Administration, Annual Energy Outlook 2008, page 27, <http://www.eia.doe.gov/oiaf/aeo/index.html>

¹⁶ “A National Renewable Portfolio Standard: Politically Correct, Economically Suspect,” Robert J. Michaels, April 2008 Electricity Journal.

¹⁷ For example, see this map showing the potential for wind generation http://www.windpoweringamerica.gov/wind_maps.asp and this map showing the potential for solar generation: http://www.nrel.gov/gis/images/us_csp_annual_may2004.jpg.

¹⁸ Democrats Challenge Each Other In Battle Over Energy Bill, Ian Talley, Dow Jones Newswires, September 11, 2007.

¹⁹ <http://my.barackobama.com/page/content/newenergy>

²⁰ <http://www.johnmccain.com/Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

Coal produces almost 50 percent of U.S. electricity.²¹ Climate change studies by Government and private agencies have shown that since carbon capture and sequestration (CCS) technology is not currently commercially available, most of today's coal generating plants would need to be replaced by non-carbon or lower-carbon emitting technologies to meet greenhouse gas targets. This will come at a major expense to the U.S. economy.²² DOE had been funding a Future Gen clean coal project, but has withdrawn support due to the huge increases in cost. Instead, DOE plans to support only the CCS portion of future projects.²³ The U.S. has the largest supplies of coal in the world. Any comprehensive energy policy must include coal given its predominant role in our electrical supply system.

Domestic Oil Production

Obama: Wants oil companies to drill in the 68 million acres that they have leased but from which they are not producing energy. Promotes energy production in Bakken Shale in Montana and North Dakota, and in the National Petroleum Reserve-Alaska.²⁴

Contends companies could produce 4.8 million barrels more per day domestic oil if oil companies were currently producing on all currently-leased areas.²⁵ Supported limited Outer Continental Shelf (OCS) energy production in formerly-banned areas as part of a broader energy package including concessions for renewable technologies.²⁶

Opposes energy production in the Alaska

McCain: Wants to expand domestic oil exploration and production to the previously banned areas of the OCS to lessen U.S. imports of foreign oil, increase U.S. domestic supplies, and reduce the U.S. Federal Trade deficit.²⁸ Does not support drilling in ANWR at this time.²⁹

²¹ Energy Information Administration, Annual Energy Review 2007, <http://www.eia.doe.gov/emeu/aer/contents.html>.

²² Energy Information Administration, Energy Market and Economic Impacts of S.2191, the Lieberman-Warner Climate Security Act of 2007, <http://www.eia.doe.gov/oiaf/servicerpt/s2191/index.html>, Environmental Protection Agency, EPA Analysis of the Lieberman-Warner Climate Security Act of 2008, http://www.epa.gov/climatechange/downloads/s2191_EPA_Analysis.pdf, and American Council for Capital Formation/National Association of Manufacturers Study of the Economic Impact of the Lieberman-Warner Climate Security Act, <http://www.accf.org/nam.html>.

²³ <http://www.energy.gov/news/5912.htm>, http://www.fossil.energy.gov/news/techlines/2008/08030-CO2_Capture_Projects_Selected.html

²⁴ <http://my.barackobama.com/page/content/newenergy>

²⁵ <http://thepage.time.com/obama-response-to-mccain-ad/>

²⁶ Comparing McCain, Obama energy plans, International Herald Tribune, <http://www.iht.com/articles/ap/2008/08/09/america/Energy-Next-President-Highlights.php>

National Wildlife Refuge (ANWR).²⁷

Until the U.S. Congress allowed the OCS moratoria to expire at the end of September, American oil leasing had been prohibited on most of the OCS in the lower 48 states since 1982. The moratoria had limited energy exploration and production to a mere 3% of America's offshore OCS lands. This made the U.S. the only developed nation in the World to restrict access to its offshore energy resources. The Minerals Management Service (MMS) estimates that the outer continental shelf contains 86 billion barrels of oil and 420 trillion cubic feet of natural gas, both conservative estimates since bans on offshore leasing have made it illegal to explore.³⁰ It is now necessary to ensure that Congress does not reinstate the moratoria as they are threatening to do and that the leases are not tied up in legal disputes.

