

Presidential Policies' Effects on Oil and Gas Price and Productions Within the United States from 1977-2021

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Amidst the ongoing COVID-19 pandemic, the contentious U.S. 2020 presidential election featured candidates with quite different stances on regulating the oil and gas industry, leaving many to question the longevity of fossil fuel use. However, little research explores the relationship between presidential policies and the oil market. In this paper, extensive research into presidential energy policies and their effects on domestic oil prices and production dating back to 1977 helps us identify whether we can predict the industry's future under Joe Biden's administration. The paper's results suggest the domestic oil industry is more dependent on external foreign events – with presidential policies offering almost negligible effects on prices and production.

Keywords: public policy, presidential policy, oil and gas price, oil and gas productions

INTRODUCTION

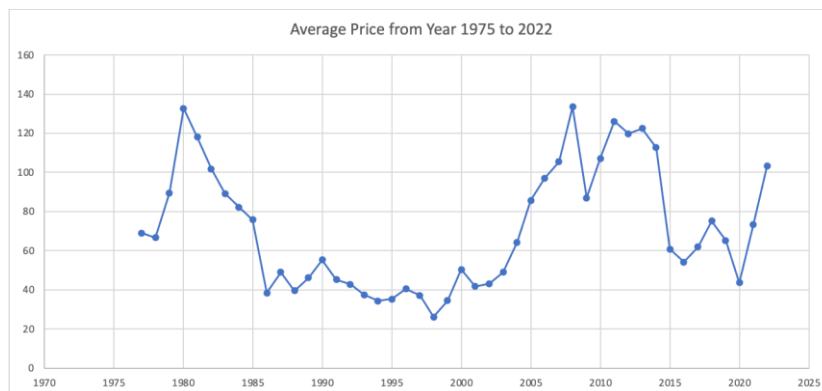
With growing concerns about the environment, the devastating effects of the global pandemic, and the tumultuous presidential election, more eyes have been on the energy sector's future than ever (Chuvakhina, et al., 2021; Gahill, 2021; Elder, 2021). Oil companies, big and small, are reporting bankruptcy (Roberts, 2021; Egan, 2020), stock prices hit record lows in 2020 (Fearnow, 2020), people have reduced travel due to the pandemic, and inconsistent government policies have sent the industry into a tailspin. Coupled with the President Joe Biden proposed and issued new energy policies, many have been left to wonder: Is this the final straw for the oil and gas industry? This paper seeks to investigate how changing energy policies enacted by former presidents - from Jimmy Carter to Donald Trump – have affected the already volatile oil and gas industry prices and production. It will cover significant regulations introduced or reversed by each President, how these policies affected the market and American economy.

The new energy policy proposed by President Joe Biden has turned the traditional oil and gas industry into a contentious area (Palmer, 2021). With the world facing unprecedented circumstances, U.S. oil and gas companies had lost over 100,000 jobs in 2020 (Dunn, 2020; Egan, 2020), with about 14% of permanent

employees laid off (Deloitte, 2021). This paper looks at another 2020 event that is speculated to impact oil and gas for the next 4-8 years: the presidential transits. President Trump conceded, and Joe Biden transits into his new role as President of the United States. With the changing political party and leadership in the U.S., it is becoming harder to predict whether the oil and gas industry will return to anything resembling normal (pre-COVID19) operations. This topic is interesting because energy and environmental stances have become an important part of any politician's policies. With all the uncertainty surrounding the next few years, it is a good time for us to investigate the effects of regulations by former presidents put into place against or for the oil and gas market.

As the Figure 1 shows, the average oil prices always in flux across 47 years. Anyone who has tied to the oil and gas industry is looking at this topic. How will the industry come back from a devastating year? What will the new leadership bring with it? Can the O&G (oil and gas) industry find the answer by looking and learning from its past? Many news outlets have reported on President Trump's energy and environmental policies and attempted to predict the future of oil and gas under Biden, including Marketplace, Politico, NPR, and The Washington Post. In October 2020, Brancaccio, Safo and Schroeder (2020) reported that some "fossil fuel companies appear to be hedging some bets now" and donated money to Democrats. An article posted by Politico later that month detailed how President Trump and his administration have not made any long-lasting beneficial changes to the industry - even hurting overall activity at times. It also covered the industry's hesitance as it "game-[plans] for a possible Biden administration" (Lefebvre, 2020). As recently as November 2020, NPR reported that Enverus director Jen Snyder said, "we're actually cautiously positive," about a Biden presidency (Domonoske, 2020). With 2020 and Trump's presidency ending, the oil industry is looking to the next administration and trying to make the best of an already difficult situation (Beck, et al., 2020).

FIGURE 1
AVERAGE PRICE OF CRUDE OIL FROM 1977 TO 2021



Note: the oil price is adjusted by controlling inflation. The vertical line represents the inflation-adjusted crude oil prices per barrel. The horizontal line represents the years.

