The background of the slide is a photograph of an oil pumpjack (jack-o'-lantern) in silhouette against a bright, hazy sky at sunset or sunrise. The pumpjack is the central focus, with its long walking beam and counterweights clearly visible. Other smaller pumpjacks and industrial structures are visible in the distance, creating a sense of an oil field. The sky transitions from a deep blue at the top to a warm orange and yellow near the horizon.

WHAT'S NEXT: The Effects of Falling Oil Prices on the Oil & Gas Industry

by Karen J. Anspaugh

March 26, 2015
New Orleans, LA 70112

WHAT HAS LED TO THE DECLINE IN OIL PRICES?

West Texas Intermediate oil benchmark prices per barrel:

- Peaked on July 11, 2008 at high of \$147.27
- Dipped on March 16, 2015 to low of \$42.85
- See *“Fossil Fuels Will Save the World (Really)”*
[By: Matt Ridley, Wall Street Journal \(March 13, 2015\)](#)
- See *“How are Oil Prices Set and Why are They Falling Fast?”*
[By: Karen J. Anspaugh, Bingham Greenebaum Doll LLP \(Dec. 19, 2014\)](#)

WHAT FACTORS INFLUENCE OIL PRICES?

1) SUPPLY:

- Global economic downturns result in reduced consumption, demand and price
- Historically, supply was governed by OPEC (founded in 1960)
- On November 27, 2014, OPEC voted not to reduce supply despite lower demand and falling prices
- Global benchmark prices are now greatly influenced by U.S. production
- The U.S. is the world's largest producer of natural gas
- The U. S. produces more oil than all other countries except Saudi Arabia

2) DEMAND:

- It is anticipated that oil storage facilities in the U.S. will reach full capacity in May or June of 2015
- Global demand for oil has decreased as the economies of China, Japan and Europe are flat or struggling

3) TECHNOLOGICAL ADVANCES:

- Multilateral horizontal drilling techniques
- Well depths reaching 10,000 feet and greater are routinely drilled
- High pressure, high volume, multi-stage, slick water fracking
- 2/3 of the world's oil and gas reserves are in unconventional resources

4) POLITICS:

- Wars, political unrest, embargoes

5) FUTURES:

- If oil benchmarks fall below the price agreed upon in futures contracts, operators will decrease supply
- Decreased supply eventually depletes inventories and benchmark prices rebound

WILL OIL PRICES REBOUND?

- 1) Many experts anticipate that oil prices will remain depressed for the next 2 to 4 years
- 2) A survey of global oilfields shows that most fields are productive at \$40 per barrel; thus, production will continue at low prices
- 3) The U.S. produces 9.4 million barrels a day, which is a 32-year high
- 4) U.S. production will increase in 2015
- 5) Certain oil producing countries (Russia) must continue to produce at lower prices to prevent their economies from collapsing
- 6) Saudi Arabia has \$726 billion in foreign reserves stored to ride out the oil glut so has no incentive to reduce OPEC production

WHAT FACTORS IMPACT U.S. PROFITABILITY?

- 1) Overregulation - Permit and approval delays are common
- 2) Proposed Regulations - Business climate is unstable as conditions are unknown
- 3) High taxation and fees (i.e. Pennsylvania Severance Tax)
- 4) Governmental and public opposition (Federal to local zoning)
- 5) Continued enforcement of the 1973 oil export ban
- 6) Keystone XL Pipeline has not been approved

(Note that only #2, #5 and #6 set out above are discussed in detail hereafter)

#2 PROPOSED REGULATIONS (Regulatory Push by Administration)

When the oil and gas industry is strained to survive low prices, the administration is increasing regulations. Increased energy costs to the consumer, energy independence and national security do not seem to be factors that motivate government regulatory agencies, even with terrorism and ISIS in rampant expansion.

“Oil and Gas Regulatory Push Coming from Obama Administration: Methane Emissions, Fracking, Arctic Drilling, Rail Tanker Cars All Would Be Subject to New Rules”

[By: Amy Harder, Wall Street Journal \(Dec. 30, 2014\)](#)

“The Obama administration is planning to release in the coming months a series of regulations on the oil and natural gas industry, a response to the nation’s energy boom that also is aimed at burnishing President Barack Obama’s environmental legacy in his final two years.”

