



President Obama's Clean Energy Progress: How The Top 10 Energy Priorities Fared During His First Term

Daniel J. Weiss January 9, 2013

Barack Obama's 2008 presidential campaign was built on "hope and change." Millions of Americans went to the polls hoping that the federal government would change its approach to many of the nation's challenges after eight years of retreat, neglect, and inertia under President George W. Bush and Vice President Dick Cheney. This was particularly true for concerns about providing greater public health protection from climate change and air pollution, while also increasing security of our energy supplies. The Bush administration gave scant attention to these challenges, and instead pursued policies designed by Big Oil and coal companies for their economic benefit—policies that ignored growing threats from climate change.

In December 2008, during President-elect Obama's transition, the Center for American Progress proposed the "Top 10 Energy and Environment Priorities for the Obama Administration and 111th Congress."¹ This progressive agenda was designed to protect public health from carbon and mercury air pollution, reduce oil consumption, and simultaneously boost the economic recovery. Four years later the administration accomplished nearly all of these goals despite the worst economy in nearly 80 years and strong opposition from Big Oil, coal, and other energy interests. Unfortunately, the priorities that required congressional action did not occur, though some progress was still made in each of these areas.

Here are brief descriptions of these top 10 energy and environment priorities outlined by CAP in 2008, and their status at the end of President Obama's first term. Shortly, we will propose the top 10 energy and environment priorities for President Obama's second term and the 113th Congress.

TABLE 1
Top 10 energy and environment priorities in President Obama’s first term

President Obama’s first-term goals	Result	Details
Cleaner cars	Done	In 2012 average fuel economy for passenger vehicles was the highest ever. Modern fuel-economy standards will double miles per gallon by 2025.
Take first step to limit carbon pollution under the Clean Air Act	Done	Made “endangerment finding.” Issued carbon pollution standards for vehicles. Proposed limits for new power plants.
Invest in clean energy as part of economic recovery plan	Done	Invested \$90 billion of grants, loans, and tax incentives in renewables, efficiency, and research.
Slash mercury pollution from power plants	Done	Power plant mercury pollution cut by 90 percent. Cut mercury and toxics from boilers, incinerators, and cement production too.
Reduce carbon pollution with cap and trade program	Congress failed to act	Passed House; could not get 60 votes in Senate.
Establish a national renewable electricity program	Congress failed to act	Passed House; could not get 60 votes in Senate. Administration proposed clean energy standard.
Bridge loans to auto companies to prevent bankruptcy and produce more fuel-efficient cars	Done	In 2012 General Motors produced 1 million cars with fuel efficiency of 30 miles per gallon or better.
Establish federal energy-efficiency resources standard	Partial success	Congress didn’t pass most efficiency legislation. American Recovery and Reinvestment Act included \$14.5 billion in efficiency investments. Executive orders require more federal energy efficiency.
Adopt reforms to ease rehabilitation and siting of electricity transmission lines	Done	Invested \$4 billion in modernizing grid.
Investment in clean-energy research, development, and deployment	Done	First funding for Advanced Research Project Agency-Energy for transformational energy projects. Nearly \$17 billion spent on energy efficiency and renewables.

Citations for these data are included throughout the rest of the issue brief.

Let’s look at each of the above priorities in greater detail.

Cleaner cars

Wish they all could be California cars

On his seventh day in office, President Obama launched the development of the first improved fuel economy standards in 20 years.² His administration, supported by 13 major auto companies, the United Auto Workers, the state of California, and environmentalists, promulgated rules to double automobile fuel economy by 2025 while slashing carbon pollution by 6 billion tons.³ The modern standards will save drivers \$8,200 in lower gasoline purchases over the life of their 2025 vehicle, and will reduce oil consumption by 2.2 million barrels per day.

The White House also adopted the first ever efficiency and carbon pollution standards for commercial trucks, vans, and other heavy vehicles. According to the White House, the new standards will “save over 500 million barrels of oil and save vehicle owners and operators an estimated \$50 billion in fuel costs.”