While neither candidate currently advocates exploration in ANWR, U.S. Geological Survey (USGS) estimates that the "1002 Area" contains a mean expected value of 10.4 billion barrels of technically recoverable oil.³¹ The 1002 Area is not designated as wilderness; there are no trees, deepwater lakes, or mountain peaks. The 1002 area could produce about one million barrels of oil per day, which is about 20 percent of our daily domestic production and would make ANWR the single largest producing field in North America.³² It would also extend the life of the Trans Alaskan Pipeline, which is currently operating at 1/3 of its original capacity. ANWR would generate large amounts of revenue for the federal government from royalties, as well as corporate income taxes. For example, a recent Congressional Research Service Report found that developing ANWR would produce \$191 billion in new federal revenues from corporate income taxes and royalties.³³

Additionally, the United States has significant quantities of energy potential in its onshore federal lands that are not leased, as well as in its oil shale deposits, the world's largest. Unlike other energy sources which require subsidies and/or mandates, the use of government resources to meet our energy needs not only creates jobs, but also enormous quantities of revenue.

²⁷ Institute for 21st Century Energy, U.S. Chamber of Commerce, Washington D.C., <http://www.energyxxi.org/NR/rdonlyres/eam4biljadknpedoyypgej2y2lf2df2y5mob4f5hyhzfs7ah577126gskrcrphj5fy2dq4jaflz4ofushfcv2fwgwgw/PresidentialEnergyPositions20080618.pdf>

²⁸ <http://www.johnmccain.com//Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

²⁹ Institute for 21st Century Energy, U.S. Chamber of Commerce, Washington D.C., <http://www.energyxxi.org/NR/rdonlyres/eam4biljadknpedoyypgej2y2lf2df2y5mob4f5hyhzfs7ah577126gskrcrphj5fy2dq4jaflz4ofushfcv2fwgwgw/PresidentialEnergyPositions20080618.pdf>

³⁰ Offshore Energy & Minerals Management (OEMM), The Minerals Management Service, <http://www.mms.gov/offshore/>, July 7, 2008.

³¹ U.S. Geological Survey, <http://pubs.usgs.gov/fs/fs-0028-01/>

³² http://tonto.eia.doe.gov/dnav/pet/pet_crd_crpdn_adc_mbbbl_m.htm

³³ http://www.usembassy.at/en/download/pdf/anwr_revenue.pdf

The claim that oil companies are deliberately withholding production on 68 million acres has been debunked and is no longer taken seriously by energy analysts.³⁴ Oil companies do not know exactly where profitable deposits of oil and natural gas will be found until they actually drill, and so naturally at any given time, a portion of leased land will not be in production. If the oil companies were truly withholding 4.8 million barrels per day, that would imply they were ignoring \$140 billion in gross revenues per year (assuming a price of \$80 per barrel). It would also be curious that oil companies were lobbying for the ability to pay for additional leases on previously banned lands, if they had already paid for access to more oil and gas than they wanted to sell.

Alaskan Gas Pipeline

Obama: Wants to work with stakeholders to facilitate construction of this natural gas pipeline.³⁵

McCain: Believes in promoting and expanding the use of our domestic supplies of natural gas, including building the infrastructure needed to transport it.³⁶

Natural gas currently supplies 23 percent of our energy needs.³⁷ Besides heating many U.S. homes, it is used for electricity production and in industrial processes. It is the least carbon-intensive of the fossil fuels. The Energy Information Administration predicts that natural gas use will grow,³⁸ and many studies have shown that natural gas is needed as a transitional fuel under scenarios to reduce greenhouse gases.³⁹ Alaska has 35 trillion cubic feet of known quantities of natural gas and experts expect the potential is much greater. These supplies of natural gas could be used in the lower 48 states if construction of the pipeline were undertaken.

SPR or tax holiday

Obama: Supports releasing 70 million barrels of oil from the government's Strategic Petroleum Reserve (SPR) to increase oil

McCain: Opposes the use of the SPR to reduce gasoline prices, believing it should be used in the event of an emergency cutoff of imports. Instead, he

³⁴ <http://www.instituteforenergyresearch.org/2008/08/15/bogus-lease-claims-in-use-it-or-lose-it-proposal-stymie-real-energy-security/>

³⁵ <http://my.barackobama.com/page/content/newenergy>

³⁶ <http://www.johnmccain.com/Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

³⁷ Energy Information Administration, Annual Energy Review 2007, <http://www.eia.doe.gov/emeu/aer/contents.html>.

