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US Election Note: Energy Policy after 2012

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Summary points

- Thanks to continued partisan gridlock, major congressional action on energy is unlikely after the 2012 elections. However, this could change if there is a deal to address the budget deficit or if one party makes significant gains in seats.
- Domestic oil and natural gas production will continue to grow under either Barack Obama or Mitt Romney.
- A second Obama administration would be likely to seek to accelerate the commercialization and deployment of clean energy through a mix of tax incentives, encouraging private financing, and regulation of conventional and climate pollutants.
- A Romney administration would be likely to focus on increasing domestic conventional energy production by reducing environmental regulation, particularly on coal-burning power plants, and opening more public land to oil and natural gas development. Excluding basic research, government incentives for clean energy would be likely to be eliminated.

Introduction

In 2008, the price of natural gas in the United States was roughly \$8 per thousand cubic feet (tcf),¹ coal was used to generate more than 47 per cent of all electricity,² and there was a consensus among Democrats and Republicans that climate change was real, caused by humans, and needed to be addressed immediately. It seemed only a matter of time before the country adopted a capand-trade system similar to one backed by both parties' presidential nominees.

Four years later, the energy landscape has changed dramatically. Cap-and-trade is on the ash heap of history, and climate change and clean energy have become enormously politicized. The price of natural gas has dropped as low as \$2.25 per tcf³ thanks to the hydraulic fracturing drilling process (fracking) that has given the United States access to more than 500 trillion cubic feet of natural gas and sent domestic coal use into a precipitous decline. That same fracking technology has led to a domestic oil boom, with imports dropping to 42 per cent of use, the lowest level in two decades.⁴ Clean energy, particularly wind and solar, also saw a boom in the early years of the Obama administration thanks to the American Recovery and Reinvestment Act of 2009 (ARRA).

The growth in domestic shale oil and gas production seems inevitable. But the broader future of US energy faces much more uncertainty. There are enormous differences in how the two candidates would approach regulation of energy production and generation, climate change and America's competition in the global clean energy race. Polling shows that these issues will have little impact on the decisions voters make.⁵ But they will have enormous implications for the price and source of the energy Americans consume, the success of America's energy industries and the fate of international efforts to stem climate change.

2 'Electricity Generation: Coal's Share Down in 2009, Lowest Since 1978,' Institute for Energy Research, 21 July 2010, http://www.instituteforenergyresearch.org/2010/07/21/electricity-generation-coals-share-down-in-2009-lowest-since-1978/.

¹ US Department of Energy, Energy Information Administration, 'U.S. Natural Gas Wellhead Price (Dollars per Thousand Cubic Feet)', Graphic (annual), 31 August 2012, http://www.eia.gov/dnav/ng/hist/n9190us3A.htm.

³ US Department of Energy, Energy Information Administration, 'U.S. Natural Gas Wellhead Price (Dollars per Thousand Cubic Feet)', Graphic (monthly), 31 August 2012, http://www.eia.gov/dnav/ng/hist/n9190us3m.htm.

⁴ Kasia Klimasinska, U.S. Oil Imports to Seen Hitting 20-Year Low 42% of Use', Bloomberg L.P., 23 August 2012, http://www.bloomberg.com/news/2012-08-23/u-s-oil-imports-to-seen-hitting-20-year-low-42-of-use.html.

^{5 &#}x27;For Voters It's Still the Economy: Energy, Terrorism, Immigration Less Important Than in 2008', chart, Pew Research Center, 24 September 2012, http://www.people-press.org/2012/09/24/for-voters-its-still-the-economy/.

Background

Over the past four years, energy issues have been hotly debated in Congress. But with the economy struggling to recover from the recession, few voters placed much importance on such issues as addressing climate change or developing renewable energy. Despite the lack of attention from the general public, however, an energy transformation has taken place within the country.

In 2008, both major parties' presidential nominees supported the concept of an economy-wide capand-trade system to reduce carbon emissions. In 2009, as cap-and-trade passed the Democraticcontrolled House, an economy-wide plan seemed likely to get enacted into law and transform the energy sector. Cap-and-trade, however, died in the Senate under the weight of its own complexity and Republican attacks claiming that it was little more than a massive energy tax that would hurt voters already struggling from the recession.