Thanks to these standards, the average fuel economy of cars and light duty trucks (SUVs, minivans) was 23.9 miles per gallon in 2012, the highest ever, according to a University of Michigan analysis.⁴

Take first step to limit carbon pollution under the Clean Air Act

Global warming is a real and present danger

In addition to setting the first limits on carbon pollution from motor vehicles, the Obama administration also made the “endangerment finding” for greenhouse gas pollutants under the Clean Air Act, as recommended by Environmental Protection Agency scientists. President Bush refused to make this finding during his administration despite the strong recommendation by then-EPA Administrator Stephen Johnson.⁵ The endangerment finding is a critical step in the process of establishing limits on carbon pollution from power plants and other large sources.

Invest in clean energy as part of economic recovery plan

Green stimulus and recovery

The American Recovery and Reinvestment Act, passed in February 2009, included \$90 billion in grants, tax incentives, and loan guarantees to increase investments in clean energy.⁶ This was the largest clean-energy program in history. It included assistance for wind and solar electricity generation, advanced batteries, public transportation, advanced energy research, and many other clean energy projects.

Case in point: The Recovery Act, which financed weatherization to make nearly 900,000 homes of low-income families more energy efficient, saving an annual average of \$400 per household in lower energy costs.⁷ The act also “supported 30 new advanced battery and electric vehicle component plants opening across the country so that, by 2015, the U.S. will be able to produce enough batteries and components to support one million hybrid and electric vehicles.”⁸

Slash mercury pollution from power plants

Mercury falling

The Clean Air Act of 1990 required major industrial polluters to severely limit their emission of toxic and hazardous air pollutants. The George W. Bush administration's mercury reduction standard for power plants—the largest domestic emitter—was struck down by the federal courts because it was too weak.⁹ In December 2011 the Obama administration finalized a mercury and toxic pollution standard for power plants that will slash this neurotoxin by 90 percent. Additionally, the standard will save at least an estimated 11,000 lives and prevent 130,000 asthma attacks annually. The mercury standard for power plants will also generate up to \$90 billion in *net* economic benefits from saved lives, reduced health care costs, and fewer missed work days.¹⁰

In addition, on December 20, 2012, the EPA finalized mercury and toxic pollution-reduction standards for industrial boilers, incinerators, and cement kilns.¹¹ The new standards for the first two sources will:

- “Avoid up to 8,100 premature deaths, 5,100 heart attacks, and 52,000 asthma attacks [annually]”
- Enable Americans to “receive between \$13 and \$29 in health benefits for every dollar spent to meet the final standards”

The new pollution-reduction standard for cement kilns will cut mercury pollution by 93 percent and other toxic pollutants by more than 80 percent. Although the cement kiln safeguards provide new public protections, the American Lung Association determined that “industry pressure resulted in weaker standards and delayed implementation.”¹²

Reduce carbon pollution with cap and trade program

Curb the enthusiasm for greenhouse gases

There was great optimism at the start of the Obama administration that the 111th Congress would finally pass comprehensive climate change and clean-energy legislation. In June 2009 the House fulfilled its responsibility by passing Reps. Henry Waxman (D-CA) and Ed Markey's (D-MA) American Clean Energy and Security Act with bipartisan support.¹³ It would have cut carbon pollution by at least 17 percent below 2005 levels by 2020, while reducing oil use and creating hundreds of thousands of clean energy jobs. Unfortunately, the Senate was unable to pass the similar American

Power Act, drafted by Sens. John Kerry (D-MA) and Joe Lieberman (I-CT). This failure occurred because the worst unemployment in 30 years inhibited enough senators that it was impossible to muster a super-majority of 60 votes needed to pass the bill.¹⁴ The jobless rate in 2009 and 2010 was 50 percent higher compared to the time periods when most major environmental laws passed between 1970 and 2009. In addition, Senate Minority Leader Mitch McConnell (R-KY) insisted that his caucus oppose all legislation supported by Democrats. Finally, Big Oil and coal companies, along with other special interests, spent more than \$500 million in lobbying and advertising to ensure enough opposition to defeat the bill.

Despite this disappointment, the Energy Information Administration recently concluded that the United States has reduced its carbon pollution by 9 percent below 2005 levels—halfway to the 2020 goal of the 17 percent reduction below 2005 levels set in these bills.¹⁵ The reduction in carbon pollution is due to emission reductions from motor vehicles (see “Cleaner cars” section) and lower electricity demand. The Energy Information Administration projects, however, that carbon pollution from the energy sector will begin to rise in 2017 without additional action.