³⁸ Energy Information Administration, Annual Energy Outlook 2008, <http://www.eia.doe.gov/oiaf/aeo/index.html>

³⁹ Energy Information Administration, Energy Market and Economic Impacts of S.2191, the Lieberman-Warner Climate Security Act of 2007, <http://www.eia.doe.gov/oiaf/servicerpt/s2191/index.html>, Environmental Protection Agency, EPA Analysis of the Lieberman-Warner Climate Security Act of 2008, http://www.epa.gov/climatechange/downloads/s2191_EPA_Analysis.pdf, and American Council for Capital Formation/National Association of Manufacturers Study of the Economic Impact of the Lieberman-Warner Climate Security Act, <http://www.accf.org/nam.html>.

supplies and reduce gasoline prices.⁴⁰ The light oil released from the SPR would be replaced later with heavier oil.⁴¹

suggested reducing gasoline prices by temporarily suspending the 18-cents-per-gallon Federal gasoline tax.⁴²

The SPR was developed in 1975 as a response to the 1973 oil embargo against the West. The U.S., in conjunction with other OECD nations, keeps spare stocks of oil in case oil is used as an economic weapon. The President has the authority to release crude from the SPR in time of a national emergency. President Bush has done so in the aftermath of Hurricanes Katrina and Ike, when offshore production facilities and refineries were temporarily closed for repair, replacing the crude once the facilities were operational. Both the SPR withdrawal and temporary Federal tax holiday would have, at best, short-run benefits, and they would come at the cost of reduced security against another oil embargo (for the SPR drawdown) and an increased Federal budget deficit (for the tax holiday). We believe that a better solution than either of these proposals is adding new domestic supplies from the more than 96% of government owned lands and waters currently not leased for energy. This achieves the goal of price relief for consumers, because increased supplies lead to lower oil prices, and it turns the two negatives of the Obama and McCain plans into positives: That is, increasing domestic production reduces U.S. vulnerability to foreign embargoes, and it also would provide extra revenue for the Treasury.

Energy Speculation **Obama:** Plans to enact legislation to close loopholes in Commodity Futures Trading Commission regulations and increase market transparency.⁴³

McCain: Wants to reform the laws and regulations governing the oil futures market and provide oversight.⁴⁴

Studies by the Commodity Futures Trading Commission showed that there was no evidence that speculators were responsible for high oil prices.⁴⁵ Also, if the price of oil were above the levels that fundamentals of supply and demand could support, there would be growing inventories, which there were not. Successful speculators actually make oil prices less volatile, by buying when prices are low

⁴⁰ Comparing McCain, Obama energy plans, International Herald Tribune, <http://www.iht.com/articles/ap/2008/08/09/america/Energy-Next-President-Highlights.php>

⁴¹ <http://my.barackobama.com/page/content/newenergy>

⁴² Comparing McCain, Obama energy plans, International Herald Tribune, <http://www.iht.com/articles/ap/2008/08/09/america/Energy-Next-President-Highlights.php>

⁴³ <http://my.barackobama.com/page/content/newenergy>

⁴⁴ <http://www.johnmccain.com//Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

⁴⁵ Interim Report on Crude Oil, Interagency Task Force on Commodity Markets, July 2008, <http://www.cftc.gov/stellent/groups/public/@newsroom/documents/file/itfinterimreportoncrudeoil0708.pdf>, and <http://www.marketwatch.com/news/story/cftc-report-undercuts-claim-investors/story.aspx?guid={06B5DBFD-CC90-41A2-A3C0-6F18A3DBC03A}&dist=hppr>

and selling when prices are high (or "shorting" when prices are high and then covering when prices are low). Major producers and consumers of oil use futures markets to "hedge" themselves against future volatility by locking in a fixed "futures price" of oil. Large investment funds provide *liquidity* to the commodities futures markets, and allow producers and physical consumers (such as airlines and refiners) to concentrate on their core businesses. Government restrictions on investment in the oil futures market would only hurt consumers by making the oil market less efficient. New regulations will do nothing to ease oil prices in the long term.⁴⁶ Additional supplies help temper any speculation, also. Since President Bush announced the lifting of the presidential moratorium on July 14, 2008, oil prices have fallen by almost 50%. Congress' decision to allow the OCS energy moratorium to expire October 1, 2008 has further sent a message to markets about American willingness to produce its own energy.