The failure of cap-and-trade left climate advocates with few other arrows in their quiver. Climate change and energy policy became deeply politicized, with belief in man-made climate change far lower among Republicans (28 per cent) than Democrats (57 per cent).⁶ Many Republican elected officials and voters staunchly opposed any government assistance for greenhouse gas reduction efforts, whether through loan guarantees, grants or tax incentives for renewables.

The politicization of clean energy comes at the end of a period of massive growth in the sector. In his first term, Obama provided more than \$67 billion dollars in funding through ARRA to develop and deploy clean energy technologies. This, coupled with state-level requirements for the use of renewable energy, led to a 110 per cent increase in solar generation and a 116 per cent growth in wind generation in the United States between 2008 and 2011.⁷ The end of ARRA funding and Republican opposition to the continuation of tax incentives for renewables are likely to result in a significant drop in clean energy growth in 2013, particularly for the wind industry.

Domestic oil and natural gas production also saw a boom over the last four years, thanks to deepwater drilling for oil and hydraulic fracturing. Even the 2010 Macondo well disaster, which killed eleven people and leaked 4.9 million barrels of oil into the Gulf of Mexico, has had little impact on oil production.⁸ Despite a temporary moratorium on deepwater drilling after the disaster, 2011 crude oil production levels in the United States exceeded those of the previous eight years.⁹ This growth in production, along with decreased demand owing to economic conditions and improvements in the fuel efficiency of cars and trucks, has helped the United States come much closer to the elusive, but politically popular, goal of eliminating reliance on foreign oil. Imports fell from 57 per cent of total oil needs in 2008 to only 42 per cent in 2012.¹⁰ If the trends of increased production and improved vehicle efficiency continue, imports are projected to drop to as little as 36 per cent of total US oil consumption.¹¹

Production of natural gas has also soared, sending the price tumbling from \$10.36 per tcf in June 2008 to \$2.54 in June 2012.¹² The low price has driven a massive switch in the electricity sector from coal to natural gas and a revival of domestic manufacturing, particularly in the chemical industry. But natural gas fracking is not without controversy. Some of the local communities where natural gas deposits are being developed have raised concerns about the environmental and public health impact of fracking, leading New York and other states to slow development and even consider banning the process.

⁶ Connie Roser-Renouf, Anthony Leiserowitz and Edward Maibach, 'The Political Benefits of Taking a Pro-Climate Stand in 2012', Yale Project on Climate Change Communication and George Mason University Center for Climate Change Communication, 14 April 2012, p. 3, http://environment.yale.edu/climate/news/Political-Benefits-Pro-Climate-Stand/

⁷ US Department of Energy, Energy Information Administration, 'Table 1.1.A. Net Generation by Other Renewables: Total (All Sectors), 2002-July 2012', *Electric Power Monthly*, 24 September, 2012, http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_1_01_a.

⁸ Maureen Hoch, 'New Estimate Puts Gulf Oil Leak at 205 Million Gallons', PBS NewsHour's Rundown Blog, 2 August 2010, http://www.pbs.org/newshour/rundown/2010/08/new-estimate-puts-oil-leak-at-49-million-barrels.html.

⁹ US Department of Energy, Energy Information Administration, 'U.S. Field Production of Crude Oil', 30 August, 2012. http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mcrfpus1&f=a.

¹⁰ US Department of Energy, Energy Information Administration, 'Table 3.3a: Petroleum Trade: Overview', *Monthly Energy Review*, September 2012, p. 41, http://www.eia.gov/totalenergy/data/monthly/pdf/sec3_7.pdf.

¹¹ US Department of Energy, Energy Information Administration, 'Figure 114: Net import share of U.S. petroleum and other liquids consumption in three cases, 1990–2035 (percent)', *Annual Energy Outlook 2012*, p. 96.

¹² US Department of Energy, 'U.S. Natural Gas Wellhead Price', Graphic (monthly).