In 2012 the Obama administration proposed a carbon pollution standard for new power plants that would allow only half the emissions compared to an uncontrolled plant. That standard must be finalized to slow the growth of emissions. The administration must also adopt pollution limits on *existing* power plants, which emit one-third of all climate pollution in the United States.¹⁶

Establish national renewable electricity program

The answer is blowing in the wind (and shining in the sun)

Thirty states and the District of Columbia have renewable (or alternative) electricity (or portfolio) standards that require utilities to generate a certain portion of their electricity from wind, solar, or other renewable energy sources.¹⁷ A renewable electricity standard was included in both the American Clean Energy and Security Act and the American Power Act in the 111th Congress.

Since neither bill became law, in 2011 President Obama proposed a clean-energy standard that would require utilities to generate 80 percent of their electricity from no- or low-carbon pollution sources by 2035.¹⁸ In 2012 Senate Energy Committee Chair Jeff Bingaman (D-NM) introduced such a bill, but it was never voted on.¹⁹

Despite these setbacks, however, the combination of renewable energy investments in the Recovery Act, concerted administration efforts to site solar projects on appropriate

public lands, existing tax incentives, and state standards led to the doubling of renewable electricity generation under President Obama.²⁰ Nationwide wind electricity doubled to 50 gigawatts, enough to power every home in Alabama, Colorado, Connecticut, Nevada, Virginia, and Wisconsin.²¹

Bridge loans to auto companies to prevent bankruptcy and produce more fuel-efficient cars

Bridge loans to the 21st century

When President Obama took office both General Motors and Chrysler teetered on the brink of bankruptcy. Despite some public and congressional opposition, the president provided loans to the automakers to prevent their collapse and provide them with time to restructure.

One of the stipulations of the auto bailout was that the companies had to develop aggressive plans to return to viability by investing in energy-efficient cars. Both companies agreed to move toward a more fuel-efficient fleet. In a March 2009 press statement President Barack Obama said the landmark agreement would create “a 21st century auto industry that is creating new jobs, unleashing new prosperity, and manufacturing the fuel-efficient cars and trucks that will carry us towards an energy-independent future.”²²

In addition to the successful bridge loans, other major Obama administration policies helped the auto industry and the nation by creating jobs, reducing oil use, saving families money, and cutting pollution. These policies included modern fuel economy standards, investments in research of alternatively fueled vehicles, retooling facilities to manufacture cleaner cars, and incentives for consumers to buy more fuel-efficient vehicles.²³

In addition to returning General Motors and Chrysler to profitability, GM announced on January 4, 2013, that it is the first automaker to sell 1 million cars in one year that get 30 miles per gallon.²⁴

Establish federal energy-efficiency resources standard

Pick the low-hanging energy fruit

Policies encouraging energy efficiency enjoyed bipartisan support over the past four years, and a number of landmark pieces of efficiency legislation were advanced in both houses of Congress only to languish along with the stalled climate legislation. An

Energy Efficiency Resource Standard, which requires utilities to reduce energy use, was included in the American Clean Energy and Security Act.²⁵ The Senate's American Clean Energy Leadership Act had standards for energy efficiency, including strong new building codes and significant investments in industry, utilities, homes, and offices.²⁶ Likewise the bipartisan Home Star, Rural Star, and Building Star bills created incentives for efficiency upgrades.²⁷ The first two bills (Home Star and Rural Star) passed the House in the 111th Congress but were not voted on in the Senate. At the conclusion of the just completed 112th Congress, a modest energy-efficiency bill became law.²⁸ That bill, the American Energy Manufacturing Technical Corrections Act, will modernize some efficiency standards for appliances, and study efficiency strategies employed by businesses and the federal government.²⁹

Despite congressional inaction on nearly all energy-efficiency legislation, the Obama administration provided leadership through other avenues. The American Recovery and Reinvestment Act of 2009, for example, included a historic investment of \$14.5 billion in energy efficiency measures alone.³⁰ President Obama repeatedly used his executive authority to promote energy efficiency. The Better Buildings Initiative made a combined federal-private commitment of \$4 billion for efficiency upgrades on federal buildings.³¹ Executive Order 13514 complemented these efforts, requiring that all new federal buildings achieve “net zero” energy usage by 2030.³² And new federal building construction must meet guiding principles for sustainability.³³ In the near term, 15 percent of the existing federal building stock must meet these principles by 2015.