CAFE

Obama: Will increase fuel economy standards 4 percent per year, going beyond the 35 mpg requirement in 2020 mandated by the Energy Independence and Security Act of 2007.⁴⁷

McCain: Will enforce existing CAFE standards by increasing the penalties for not complying with the standards, which many auto manufacturers currently pay and add to the price of their cars.⁴⁸

Like all markets, automakers will supply the market with vehicles that consumers demand. In the past, consumers preferred increased horsepower and larger vehicles rather than more fuel efficient and smaller vehicles. In the past, consumers have preferred more sport utility vehicles and light trucks, than smaller vehicles. Higher oil and gasoline prices have moved the car purchasing market to more fuel efficient vehicles, though some consumers still prefer the safety features in the heavier vehicles. The issue related to increasing the CAFE standard beyond the current legislated level is whether technologies exist to meet a higher standard. Also of note, by restricting consumer choice CAFE standards have lead to more deaths and injuries than otherwise because CAFE forces carmakers to build smaller cars than consumers would prefer. CAFE may save gasoline, but it costs lives.⁴⁹

R&D and Tax Credits for Advanced Transportation Vehicles

Obama: Wants to mandate that all new vehicles are flex-fuel vehicles. Spend U.S. tax dollars on advanced vehicle technology; put 1 million plug-in electric vehicles on the road by 2015. Provide a \$7,000 tax credit for the purchase of advanced technology vehicles

McCain: Supports flex-fuel vehicles and wants automakers to make a more rapid switch to flex-fuel vehicles than their current commitment. Proposes a \$300 million prize to improve battery technology for full commercial development. Provides a \$5,000 tax credit for purchase of a zero emission car and a

⁴⁶ http://www.instituteforenergyresearch.org/wp-content/uploads/2008/06/oil_speculators.pdf

⁴⁷ <http://my.barackobama.com/page/content/newenergy>

⁴⁸ <http://www.johnmccain.com//Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

⁴⁹ See e.g., Sam Kazman, *CAFE is Bad for Your Health*, Wall Street Journal (Nov. 13, 2005) <http://cei.org/gencon/019,04970.cfm> .

and conversion tax credits. Convert the White House fleet to plug-ins within one year of becoming President. Make half of all cars purchased by the Federal Government be plug-in hybrids or all-electric by 2012. Provide \$4 billion in retooling tax credits and loan guarantees for domestic auto plants and plant manufacturers so that new fuel-efficient cars are built in the U.S. rather than overseas.⁵⁰

graduated tax credit for other vehicles based on their carbon emission levels.⁵¹

Studies regarding tax credits show that they have limited ability to spur change compared to their cost to the U.S. Treasury and the American taxpayer. The Energy Information Administration, for example, evaluated the impact of tax credits on the energy system on both a cost and carbon emission basis finding their cost per unit high and their benefit to lowering carbon emissions and energy consumption low.⁵²

Electricity Grid

Obama: Will spend U.S. tax dollars on smart metering, distributed storage and other advanced technologies. Will establish a Grid Modernization Commission to facilitate adoption of Smart Grid practices. Will instruct the Secretary of Energy to: 1.) establish a Smart Grid Matching Grant Program to provide a subsidy of one-fourth of qualifying investments; 2.) conduct programs to deploy advanced technologies for managing peak load reductions and energy efficiency savings; and 3.) establish demonstration projects.⁵³

McCain: Wants to upgrade the national grid to meet the electricity demands of the 21st century, including a capacity to charge electric vehicles. Promotes deployment of SmartMeter technologies that provide consumers with real-time energy consumption usage to encourage cost-efficient use of power.⁵⁴

The candidates appear to be silent on the issue of grid instability related to delays, lawsuits and red tape associated with upgrading the grid and building sufficient power capacity to ensure grid stability. In a

⁵⁰ <http://my.barackobama.com/page/content/newenergy>

⁵¹ <http://www.johnmccain.com//Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

⁵² Energy Information Administration, Analysis of the Climate Change Technology Initiative, April 1999, and Analysis of the Climate Change Technology Initiative: Fiscal Year 2001, April 2000.