“The coming rules—at least nine in total—would include the first-ever federal standards addressing methane emissions, stricter controls on hydraulic fracturing, drilling requirements in the Arctic, new rules governing oil shipped by trains and tougher standards on offshore drilling technology.”

Regulations Rundown | Moves planned by the Obama Administration

REGULATORY ACTION	THE BASICS	PROPOSAL	FINAL
Hydraulic Fracturing	The Interior Department plans to require chemical disclosures and tougher standards for fracking for wells on public lands.	May 2013	early 2015
Methane Emission Regulations by the EPA	EPA has said it would decide whether to or to what extent it would establish the first national standard for methane emissions as an air pollutant.	January 2015	To Be Determined
Arctic Drilling	The Interior Department is writing proposed regulations for offshore drilling in the Arctic.	Early 2015	October 2015
Royalty Rates for Onshore Oil and Gas Leases	The Interior Department will seek comment on whether it should change the royalty process for onshore oil and gas leases to, according to the administration, "better ensure a fair return to the public."	Early 2015	To Be Determined
Blowout Preventers	The Interior Department is promulgating tougher standards for blowout preventers, a kind of drilling equipment that broke down and partly caused BP's Deepwater Horizon explosion in 2010.	February 2015	July 2015
Methane Emission Regulations by the Interior Department	Interior's Bureau of Land Management is writing a rule to require companies to cut down on how much methane, a component of natural gas, is vented from or flared from wells.	April 2015	April 2016
Reconsideration of a 2012 EPA Fracking Rule	Facing legal threats from both industry and environmentalists, EPA agreed to reconsider, and potentially expand, portions of a rule it finalized in 2012 cutting down on traditional pollutants from new hydraulically fracked natural-gas wells.	May 2015	June 2016
Transportation of Crude Oil by Rail	In response to the increase in crude-by-rail and a series of fiery accidents, the Transportation Department is upgrading its safety regulations for trains carrying flammable liquids (oil & ethanol).	July 23, 2014	2015
Renewable Fuel Standards	As required by a 2007 law, EPA requires increasingly large amounts of different types of ethanol to be blended into gasoline each year. Given multiple delays, EPA hopes to address the volume levels for 2014, 2015 and 2016 all in 2015.	November 15, 2013	2015

Source: U.S. federal government

Source: [Amy Harder, Wall Street Journal \(Dec. 30, 2014\)](#)

#5 CONTINUED ENFORCEMENT OF THE 1973 OIL EXPORT BAN

“U.S. oil exports have been banned for 40 years. Is it time for that to change?”

[By: Brad Plumer, Washington Post \(Jan. 8, 2014\)](#)

- 1) The ban was passed in response to the 1973 oil embargo
- 2) World oil prices were soaring, and Congress was trying to limit U.S. exposure to the global crude markets
- 3) The goal was to keep crude oil at home, limit the nation's reliance on imports, and avoid volatile global markets
- 4) The Commerce Department has granted limited exceptions
- 5) There is no ban on exporting oil refined into gasoline or diesel fuel so it is processed and then shipped overseas
- 6) The export ban is hurting U.S. producers of light, sweet crude as many refineries on the Gulf Coast are capable of processing heavier crude only
- 7) It is difficult to ship oil to refineries on the East Coast that can process lighter oil

WHAT ARE THE ARGUMENTS AGAINST LIFTING THE BAN?

- 1) Gas prices: Opponents argue that lifting the export ban could raise the price of gasoline.
- 2) Environment: A recent report from Oil Change International agreed that lifting the export ban would allow U.S. companies to drill for more oil, which they state would increase overall greenhouse-gas emissions.
- 3) Lobbying: Many U.S. refineries support the ban as they can buy oil at artificially low prices and then export the gasoline and diesel abroad at a markup.
 - “We wouldn't be doing as well financially if it weren't for that [the ban]” a refinery lobbyist told National Journal's Amy Harder.
 - Valero Energy, a major U.S. refiner, has spoken against allowing exports.