Adopt reforms to ease rehabilitation and siting of transmission lines

Green the wires

The comprehensive House and Senate bills that failed to pass in the 111th Congress included provisions to ease the siting and construction of electricity transmission lines. Such reforms are essential to ease the transmission of wind or solar generated electricity from rural areas where it's generated to urban areas where it is consumed.

Despite this failure, administration policies in the first term helped modernize the power grid and made electricity transmission more efficient. The Recovery Act, passed in February 2009, has invested \$4 billion in efforts to modernize the electricity grid.³⁴ The Department of Energy reports that customers are “experiencing fewer outages, faster power restoration when outages do occur, more efficient operations, and cost savings” due to these investments.³⁵

The Energy Information Administration reports that 36 million electricity customers had “smart meters” by August 2012. The agency says that these meters “support demand

response and distributed generation, can improve reliability, and also provide information that consumers can use to save money by managing their use of electricity.”³⁶

The president also created an Interagency Rapid Response Team for Transmission, which “aims to improve the overall quality and timeliness of electric transmission infrastructure permitting, review, and consultation by the Federal government on both Federal and non-Federal lands.”³⁷

In 2011 the Federal Energy Regulatory Commission used its existing authority to encourage the use of power lines that will carry renewable energy.³⁸ Richard Caperton, Director of Clean Energy Investment at CAP, concluded:

*[The] FERC’s new rule does two big things that will lead to new transmission lines: It strengthens regional planning processes and clarifies rules on who will pay for new lines... Broad cost allocation can make it easier to build important new lines... FERC’s rule instructs planners to consider certain goals, which will change which lines are prioritized. Ultimately, Order 1000 will give more priority to lines that serve renewable energy and will make those lines more affordable.*³⁹

Invest in clean energy research, development, and deployment

Rise of the new machines

The first Obama administration invested \$90 billion in clean-energy projects—far more than any previous administration.⁴⁰ This investment included support for research, development, and deployment for new and emerging technologies.

In addition to previously noted programs, the investment in clean-energy projects included \$400 million for the Advanced Research Project Agency-Energy, or ARPA-E, for “high-risk, high-reward efforts to develop transformational energy technologies... [including] 60 cutting-edge research projects in 25 states.”⁴¹ Nearly \$17 billion was spent on projects under the Department of Energy’s Energy Efficiency and Renewable Energy office.⁴² A special program (Section 1603) was created to assist companies with solar projects even if the companies could not use existing tax credits. The Advanced Energy Project Credit program (48c) helped industrial facilities become more energy efficient or employ renewable energy.⁴³

Conclusion

This tally of the Obama administration's first-term accomplishments is quite impressive despite congressional failure to pass essential legislation to reduce carbon pollution and establish a renewable electricity standard. Nonetheless, the administration successfully adopted policies to protect public health from air pollution, lower oil consumption, and create jobs. The administration must continue this progress in its second term by building on these successes.

Daniel J. Weiss is a Senior Fellow and Director of Climate Strategy at the Center for American Progress.

Thanks to Richard Caperton, Director of Clean Energy Finance; Bracken Hendricks, Senior Fellow; and, Jackie Weidman, Special Assistant for the Energy Team at the Center for American Progress