⁵³ <http://my.barackobama.com/page/content/newenergy>

⁵⁴ <http://www.johnmccain.com//Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

technology driven modern economy, this is a foundation of economic strength. A recent USDA study of rural community electric demands pointed out a need to double capacity in rural areas by 2020.⁵⁵ The North American Electricity Reliability Council reports that the capacity margins (the amount of electricity necessary to maintain the reliability of the electrical grid) are low and could drop below target capacity margins as soon as 2009 in many areas of the country.⁵⁶ The Independent Service Operators throughout the nation predict looming shortfalls in production and transmission capability in urban areas, and new demands from non-dispatchable sources (intermittent sources like new wind and solar projects) only complicate that. Moreover, there is little discussion by the candidates about the inherent conflicts of siting new alternative energy sources.

Energy Efficiency

Obama: Reduce electricity demand 15 percent from DOE's projected levels by 2020 by setting demand reduction targets for utilities and more stringent building and appliance standards. Establish a goal to make all new buildings carbon neutral by 2030. Establish a goal to improve new building efficiency by 50 percent and existing building efficiency by 25 percent. Overhaul the process for setting appliance efficiency standards to eliminate the missed deadlines by the Department of Energy for setting updated appliance efficiency standards. Achieve a 40 percent increase in efficiency in all new federal buildings within 5 years and ensure all new federal buildings are zero-emissions by 2025. Invest in cost-effective retrofits to achieve a 25 percent increase in efficiency of existing federal buildings within 5 years. Provide resources to achieve a 15 percent reduction in federal energy consumption by 2015. Work with states to flip the profit model for the utility sector so that shareholder profit is based on reliability and performance as opposed to total production. Commit to weatherize one million low-income homes

McCain: Will make greening of the Federal Government a priority by applying a higher efficiency standard to new buildings leased or purchased or retrofitting existing buildings.⁵⁸

⁵⁵ <http://www.nreca.org/PublicPolicy/issuespotlight/20081013.htm>

⁵⁶ North American Electricity Reliability Council, 2007 Long-Term Reliability Assessment (Nov. 16, 2007) <http://www.nerc.com/files/LTRA2007.pdf>.

each year for the next decade.⁵⁷

Both candidates support compelling the federal government to use less energy in its operations, strategies that may pay dividends for the largest consumer of energy in the nation. But these strategies will come at a cost. Already, some Federal buildings are kept uncomfortably hot in the summer, and uncomfortably cool in the winter to save energy. The imposition of demand reduction targets for the nation may result in significant additional economic burdens on consumers of energy which would affect consumer prices as well as the prices of the goods and service produced in the U.S. which must compete with other nations' goods.

Biofuels, Mandates, & Subsidies

Obama: Will require at least 60 billion gallons of advanced biofuels by 2030. Will spend federal tax dollars, provide tax incentives and government contracts into developing the most promising technologies and their infrastructure. Will mandate all new vehicles are flex-fuel.⁵⁹

McCain: Believes alcohol-based fuels hold great promise as both an alternative to gasoline and as a means of expanding consumers' choices. But, believes a level playing field is needed and will eliminate mandates, subsidies, tariffs, and price supports that focus exclusively on corn-based ethanol and prevent the development of market-based solutions that would provide better solutions.⁶⁰

The Energy Independence and Security Act of 2007 (EISA) requires 36 billion gallons of biofuels by 2022--15 billion gallons of corn-based ethanol and 21 billion gallons of advanced biofuels.⁶¹ Currently there are no commercially-available advanced biofuels on the market. Based on the lower mandates in the Energy Policy Act of 2005, EIA's Annual Energy Outlook 2007⁶² showed that economic levels of biofuels were projected to be 7.6 percent (or 14.6 billion gallons) of the 192 billion gallon gasoline market in 2030. Their Annual Energy Outlook 2008⁶³, which incorporated the EISA mandate by requiring that the provisions of EISA be met, reached 32.5 billion gallons in 2022, slightly below the target due to the application of waivers and modification of credit volumes resulting from inadequate quantities of biofuels to meet the initial targets. That forecast was also dependent on the commercial availability of cellulosic ethanol, which is not commercially viable today.