The politicization of energy and the rapid changes in the domestic energy landscape alone mean major changes in national energy policy are unlikely over the next four years. This could be made even more challenging by the federal government's need to get the mounting debt crisis under control. Any grand bargain to reduce the budget deficit would be likely to eliminate many of the tax incentives that allies of either fossil fuels or renewable and clean energy have used to try to expand their market share through government policy. This leaves regulatory policy issued by the next president as the strongest agent of change at the federal level. The result of the election could mean more environmental regulation to move America further away from coal and towards cleaner forms of energy, or it could mean a lightening of the regulatory load imposed over the last four years in an attempt to increase domestic oil and gas production even further and slow coal's decline.

Policy positions

A second Obama term

The regulatory and budget decisions made by his administration provide a roadmap for what to expect if Obama is re-elected. In the short term, he would be focused on increasing domestic production of oil and natural gas outside environmentally sensitive areas such as the Arctic National Wildlife Refuge. At the same time, his administration would continue to build the regulatory framework to de-carbonize energy and address climate change.

The United States would continue to see an increase in oil development from domestic and Canadian deposits over the next four years. The president has publicly supported the concept of the Keystone XL pipeline, and most expect that he will approve a route through the United States to the Gulf Coast.¹³ Similar growth in production should be anticipated from natural gas. The president has repeatedly highlighted the benefits of shale gas and formed a taskforce to streamline drilling regulation.¹⁴ It is also expected that the Federal Energy Regulatory Commission will approve at least some applications to build liquefied natural gas export facilities, creating additional demand for domestic production.¹⁵

Obama has been explicit in his desire to accelerate America's efforts to address climate change in his second term.¹⁶ While a price on carbon is unlikely, there are other options, such as the recent finalization of new auto efficiency standards that will jump to 54.5 miles per gallon in 2025.¹⁷ If a deal on the deficit is reached and an economic recovery is evident, the president may also revisit a national clean energy standard, but it is hard to see this being done early in a second term.¹⁸

Coal will not fare as well as oil and natural gas in a second Obama term. While low-priced natural gas and recent anti-pollution regulation are the primary causes of coal's decline, the Environmental Protection Agency (EPA) may accelerate the process by proposing a new rule to regulate greenhouse gas emissions from existing power plants sometime after the election.¹⁹ This will make it harder for existing coal plants to operate, furthering America's transition to natural gas. This rule would also drive additional use of renewables such as hydro-electricity in states with high renewable portfolio standards.

¹³ Brianna Lee, '5 Things You Need to Know About ...The Keystone XL Pipeline', PBS, 7 November 2011, http://www.pbs.org/wnet/need-to-know/five-things/the-keystone-xl-pipeline/12200/.

¹⁴ The EPA revised rules to give drillers flexibility in complying with air and water regulations, and the Department of Interior recently issued a proposed rule that gives drillers more latitude in complying with fracking fluid disclosure requirements. 15 Ayesha Rascoe and Emily Stephenson, 'Insight: As Congress looks away, U.S. tiptoes toward exporting a gas bounty',

Reuters, 27 June 2012, http://www.reuters.com/article/2012/06/27/us-usa-Ing-exports-idUSBRE85Q05820120627.

¹⁶ Coral Davenport, 'Conventions Revive Climate-Change Debate', *National Journal*, 6 September 2012, http://www.nationaljournal.com/convention-events/conventions-revive-climate-change-debate-20120906.

¹⁷ US Environmental Protection Agency, 'President Obama Announces Historic 54.5 mpg Fuel Efficiency Standard/Consumers will save \$1.7 trillion at the pump, \$8K per vehicle by 2025', press release, 29 July 2011, http://yosemite.epa.gov/opa/admpress.nsf/0/0019c092ccae8ac2852578dc0056ded0?OpenDocument.

¹⁸ Nat Keohane, 'A Clean Energy Standard for America', The White House Blog, 2 March 2012, http://www.whitehouse.gov/blog/2012/03/02/clean-energy-standard-america.

¹⁹ David Roberts, 'So what's EPA up to with its CO2 regulations?', Grist Magazine, 13 November 2010, http://grist.org/politics/2010-11-12-so-whats-epa-up-to-with-its-co2-regulations/.

Nuclear energy's fate is less certain. Obama has voiced strong support for its expansion, and the first new reactors in the United States for more than 30 years are now being built. The market, however, makes it difficult for any more plants to be built regardless of the level of presidential support.