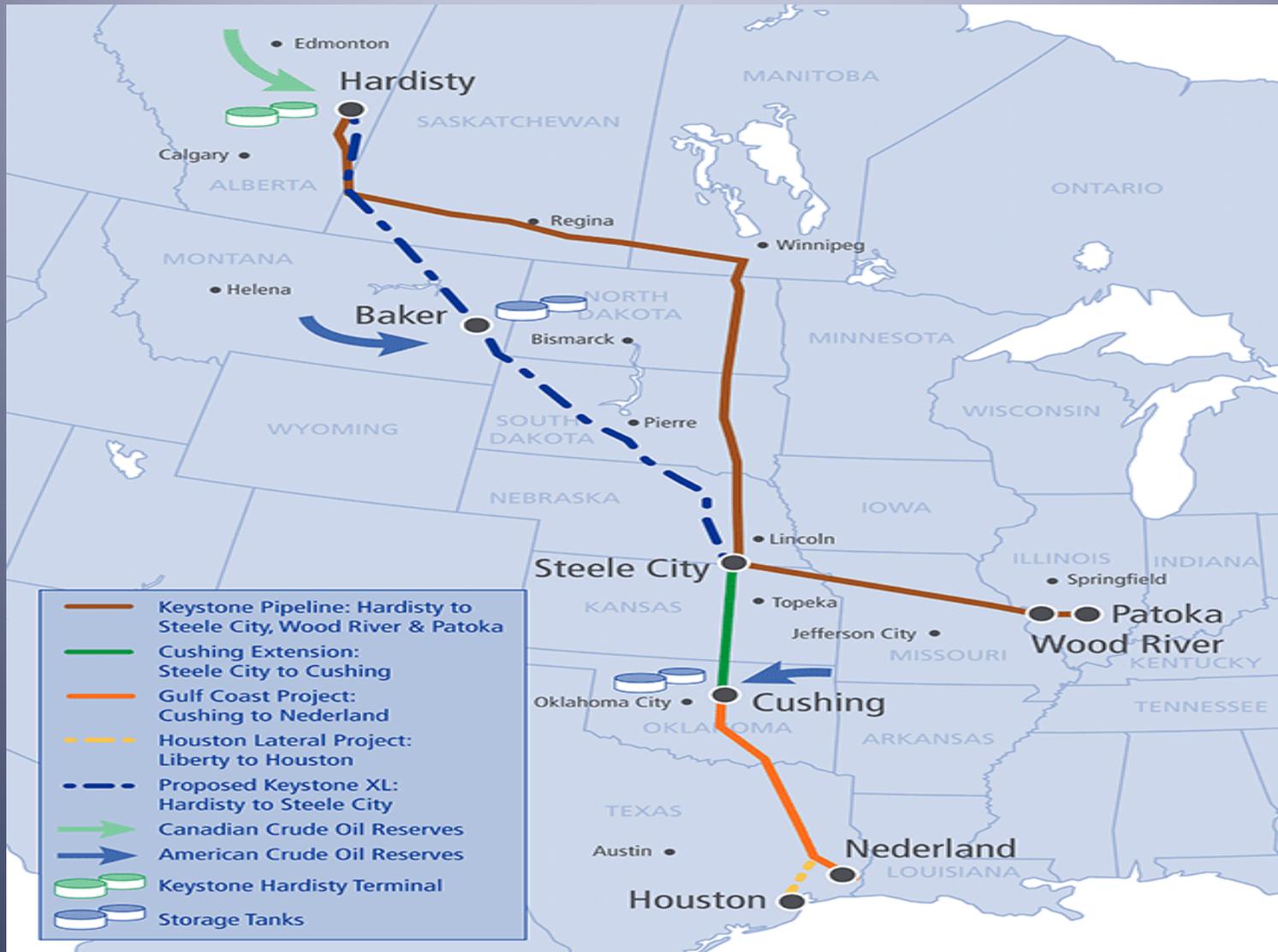
#6 KEYSTONE XL PIPELINE HAS NOT BEEN APPROVED

“Keystone XL Pipeline: Why is it so Disputed?”

[By: Micah Luxen, BBC \(Feb. 25, 2015\)](#)

A. WHAT IS THE KEYSTONE XL PIPELINE?

- 1) Proposed to run 1,179 miles from the oil sands in Alberta, Canada, to Steele City, Nebraska, where it would join the Keystone pipeline
- 2) It could carry 830,000 barrels of oil each day
- 3) Pipeline proposed by TransCanada
- 4) Has the same origin and destination as the Keystone pipeline approved in 2008 by President George W. Bush; however, the XL takes a more direct route



Source: [Keystone XL Pipeline - Overall Route Map, TransCanada](#)

A section running from Cushing, Oklahoma, to the Gulf opened in January 2014.