Currently there are multiple mandates and subsidies that encourage the sale of ethanol. For example, in

⁵⁷ <http://my.barackobama.com/page/content/newenergy>

⁵⁸ <http://www.johnmccain.com//Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

⁵⁹ <http://my.barackobama.com/page/content/newenergy>

⁶⁰ <http://www.johnmccain.com//Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

⁶¹ Energy Information Administration, Assumptions to the Annual Energy Outlook 2008, <http://www.eia.doe.gov/oiaf/aeo/assumption/index.html>

⁶² Energy Information Administration, Annual Energy Outlook 2007, <http://www.eia.doe.gov/oiaf/archive/aeo07/index.html>

⁶³ Energy information Administration, Annual Energy Outlook 2008, <http://www.eia.doe.gov/oiaf/aeo/index.html>

many areas of the country retailers are required to sell gasoline that is 10 percent ethanol to meet clean air regulations. Also there is a 51 cents per gallon of ethanol subsidy for ethanol.⁶⁴ Without these subsidies and mandates, the ethanol industry would not have developed as much. This is especially true because there is less energy in a gallon of ethanol than in a gallon of gasoline, it is more expensive to produce ethanol than gasoline, and there are other negative factors such as its impact on water and land usage and food prices. Mandating 60 billion gallons by 2030, 67 percent higher than the current mandate in just 8 additional years is making an already difficult task harder, and could have even more dramatic impacts on food prices and water and land usage issue.

Government mandates of any kind distort markets, and ethanol is no exception. The ethanol mandate is already leading to higher food prices.⁶⁵ Higher food prices have led to food riots around the world.⁶⁶ Increasing food prices are making life more difficult for the world's poor, leading UN Special Rapporteur for the Right to Food, Jean Ziegler, to call using food crops to produce ethanol "a crime against humanity."⁶⁷

Not only are there serious human costs to the current ethanol mandates, but there are large environmental costs as well. Recent studies published in *Nature* argue that biofuel production releases 17 to 420 times more carbon dioxide than the fossil fuels they replace.⁶⁸ Increased carbon dioxide emissions are not the only environmental harm biofuel production promotes. Biofuel production has also led to converting millions of acres of rainforest into biofuel plantations.⁶⁹

Besides the human and environmental products ethanol mandates produce, it is difficult to comprehend how it is possible to mandate the use of a product in the future that cannot presently be produced commercially, such as cellulosic ethanol. The U.S. has the world's largest oil shale deposits, from which DOE estimates 800 billion barrels are recoverable. Currently it is not produced commercially, and no candidate has supported a mandate for its production by a date certain. The purpose of this comparison is to demonstrate that mandates are by definition, the government picking winners and losers as opposed to freely motivated individuals operating in a free market.

⁶⁴ Energy Information Administration, Assumptions to the Annual Energy Outlook 2008, <http://www.eia.doe.gov/oiaf/aeo/assumption/index.html>

⁶⁵ <http://web.worldbank.org/WBSITE/EXTERNAL/EXTSITETOOLS/0,,contentMDK:21845834~pagePK:98400~piPK:98424~theSitePK:95474,00.html>

⁶⁶ CNN, Riots, instability spread as food prices skyrocket, Apr. 14, 2008, http://www.cnn.com/2008/WORLD/americas/04/14/world.food.crisis/index.html?eref=rss_topstories.

⁶⁷ CNN, Riots, instability spread as food prices skyrocket, Apr. 14, 2008, http://www.cnn.com/2008/WORLD/americas/04/14/world.food.crisis/index.html?eref=rss_topstories.

⁶⁸ The Nature Conservancy, *Climate Change and Energy: The True Cost of Biofuel*, <http://www.nature.org/initiatives/climatechange/features/art23819.html>.