Under Obama, the government will continue to provide funding to the private sector to develop clean energy, albeit with far lower levels than it received during the heyday of ARRA in 2009–11. The president has expressed his desire for the continuation of the Production Tax Credit and Investment Tax Credit that provide financing for the deployment of wind and solar generation. If approved by Congress, which is by no means certain, this would result in sustained solar expansion and an estimated 20GW of additional wind capacity.²⁰ Obama's 2013 budget increased funding for research and development at the Department of Energy by 7 per cent.

A Romney presidency

Romney's positions on energy are far less specific than Obama's. He has, however, made energy independence one of the main tenets of his presidential campaign, focusing on reducing the burden of federal regulations that restrict production of all domestic sources of energy, particularly oil, natural gas and coal. The energy plan released by his campaign in August 2012 highlights regulatory adjustments meant to maximize extraction of oil and gas offshore and on private and public lands.²¹

Romney has set a goal of North American energy independence by the year 2020, an aggressive target that he proposes to meet with increased domestic production in the Gulf of Mexico, production in new areas of Alaska and off the Atlantic coast, turning regulation of energy production on federal lands over to state authorities, and the rapid completion of the Keystone XL pipeline that would bring Canadian oil to US refineries.²² He has said for most of the campaign that he would seek to maintain tax incentives for oil and gas producers, arguing that they are critical to continuing strong domestic production. However, Romney has recently equivocated on this position, saying that *all* tax incentives will be on the table for deficit reduction.

Romney has been equally supportive of utilizing America's vast coal reserves, advocating rolling back regulations that restrict coal-mining and emissions at power plants. While the courts have affirmed that EPA regulations limiting greenhouse gas emissions from new coal-fired power plants are in keeping with the Clean Air Act, Romney has suggested he would seek to have the act revised so as to exclude carbon dioxide from its jurisdiction, allowing existing coal plants to operate without additional pollution controls and new plants to be built. He has been equally supportive of nuclear energy, stating that he would like to streamline regulations to reduce the cost of building new reactors. However, he has stopped short of supporting government financing assistance, something the industry has said it needs in order to expand.

Romney's energy policies are driven, in part, by his publicly stated doubts about anthropogenic climate change.²³ He has been critical of Obama's efforts to lower America's greenhouse gas emissions in an attempt to address the issue. The complete omission of climate change from his energy plan would also make it much more difficult for a Romney administration to justify support of a carbon tax, despite the fact that at least some of his top economic advisers have advocated such a policy.

Basic research and development for energy would continue under a Romney administration. He has also stated his support for deployment of all energy sources, including wind and solar, when they are competitive with other fuels. But many of the federal incentives for mature renewable technologies, along with funding for commercialization, would be in doubt. Romney has made it

^{20 &#}x27;Impact of the Production Tax Credit on the U.S. Wind Market', Presentation, Navigant Consulting, Inc., 12 December 2011, p. 7, http://www.awea.org/learnabout/publications/reports/upload/AWEA-PTC-study-121211-2pm.pdf.

²¹ Mitt Romney, 'Believe in America: Mitt Romney's Plan for Jobs and Economic Growth', 5 August 2012, pp. 91–5, http://www.mittromney.com/blogs/mitts-view/2011/09/believe-america-mitt-romneys-plan-jobs-and-economic-growth.

²² Mitt Romney, 'The Romney Plan for a Stronger Middle Class: Energy Independence', 23 August 2012. http://www.scribd.com/doc/103646979/Energy-Policy-White-Paper-8-23?secret_password=10rki016qc2ergap31c0.

²³ Brad Plumer, 'Do Paul Ryan and Mitt Romney Disagree on Climate Change?', *Washington Post*, 14 August 2012, http://www.washingtonpost.com/blogs/ezra-klein/wp/2012/08/14/do-paul-ryan-and-mitt-romney-disagree-on-energy-policy/.

clear that he wants to minimize government interference in the market, and specifically to stop 'picking winners and losers' with federal policy. That is why he has called for an end to the production tax credit that supports wind energy, saying that technologies such as solar and wind should stand on their own without this subsidy. The fate of the Advanced Research Projects Agency-Energy (ARPA-E) and other energy innovation programmes is less clear, although the budgets proposed by Republican vice-presidential nominee Paul Ryan would reduce funding. Romney has also remained consistent in his criticism of the new vehicle emissions and fuel efficiency standards set by the federal government, which he views as 'extreme,' although it is unclear how he would roll back these politically popular standards.