B. WHY IS THE KEYSTONE PIPELINE DISPUTED WHEN OTHERS ARE NOT?

- 1) Because the XL pipeline crosses the U.S./Canadian border, the project requires presidential permit prior to construction
- 2) The Canadian National Energy Board approved the Keystone XL pipeline in March 2010
- 3) Obama did not approve at that time citing an inadequate environmental assessment
- 4) The EPA encouraged Obama not to approve the pipeline

C. DEMOCRATIC/ENVIRONMENTALIST OPPOSITION TO THE PIPELINE:

- 1) Pipeline will add to carbon emissions
- 2) Pipeline will contribute to global warming
- 3) Risk of spills (Why in light of smart pigs?)
- 4) Pipeline means a commitment to develop Alberta's oil sands
- 5) Veto is a symbolic statement against America's energy future

Environmentalists adopted the Keystone XL cause because it is easy to organize around, Politico's Energy Reporter, Elana Schor, told MSNBC. The dangers of pollution may seem abstract to many, and it's tough to drive people into the streets over EPA carbon rules.

“But Keystone, a piece of steel, something you can picture farmers having to deal with, it's much more evocative and emotional for environmentalists, and they've done a lot of work to elevate it as a symbol.”

[Source: Micah Luxen, BBC \(Feb. 25, 2015\)](#)

D. REPUBLICAN POSITION IN FAVOR OF THE PIPELINE:

- 1) Pipelines are the safest method to transport oil and gas
- 2) Pipeline would allow for an increased supply of oil from Canada
- 3) Canada already sends 550,000 barrels of oil per day to the U.S. via the existing Keystone Pipeline to refineries on the Gulf Coast
- 4) An increased supply of oil from Canada would mean a decreased dependency on the Middle Eastern market
- 5) According to market principles, the more oil in the market, the lower the price for consumers
- 6) The infrastructure project would create 42,000 jobs over a two-year construction period, the U.S. State Department estimates
- 7) 35,000 jobs would remain after the pipeline is built
- 8) Amount of oil produced in northern Alberta is projected to double by 2030

- “The State Department’s latest study — the product of more than five years of investigation — largely confirms the conclusions of previous assessments and those of many independent energy experts: Allowing the firm TransCanada to build Keystone XL, which would run across the Canadian border to Steele City, Neb., is unlikely to have significant effects on climate-change-causing greenhouse gas emissions. The real downside to rejecting the project concerns jobs (construction would create at least several thousand), relations with Canada and the message that arbitrary decision-making would send to investors and other nations.”

[Source: Editorial Board, Washington Post \(Feb. 5, 2014\)](#)

- “The U.S. State Department’s Final Supplement Environmental Impact Statement (EIS) for the proposed Keystone XL pipeline project provides a fact-based conclusion that the construction of the Keystone XL pipeline is indeed safe for the environment. The Department’s Final SEIS should put to rest any doubt about the environmental impact of the project and, we hope, pave the way toward final approval of the Keystone XL pipeline, which will create thousands of jobs and bolster the nation’s energy security while responsibly protecting the environment.”

[Source: Texas Oil and Gas Association, TransCanada](#)

“Alternatives to the Keystone XL will have greater environmental impact”

[Source: United States Department of State - Bureau of OES](#)

“The total annual GHG emissions (direct and indirect) attributed to the No Action scenarios range from 28 to 42 percent greater than for the proposed Project [Keystone XL].”

- While the Keystone XL Pipeline war rages 11,600 miles of pipeline have been added
- Overall pipeline has increased almost 25% in the last 10 years
- About 3.3 million barrels per day of capacity has been added since 2012.

“Oklahoma officials say pipelines are safest way to move oil and natural gas: Increased oil and natural gas production has led to new and expanded pipelines throughout the country”

[By: Adam Wilmoth, NewsOK \(Jan. 5, 2014\)](#)

- Proper maintenance and regulation is the key to ensuring energy transportation safety, Oklahoma Energy and Environment Secretary Michael Teague said.
- “Pipelines give you the safest system in terms of health, safety and the environment. I know there are concerns with environmental impacts of pipelines, but if done correctly and regulated correctly, pipelines are going to give you the best long-term solution,” he said.
- The train disasters in Ontario and West Virginia were the latest in a long line of explosions from oil trains, or “bomb trains” as they have been called derisively by their critics. The problem, regulators thought, were the thin-walled flimsy DOT-111 railcars, which had not originally been designed to safely carry volatile crude oil.

