

KEY TAKEAWAYS

Both presidential candidates have made achieving energy self-sufficiency part of their campaigns.

The U.S. has become less reliant on foreign oil imports due to the exploitation of domestic shale oil, but it seems unlikely that the U.S. could ever meet all oil needs domestically.

Both candidates' energy policy statements reinforce their larger campaign narratives and reflect their respective world views, but neither seems to realistically address the underlying economics of energy independence.

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ENERGY INDEPENDENCE: WORTH THE COST?

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Both presidential candidates have discussed energy independence as a goal for their administrations, though their actual platforms speak more to their broad policy orientations than to any real specifics. We doubt that the United States could be truly energy independent for any sustained period. Given the high costs of U.S. energy production relative to other parts of the world, it's unclear whether true energy independence would be economically sensible. However, the U.S. shale revolution has fundamentally altered the economics of the global oil market and may keep prices subdued for years to come. Investors looking for opportunities in energy will find them, but they will have to be more selective than in years past.

INDEPENDENCE DAY

Both presidential candidates have suggested that the United States needs to obtain, or in some cases, even maintain existing energy independence; though we have not actually attained it. Granted there will always be a certain amount of hyperbole by any candidate when speaking, particularly with statements that are in response to questions or in a debate, as opposed to formally released statements. With large resources of coal and natural gas, not to mention the use of nuclear and hydro-electric power, the United States is already largely energy independent. The obvious exception is in the production and use of crude oil. The United States has greatly increased its production of oil, largely due to advances in drilling techniques and the ability to extract oil from shale—a process known as “hydro-fracturing” or “fracking.” However, even with the great increase in domestic production, the United States is far from self-sufficient in oil production [Figure 1].

POLICY MATTERS

Energy policy is an area where the two candidates' policies vary greatly. It's not just that their proposed policies are different, but that they are informed by divergent world views. Hillary Clinton's energy policy is highly influenced by her view on environmental issues, including but not limited to her view on global warming. Her energy policy is basically her environmental one. Donald Trump's energy policy is defined largely by his aversion to government regulations, as well as his desire for increased U.S. global autonomy [Figure 2].

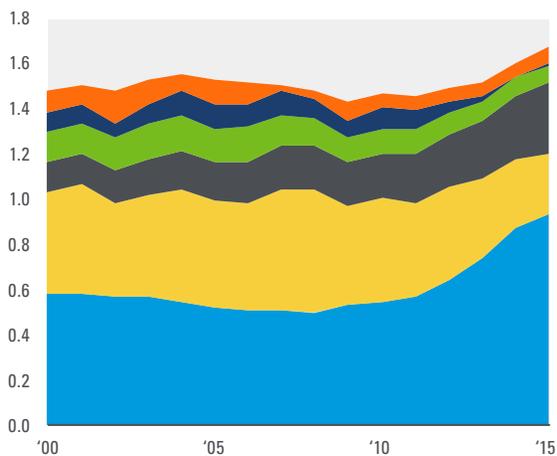
Unfortunately, neither candidate has been a model of consistency on energy policy. Hillary Clinton has recently been publically skeptical on fracking, stating in the March 6, 2016 debate with Bernie Sanders, “So by the time we get through

all my conditions, I do not think there will be many places in America where fracking will continue to take place.” However, she promoted fracking, and exports of U.S. energy, during her time as Secretary of State and during some of her private sector speeches, the contents of which were released through WikiLeaks. Should she be elected, Clinton would have to somehow reconcile these two inconsistent views.

1 PRODUCTION HAS INCREASED, BUT A LONG WAY FROM INDEPENDENCE

Sources of U.S. Crude Oil (Millions of Barrels per Day)

● U.S. ● OPEC ● Canada
● Mexico ● Nigeria ● Other Non-OPEC



Source: LPL Financial, Energy Information Agency 10/22/16

Data are as of 09/30/16.

Donald Trump has generally been consistent on his views of domestic energy, but less clear on foreign oil. Trump has vowed to renegotiate the North American Free Trade Agreement (NAFTA). Over half of the imported oil in the U.S. comes from Canada or Mexico. However, both countries, particularly Mexico, are also major consumers of petroleum products produced in the U.S., like gasoline and diesel. Trump has also made repeated claims that the U.S. should have taken Iraq's oil after the second Gulf War and "I'm only interested in Libya if we take the oil. If we don't take the oil, I'm not interested." Ignoring any practical considerations, it's hard to see how controlling overseas oil reserves supports either U.S. energy independence or creates jobs domestically.