Endnotes

- 1 Daniel J. Weiss and Alexandra Kougentakis, "Top 10 Energy and Environment Priorities for the Obama Administration and 111th Congress" (Washington: Center for American Progress, 2008), available at <http://www.americanprogress.org/issues/green/news/2008/12/22/5303/top-10-energy-and-environment-priorities-for-the-obama-administration-and-111th-congress/>.
- 2 Macon Phillips, "From Peril to Progress (Update 1: Full Remarks)," *The White House Blog*, January 26, 2009, available at http://www.whitehouse.gov/blog_post/Fromperilto-progress.
- 3 The White House, "Obama Administration Record on an All-of-the-Above Energy Strategy" (2012), available at http://www.whitehouse.gov/sites/default/files/docs/clean_energy_record_0.pdf.
- 4 University of Michigan, "Eco-Driving Index: Average sales-weighted fuel economy of purchased new vehicles for October 2007 through December 2012" (2012), available at http://www.umich.edu/~umtristw/EDI_sales-weighted-mpg.html.
- 5 Letter from Environmental Protection Agency Administrator, Stephen Johnson, to President George W. Bush, January 31, 2008.
- 6 Daniel J. Weiss and Alexandra Kougentakis, "Recovery Plan Captures the Energy Opportunity" (Washington: Center for American Progress, 2009)
- 7 The White House, "Obama Administration Record on an All-of-the-Above Energy Strategy" (2012)
- 8 The White House, "The Blueprint for A Secure Energy Future: Progress Report" (2012), available at http://www.whitehouse.gov/sites/default/files/email-files/the_blueprint_for_a_secure_energy_future_oneyear_progress_report.pdf.
- 9 Felicity Barringer, "Appellate Panel Rejects E.P.A. Emissions Limits," *The New York Times*, February 9, 2008, available at http://www.nytimes.com/2008/02/09/washington/09mercury.html?_r=0.
- 10 Environmental Protection Agency, *Fact Sheet: Mercury and Air Toxics Standards* (2011) (<http://www.epa.gov/mats/pdfs/20111221MATImpactsfs.pdf>).
- 11 Environmental Protection Agency, *Fact Sheet: Adjustments for Major and Area Source Boilers and Certain Incinerators* (2012), available at http://www.epa.gov/airquality/combustion/docs/20121221_sum_overview_boiler_ciswi_fs.pdf;
Environmental Protection Agency, *Final Amendments to Air Toxics Standards for Portland Cement Manufacturing* (2012), available at http://www.epa.gov/airquality/cement/pdfs/20121220_port_cement_fin_fs.pdf.
- 12 American Lung Association, "Boiler, Incinerator and Cement Cleanup will Cut Pollution and Save Lives," Press release, December 21, 2012, available at <http://www.lung.org/press-room/press-releases/boiler-cleanup-cut-pollution-save-lives.html>.
- 13 *American Clean Energy and Security Act of 2009*, H. Rept. 2454, 111 Cong. 1 sess. (Government Printing Office, 2009); Vote Record, *American Clean Energy and Security Act of 2009*, H. Rept. 2454, 111 Cong. 1 sess. available at <http://clerk.house.gov/evs/2009/roll477.xml>.
- 14 Daniel J. Weiss, "Anatomy of a Senate Climate Bill Death" (Washington, Center for American Progress, 2010).
- 15 Energy Information Administration, *Annual Energy Outlook 2013 Early Release* (2013), available at (<http://www.eia.gov/oiiaf/aeo/tablebrowser/#release=AEO2013ER&subject=4-AEO2013ER&table=17-AEO2013ER®ion=1-0&cases=early2013-d102312a>).
- 16 Environmental Protection Agency, *Greenhouse Gas Emissions*, available at <http://www.epa.gov/climatechange/ghgemissions/gases/co2.html>.
- 17 Center for Climate and Energy Solutions, "Renewable and Alternative Energy Portfolio Standards" (2012), available at <http://www.c2es.org/us-states-regions/policy-maps/renewable-energy-standards>.
- 18 Richard W. Caperton and others, "Helping America Win the Clean Energy Race" (Washington, Center for American Progress, 2011).
- 19 Center for American Progress, "CAP's Kate Gordon on Introduction of Sen. Bingaman's Proposed Clean Energy Standard," Press release, March 1, 2012, available at <http://www.americanprogress.org/press/statement/2012/03/01/16162/statement-caps-kate-gordon-on-introduction-of-sen-bingamans-proposed-clean-energy-standard/>.
- 20 Jessica Goad, "Interior Secretary Ken Salazar on Renewables: 'We Can't Afford to Turn the Clock of Progress Back to the Past,'" *Climate Progress*, August 8, 2012 available at <http://thinkprogress.org/climate/2012/08/08/654781/interior-secretary-ken-salazar-on-renewables-we-cant-afford-to-turn-the-clock-of-progress-back-to-the-past/>.
- 21 American Wind Energy Association, "American wind power reaches 50-gigawatt milestone," Press release, August 7, 2012, available at http://awea.org/newsroom/pressreleases/50_GW_milestone.cfm.
- 22 The White House, "Remarks by the President on the American Automotive Industry," Press release, March 30, 2009, available at <http://www.whitehouse.gov/the-press-office/remarks-president-american-automotive-industry-33009>.
- 23 Daniel J. Weiss and Jackie Weidman, "5 Ways the Obama Administration Revived the Auto Industry by Reducing Oil Use" (Washington: Center for American Progress, 2012).
- 24 Jeffrey N. Ross, "GM claims it's first to sell million 30+ mpg vehicles," *Autoblog*, January 4, 2013, available at <http://www.autoblog.com/2013/01/04/gm-claims-its-first-to-sell-million-30-mpg-vehicles/>.
- 25 Kalen Pruss, "The Campaign for an Energy Efficient America pushes an Energy Efficiency Resources Standard," *Climate Progress*, March 20, 2009, available at <http://thinkprogress.org/climate/2009/03/20/203838/the-campaign-for-an-energy-efficient-america-pushes-an-energy-efficiency-resource-standard/>;
Joe Romm, "The triumph of energy efficiency: Waxman-Markey could save \$3,900 per household and create 650,000 jobs by 2030," *Climate Progress*, June 9, 2009, available at <http://thinkprogress.org/climate/2009/06/09/204217/waxman-markey-energy-efficiency-savings-jobs/>.
- 26 John A. Laitner and others, "The American Power Act and Enhanced Energy Efficiency Provisions: Impacts on the U.S. Economy" (Washington: American Council for an Energy-Efficient Economy, 2010).
- 27 Bracken Hendricks and Tom Kenworthy, "HOME STAR: Putting Americans Back to Work" (Washington: Center for American Progress, 2010); Bracken Hendricks and Jorge Madrid, "A Star Turn for Energy Efficiency Jobs" (Washington, Center for American Progress, 2011).
- 28 *American Energy Manufacturing Technical Corrections Act*, H. Rept. 6582, 112 Cong. 2 sess. (Government Printing Office, 2012)
- 29 *American Energy Manufacturing Technical Corrections Act*, H. Rept. 6582, 112 Cong. 2 sess.