WHAT IS OPEC'S CURRENT STRATEGY?

The present OPEC strategy appears to be the strategy beneficial to Saudi Arabia alone.

“Saudi Arabia has fiscal buffers enabling it to cover projected deficits while oil prices are low for at least 4 years and perhaps more than 8 years, according to an analyst at Arab Petroleum Investments Corp.”

[Source: OGI Editors, Oil and Gas Journal \(March 3, 2015\)](#)

OPEC produces approximately 40% of the world's crude oil; however, some of the member countries (listed below with the year they joined) are facing national financial crisis. The price per barrel needed to balance 2015 national budgets are as follows:

Iran (1960)	\$130.70
Iraq (1960)	\$100.60
Kuwait (1960)	\$54.00
Saudi Arabia (1960)	\$106.00
Venezuela (1960)	\$117.50
Qatar (1961)	\$60.00
Indonesia (1962)	
Libya (1962)	
UAE (1967)	\$77.30
Algeria (1969)	\$130.50
Nigeria (1971)	\$122.70
Angola (2007)	\$98.00

[Source: Roger Andrews, OilPrice.com \(Dec. 11, 2014\)](#)

WHAT ARE THE GLOBAL OIL TRENDS?

In 2004:

- The daily global oil consumption was 83 million barrels per day
- The top 21 producers generated 64.1 million barrels of oil equivalent per day

In 2014:

- The daily global oil consumption was 93 million barrels per day
- The top 21 producers generated 80.4 million barrels of oil equivalent per day

[Source: Christopher Helmun, Forbes \(March 19, 2015\)](#)

“The World’s Biggest Oil and Gas Companies – 2015”

[By: Christopher Helmun, Forbes \(March 19, 2015\)](#)

- North American oil and gas producers are underperforming and growth is stagnant compared to the explosive growth of state-run foreign companies
- The top 21 global oil and gas producers, who generate 50% of the world’s supply, are listed hereafter, followed by per day production levels measured by barrel of oil equivalent

TOP 21 GLOBAL OIL AND GAS PRODUCERS

1.	Saudi Aramco (Saudi Arabia)	12 million
2.	Gazprom (Russia)	8.3 million
3.	National Iranian Oil (Iran)	6 million
4.	<i>Exxon Mobil (U.S.)</i>	<i>4.7 million</i>
5.	Rosneft (Russia)	4.7 million
6.	PetroChina (China)	4 million
7.	BP (UK)	3.7 million
8.	Royal Dutch Shell (UK/Netherlands)	3.7 million
9.	Petroleos Mexicanos (Mexico)	3.6 million
10.	Kuwait Petroleum (Kuwait)	3.4 million
11.	<i>Chevron (U.S.)</i>	<i>3.3 million</i>
12.	Abu Dhabi National Oil (UAE)	3.1 million
13.	Total (France)	2.5 million
14.	Petrobras (Brazil)	2.4 million
15.	Qatar Petroleum (Qatar)	2.4 million
16.	Lukoil (Russia)	2.3 million
17.	Sonatrach (Algiers)	2.2 million
18.	Iraq Ministry of Oil (Iraq)	2 million
19.	PDVSA (Venezuela)	2 million
20.	<i>ConocoPhillips (U.S.)</i>	<i>2 million</i>
21.	Statoil (Norway)	2 million

[Source: Christopher Helmum, Forbes \(March 19, 2015\)](#)

RAPID EXPANSION OF FOREIGN STATE-OWNED OPERATORS

In recent years, the growth, profitably and expansion of foreign, government-owned and operated oil and gas producers, which are supported by governmental financing and protections, has expanded significantly, while the growth of the independent supermajors has been minimal or nonexistent. State-owned oil and gas producers are unrestricted by burdensome taxes, fees, bureaucratic delays, and environmentally motivated overregulation.

“Among the biggest oil companies, the vast majority of volume growth has come from state-controlled entities. Compare that with the performance of the International Oil Companies:

- ExxonMobil has managed to add only 100,000 boepd in the past decade...
- Chevron added 200,000 boepd...
- Royal Dutch Shell and BP have each dropped by 200,000 boepd...
- Conoco Phillips added 200,000...
- Total dropped 100,000.”