⁶⁹ Mongabay.com, Why is oil palm replacing tropical rainforests?, http://news.mongabay.com/2006/0425-oil_palm.html.

Energy Technology Development

Obama: Wants to spend \$150 billion over 10 years to accelerate the commercialization of plug-in hybrids, promote development of commercial scale renewable energy, encourage energy efficiency, invest in low emission coal plants, advance the next generation of biofuels and infrastructure, and begin transition to a new digital electricity grid.⁷⁰

McCain: Will spend \$2 billion annually to advancing clean coal technology. Will establish a permanent tax credit equal to 10 percent of wages spent on R&D, which will simplify the tax code, provide an incentive to innovation, make the U.S. more competitive with other countries, and remove the uncertainty facing businesses in their R&D decisions. Faces a level playing field for mandates, subsidies, tariffs, and price supports that promote the development of market-based solutions.⁷¹

Markets work better than government-directed programs to finding solutions to problems. This is because government programs are driven by political considerations not economic effectiveness like markets. Since 1978, the DOE has spent over \$75 billion on research and development into various energy sources, and our energy problems are more acute than ever.⁷² Far larger amounts have been dedicated to energy programs through the tax system, to the same end.

During the same period of time, the amount of acreage made available for leasing for energy production to the private sector has plunged dramatically, with the ultimate result of less domestic production of oil and gas. Meanwhile, permitting of electrical transmission lines, energy pipelines and energy facilities has grown more difficult and time consuming, and in capital intensive industries such as energy, time equals money, which the consumer of energy eventually pays. Even today, large subsidies for alternative energy generation exist on the one hand, while on the other hand, government laws and regulations have led to delays in the deployment of new wind farms or solar energy production facilities. Neither candidate has addressed the schizophrenic nature of the government's policies upon energy production, transmission and use in the U.S.

Energy Independence

Obama: Wants to save more oil than we currently import from the Middle East and Venezuela combined within ten years.⁷³

McCain: Wants to achieve strategic energy independence by 2025. Will continue to import oil from our North American neighbors, Canada and Mexico.⁷⁴

⁷⁰ <http://my.barackobama.com/page/content/newenergy>

⁷¹ <http://www.johnmccain.com/Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

⁷² Energy Information Administration, Federal Financial Interventions and Subsidies in Energy Markets 2007, <http://www.eia.doe.gov/oiaf/servicerpt/subsidy2/pdf/chap3.pdf>

⁷³ <http://my.barackobama.com/page/content/newenergy>

⁷⁴ <http://www.johnmccain.com/Informing/Issues/17671aa4-2fe8-4008-859f-0ef1468e96f4.htm>

Imports of oil from the Middle East and Venezuela were 3.53 million barrels per day in 2007 or 26 percent of our total oil imports of 13.47 million barrels per day.⁷⁵ The U.S. has sufficient domestic energy resources to replace these imported sources, as about 97% of offshore government lands and 94% of onshore government lands have not been leased for energy production.⁷⁶ Furthermore, our oil shale resources have not been touched, with over 800 billion barrels of recoverable shale oil that can be made commercially available with the properly structured Government leasing program. To meet the goals, the candidates will need to remove the red tape from Government restricting and/or delaying the use of these resources.⁷⁷ Government actions have for several decades led to severe reductions in the quantity and quality of government lands leased for energy production.⁷⁸ By letting energy exploration occur on much less lands, the government has been effectively stockpiling energy at a time when energy prices have hurt the American economy. Allowing more energy production is proven to make a significant difference in energy supplies, as the Energy Information Administration recently reported.⁷⁹ When more wells are drilled, more supplies are found. The candidates have not directly addressed this simple fact in a fashion that the American people can understand.