International implications

If Congress remains as divided and unproductive as it has over the past two years, energy policy will be limited to initiatives that fall within the powers of the White House. While not nearly as versatile as the legislative branch, the executive does offer certain tools that could be used to shape policy, such as regulations, executive orders and the ability to adjust (or cease) the enforcement of pre-existing laws in certain instances. Regardless of any limitations of the presidency, there could be very real implications for the international community depending on who fills the office.

Both candidates will push for energy 'independence' – Romney through increased domestic production and Obama through a combination of production, fuel efficiency and promotion of alternatives such as biofuels and electric vehicles. But neither will bring the country anywhere close to complete independence within the next four years.²⁴

As long as the United States relies on *any* substantial quantity of oil from *any* part of the world, it will be affected by prices on the global oil market and – like any other country – it will attempt to shape geopolitics to serve its best interest. But unlike any other country, it has the largest military force in the world and has shown a willingness to assert itself diplomatically and/or militarily to protect foreign supplies of oil. Given its greatly reduced dependency on oil from the Middle East, the United States might be less inclined to exercise its costly military power in response to events that threaten to disrupt exports from that particular area of the world. Ultimately, the decision to intervene in these cases tends to be made by the president, with or without the cooperation of Congress.

With roughly 18 per cent of global greenhouse gas emissions, the United States is the world's second-largest contributor to climate change after China.²⁵ Global climate initiatives hinge on America's willingness to substantially cut its own emissions and engage in international efforts that will bring other major emitters to the table. How it engages in this process will differ dramatically depending on the occupant of the White House. International negotiations have struggled in recent years. A second Obama term could see the president trying to revive or redirect America's contribution to these efforts, while a Romney administration would most likely allow the negotiations to further wither.

The difference between Obama's and Romney's respective approaches to promoting domestic industries and innovation could also make a difference on a global level. With the help of the federal government, the United States pioneered many of the technologies that have revolutionized energy production around the world, including solar photovoltaic, hydraulic fracturing and nuclear fission. But fiscal restraint will require difficult choices to be made across the government's budget, including in research and development. Both candidates support tax incentives to encourage R&D in the private sector, but their assessment of whether and how to help industries secure financing or encourage demand will differ sharply – as will the subsequent results. If America lags behind in

²⁴ Blake Clayton, 'Is U.S. Energy Independence Possible?', Council on Foreign Relations, 21 June 2012, http://blogs.cfr.org/levi/2012/06/21/is-u-s-energy-independence-possible/.

²⁵ US Department of Energy, Energy Information Administration, 'Countries: International Energy Statistics: Indicators: 2010',

http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=90&pid=44&aid=8&cid=all, &syid=2010&eyid=2010&unit=MMTCD.

innovation, so too will the technology transfer that has been so transformative for economies all around the world.

The outcome of the presidential election could also have an impact on the global trade of energy technologies. The current administration has moved aggressively to challenge Chinese government practices that provide subsidies to Chinese manufacturers of solar and wind components – something it sees as disadvantaging US manufacturers. Both candidates have pledged to push back on unfair trade practices, which could affect the outcome of similar efforts led by European firms, and could increase tensions in global clean energy trade.²⁶

Conclusion

While energy is not a top-tier issue for the American public, Obama and Romney present very different visions for how the United States will generate and consume energy over the next four years – and perhaps set the stage for the next twenty. They provide a clear choice for American voters and explicit differences for international onlookers seeking to understand the path the country might take in 2013 and beyond. Either will have a significant impact on oil and natural gas supplies on the world market and, at least as important, on the likelihood that the world will make progress in reducing greenhouse gas emissions before 2020.

²⁶ See May China Election Note for more details on China policy, http://www.chathamhouse.org/sites/default/files/public/Research/Americas/0512usen_china.pdf

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