[Source: Christopher Helmun, Forbes \(March 19, 2015\)](#)

HOW IS THE UNITED STATES PERFORMING IN THE COMPETITION WITH FOREIGN PRODUCERS

“The Long Shadow of the Visible Hand - Government-owned firms control most of the world's oil reserves. Why the power of the state is back.”

[By: Ian Bremmer, Wall Street Journal \(Updated May 22, 2010\)](#)

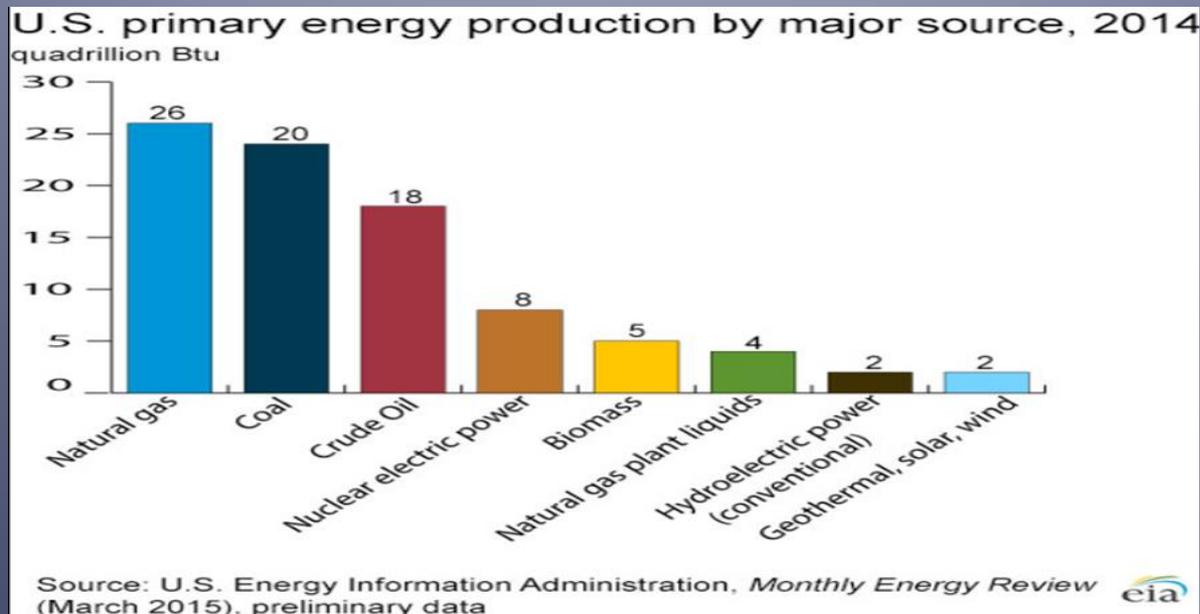
- “Name the biggest oil company in the world. ExxonMobil? British Petroleum? Royal Dutch Shell? In fact, the 13 largest energy companies on Earth, measured by the reserves they control, are now owned and operated by governments. Saudi Aramco, Gazprom (Russia), China National Petroleum Corp., National Iranian Oil Co., Petróleos de Venezuela, Petrobras (Brazil) and Petronas (Malaysia) are all larger than ExxonMobil, the largest of the multinationals. Collectively, multinational oil companies produce just 10% of the world's oil and gas reserves. State-owned companies now control more than 75% of all crude oil production.”
- “An era of state-driven capitalism has dawned, in which governments are again directing huge flows of capital—even across the borders of capitalist democracies—with profound implications for free markets and international politics. China and Russia are leading the way in the strategic deployment of state-owned enterprises, and other governments have begun to follow their lead.”

WHAT IS NEXT FOR OIL?

CAN FOSSIL FUELS BE REPLACED ANY TIME SOON?

The United States remains heavily reliant upon fossil fuels. Issues pertaining to production levels, such as overregulation and industry uncertainty due to pending regulations, are directly tied to the national economy, energy independence and national security and therefore must be aggressively addressed and rectified.

Presently, the United States runs on the following types of fuel:



[Source: U.S. Energy Information Association](#)