- 30 The Alliance to Save Energy, "Recovery Act – Summary of Energy Efficiency Provisions" (2009), available at http://ase.org/sites/default/files/arra_summary.pdf.
- 31 The White House, "We Can't Wait: President Obama Announced Nearly \$4 Billion Investment in Energy Upgrades to Public and Private Building," Press release, December 2, 2011, available at <http://www.whitehouse.gov/the-press-office/2011/12/02/we-cant-wait-president-obama-announces-nearly-4-billion-investment-energy>.
- 32 The White House, "President Obama signs an Executive Order Focused on Federal Leadership in Environmental, Energy, and Economic Performance," Press release, October 5, 2009, available at <http://www.whitehouse.gov/the-press-office/President-Obama-signs-an-Executive-Order-Focused-on-Federal-Leadership-in-Environmental-Energy-and-Economic-Performance>.
- 33 Department of Energy, *Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding* (2006), available at <http://www1.eere.energy.gov/femp/pdfs/mouhighperfsustainfedfacs.pdf>.
- 34 Department of Energy, *Recovery Act Awards*, available at <http://energy.gov/recovery-act>.
- 35 Patricia Hoffman, *Modernizing the Grid: Getting More out of America's Energy* (Department of Energy, 2012), available at <http://energy.gov/articles/modernizing-grid-getting-more-out-america-s-energy-0>.
- 36 Energy Information Administration, "Smart Meter Deployments Continue to Rise," November 1, 2012, available at <http://www.eia.gov/todayinenergy/detail.cfm?id=8590&src=email>.
- 37 Council of Environmental Quality, "Interagency Rapid Response Team for Transmission," available at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/inter-agency-rapid-response-team-for-transmission>.
- 38 Federal Energy Regulatory Commission, "FERC Transmission Planning, Cost Allocation reforms to benefit consumers," Press release, July 21, 2011, available at <https://www.ferc.gov/media/news-releases/2011/2011-3/07-21-11-E-6.asp>.
- 39 Richard Caperton, "Order 1000 Addresses Hurdles in Planning Processes and Cost Allocation" (Washington: Center for American Progress, 2011)
- 40 *The New York Times* Editorial Staff, "An \$80 Billion Start," February 17, 2009, available at http://www.nytimes.com/2009/02/18/opinion/18wed1.html?_r=0
- 41 The White House, "Obama Administration Record on an All-of-the-Above Energy Strategy" (2012)
- 42 Department of Energy, "American Recovery and Reinvestment Act," available at <http://www1.eere.energy.gov/recovery/index.html>.
- 43 Internal Revenue Service, "Advanced Energy Credit for Manufacturers," available at <http://www.irs.gov/Businesses/Advanced-Energy-Credit-for-Manufacturers-%28IRC-48C%29>.