The U.S. still imports 44% of its oil.

ENERGY FREEDOM MAY BE TOO EXPENSIVE

Though the country desires oil self-sufficiency, one of the reasons we import energy is cost. Most U.S. energy companies reduced production as oil prices fell [Figure 3]. The one exception has been companies that operate in the Permian Basin, a region primarily in Western Texas and Eastern New Mexico that covers 75,000 square miles. If the

2 CANDIDATE DIFFERENCES ON ENERGY POLICY

Policy	Clinton	Trump
Fracking	Limited support — includes right of localities to ban fracking	Supports, with much reduced regulatory burden
Offshore Drilling	Highly skeptical	Supports
Arctic Wildlife Reserve Drilling	Opposes	Supports
Climate Change	Driver of energy policy	Does not believe that climate change is man made
Keystone Pipeline	Opposes	Supports
Path to Energy Independence	Reducing need for fossil fuels by expanding renewable energy and increasing conservation	Supports renewables, but says U.S. should not favor one energy source; lower regulation on drilling to increase production

Source: LPL Research; HillaryClinton.com, DonaldJTrump.com 10/23/16

Permian were a separate state, it would be 18th largest state in the union, falling between South Dakota and Washington State for pure land mass. Despite this size, the region's population is less than 600,000. The Permian is also located reasonably close to the major oil refineries in Eastern Texas and Louisiana. Many of the hydrocarbons in the basin (both oil and gas) are relatively close to the surface. This combination of geology and geography make the Permian the lowest cost source of oil in the U.S. Costs vary greatly from well to well, but \$35 per barrel is a reasonable estimate of the average cost across the basin. Costs across all basins have come down with improving technology and greater economies of scale; though they could still decline somewhat from here. However, given the geology, it's likely that the Permian will be the lowest cost producer over the long term.

FILLING UP THE BARREL

Even at \$35/barrel, oil from the Permian basin is probably three times more expensive than oil from

places like the Middle East. Production costs from Saudi Arabia are closely guarded state secrets, but are estimated to be under \$10/barrel. It's likely that all the major producers in that region have average costs of less than \$15/barrel. So even after shipment to U.S. refineries, oil from sources offshore has a pretty substantial cost advantage.

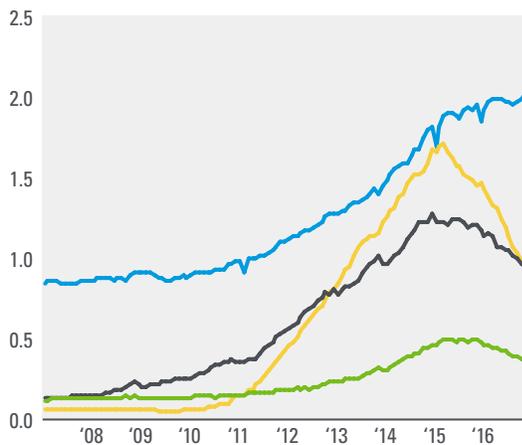
Given the cost differential, how can the U.S. be truly oil independent? There are really three possibilities:

1. Reduce oil consumption such that we can rely on the lowest cost domestic oil sources.
2. Remove regulations to cut production costs enough to make more domestic production viable.
3. Accept significantly higher prices for oil to make U.S. production economically viable.

Clinton's proposals seem to focus on the first option, Trump's on the second. The third option would be political suicide, and the higher costs to consumers may not balance the economic benefit of energy independence. In all likelihood, U.S. energy production will remain closer to the current status quo than either candidate wants to admit. ■

3 PRODUCTION REMAINS STRONG IN LOW COST PERMIAN

U.S. Production Peaks, Millions
 ● Permian ● Eagle Ford ● Bakken ● Niobrara



Source: LPL Financial, Energy Information Agency 10/22/16
 Data are as of 10/01/16.

THE KEYSTONE PIPELINE TEST: LITMUS OR RORSCHACK?

A major political issue in 2012 was the Keystone pipeline, which would bring Canadian oil to the U.S. It quickly became a political litmus test. The environmental community sees it as representing a vote rejecting global warming and expansion of the use of fossil fuels, whereas more conservative voters viewed it as a vote on economic activity. The development of U.S. shale oil, particularly by the low-cost shale producers in Western Texas, has largely made this issue irrelevant. The Keystone pipeline is more important to Canadian interests than U.S. ones. Maybe Keystone will be meaningful again one day, but it is probably irrelevant for the near future. Yet, this issue still is mentioned occasionally in the 2016 campaign, less because of its real importance than its symbolic importance.

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