Global Warming

Obama: Implement a cap and trade program to reduce greenhouse gas emissions 80 percent below 1990 levels by 2050. Require all emission credits to be auctioned. Use \$15 billion per year of the auctioned receipts to subsidize the development of clean energy and energy efficiency improvements. Use remaining receipts as rebates and other transition relief for families and communities. Engage with the U.N. Framework Convention on Climate Change and make the U.S. a leader on climate change. Establish a Low Carbon Fuel Standard that requires fuel suppliers in 2010 to begin to reduce the carbon content in their fuel by 5 percent within 5 years and 10 percent within 10

McCain: Implement a cap and trade system to reduce greenhouse gas emissions 66 percent below 1990 levels by 2050. Emission permits will eventually be auctioned to support the development of advanced technologies and reduce impacts on low-income American families. Will reform federal government research funding and infrastructure to emphasize the commercialization of low-carbon technologies. Will provide leadership for effective international efforts through actively engaging to lead United Nations Negotiations.⁸¹

⁷⁵ http://tonto.eia.doe.gov/dnav/pet/pet_move_impcus_a2_nus_ep00_im0_mbbldpd_a.htm

⁷⁶ <http://www.instituteforenergyresearch.org/2008/07/16/who-benefits-from-federal-lease-hoarding/>

⁷⁷ See, for example, <http://www.eenews.net/eenewspm/2008/10/17/2>

⁷⁸ <http://www.instituteforenergyresearch.org/wp-content/uploads/2008/10/OCSacresleased.jpg>, and <http://www.instituteforenergyresearch.org/wp-content/uploads/2008/10/FederalLeaseOfferingsAcreageLeased60-2006.pdf>

⁷⁹ http://www.eia.doe.gov/pub/oil_gas/natural_gas/data_publications/advanced_summary/current/adsum.pdf

years.⁸⁰

Under a cap-and-trade system, there is a limit set on total greenhouse gas emissions. Each regulated entity is required to hold an allowance (essentially an entitlement) for the total amount of greenhouse gases they are allowed to emit. Allowances are distributed to emitters by some criterion (e.g. historic emissions), auctioned, or by some combination of the two. Entities are allowed to buy and sell allowances, creating a market price for them. Several cap-and-trade bills have been proposed in Congress, but none has passed to date. Many studies have been done on the various proposals. The studies show that mandates limiting GHG emissions will impose very large costs on the economy in terms of lost GDP, and higher costs to consumers, particularly in the cost of electricity.⁸² Because the major growth in greenhouse gases are in developing countries like China, India, and the Middle East, U.S. emission reductions are likely to have little impact on global emissions. For example, if the U.S. were to eliminate all carbon dioxide emissions by 2030, world-wide CO₂ emissions would still increase by about 30 percent.⁸³ In addition, many economists argue that an appropriately calibrated, explicit tax on carbon could achieve the same long-run emissions reductions as a cap-and-trade program, but with less scope for corruption and with lower total compliance costs.⁸⁴ (IER does not endorse a carbon tax,⁸⁵ but it would be more straightforward than the “stealth tax” of the cap-and-trade approach endorsed by both presidential candidates.)

⁸⁰ <http://my.barackobama.com/page/content/newenergy>

⁸¹ <http://www.johnmccain.com/Informing/Issues/da151a1c-733a-4dc1-9cd3-f9ca5caba1de.htm>

⁸² Energy Information Administration, Energy Market and Economic Impacts of S.2191, the Lieberman-Warner Climate Security Act of 2007, <http://www.eia.doe.gov/oiaf/servicerpt/s2191/index.html>, Environmental Protection Agency, EPA Analysis of the Lieberman-Warner Climate Security Act of 2008, http://www.epa.gov/climatechange/downloads/s2191_EPA_Analysis.pdf, and American Council for Capital Formation/National Association of Manufacturers Study of the Economic Impact of the Lieberman-Warner Climate Security Act, <http://www.accf.org/nam.html>.

⁸³ Energy Information Administration, International Energy Outlook 2007, <http://www.eia.doe.gov/oiaf/archive/ieo07/index.html>

⁸⁴ See for example Chapter 8, “The Many Advantages of Carbon Taxes,” in the prepublication proofs of Yale economist William Nordhaus’ book, *A Question of Balance: Weighing the Options on Global Warming Policies* (New Haven: Yale University Press, 2008), available at: http://nordhaus.econ.yale.edu/Balance_2nd_proofs.pdf.

⁸⁵ See IER’s critique of Nordhaus’ case at: <http://www.instituteforenergyresearch.org/2008/06/05/ier-economist-murphy-takes-on-nordhaus-case-for-a-carbon-tax/>.