ANALYSIS OF EACH PRESIDENT'S POLICY FROM 1977 TO 2021

Jimmy Carter (1977-1981)

Reducing Oil and Gas Consumption

We start by looking at the Jimmy Carter administration's efforts to curb oil and gas consumption in America. In the middle of an energy crisis where supply was limited and prices were high, Jimmy Carter took on the presidency determined to end the problem. After making large investments into solar energy, Carter put through the 1978 National Energy Act and created the Department of Energy (Jacobs, 2016). Further regulations on producers pushed Americans to import more oil, making them even more reliant on the Middle East for energy. Unfortunately, OPEC continued to hike prices, and foreign wars further

worsened the global oil shortage. Americans lined up at gas stations on designated ration days, killed each other over favorable spots in line for gas, and Carter's approval rate tanked as his plea for less consumption went unheard. By the end of his administration, Jimmy Carter had successfully started the initiative for alternative energy within the U.S. government (Tolchin, 1979) and even saw domestic production increase. Still, he had failed miserably at lowering oil prices due to foreign events.

Ronald Reagan (1981-1989)

Laissez-faire Style on Domestic Production

Following Carter was Ronald Reagan, who ran with the words, "It is no program simply to say 'use less energy'" (Jacobs, 2016). As part of his economic plan for the United States (labeled "Reaganomics"), Ronald Reagan removed regulations on domestic production and distribution that had been in place since Nixon. Domestic oil production soared and oil prices decreased, a temporary surplus occurred (the "glut") as the economy slowed during the crisis and recessions of 1980 and 1981-82, and Americans began buying gas-guzzling and diesel vehicles again. Reagan's supply-side style and all but branded Reaganomics brought the United States' economy out of recession earlier than many other industrialized nations. His reversal of regulations on the mining and oil and gas industries allowed consumption to rise 10% (Rapier, 2020) and market recovery. However, imports increased, and domestic production decreased once more.

George H.W. Bush (1989-1993)

Balancing Energy Efficiency and Oil Production

From 1989-1993, the United States took direction from George H.W. Bush and his administration. Former President Bush Sr. took a somewhat holistic approach to the energy sector of the nation. He believed that a balance of "economic growth energy efficiency, strong environmental protection, and then a reduced dependence on foreign oil" would meet American needs (On The Issues). Bush Sr. established the Environmental Restoration and Waste Management Department, appointed the first woman to the Deputy Secretary of Energy position, and signed the Energy Policy Act (Lester, 2018; Department of Energy, 2018) while in office. The Energy Policy Act 1992 aimed to reduce the nation's dependency on oil by encouraging alternative energy methods and greater energy efficiency (U.S. Department of Energy). The Act significantly increased the competition within the electric energy sector, and it succeeded in drawing more attention to petroleum alternatives. Domestic oil production fell 12%, and imports increased by 19%. On the flipside, Bush Sr. also fought for the oil initiatives he saw as necessary. He continued to support "environmentally responsive access to the ANWR" as he found the energy production necessary to meet American demand. Likewise, after Iraq invaded Kuwait in 1990, the former President had concerned that Iraq would continue to Saudi Arabia, threatening OPEC producers. To counter this potential threat to U.S. energy imports, Bush Sr. led a coalition of 35 countries into Kuwait to drive out Iraqi forces. This event would mark the end of the Gulf War in 1991. George H.W. Bush represented both sides of energy and environmental policy (Laporte, 2018), and it resulted falling consumption and production.

Bill Clinton (1993-2001)

Increasing Renewable Energy

The years after George H.W. Bush's administration saw a booming economic growth period under former President Bill Clinton. As the economy picked up, people bought into the stock market – sending prices skyrocketing past valuation and creating a massive stock bubble. Clinton continued with many of the initiatives started by Bush Sr. He sought to increase energy efficiency, increase renewable energy use, and increase natural gas usage. With strategic moves within the Federal Reserve, the Clinton administration reduced the high inflation rates that had plagued the United States for decades. Under his leadership (or timing), Clinton's time as President saw an expanding economy, low oil prices, and increased national oil consumption throughout both of his terms. However, domestic oil production continued to plummet 40% from its peak in the 1970s (Rapier, 2020) while reliance on imports increased.

George W. Bush (2001-2009)

Relaxing Oil Extraction Regulation

After Clinton's two terms as President concluded, George W. Bush was elected into office. His administration - under the National Energy Policy Development Group directed by Vice President Dick Cheney - sought to increase domestic petroleum production by allowing extraction industries access to federal lands and easing environmental regulations even further. Bush Jr. believed that industries themselves should take the initiative to become more environmentally sustainable rather than the government enforcing strict regulations (Duignan, 2020). In addition, the Development Group issued tax credits and subsidies to energy companies hoping to stimulate more operations within the United States. Unfortunately, these changes did little to curve the decline in domestic production and climbing oil prices as Bush Jr.'s first term closed. During his second term, Bush Jr. faced record-breaking oil prices and a subsequent fall in oil consumption. (Kilian, & Zhou, 2020; Rapier, 2019). People continued to predict that this would be the start of the end of oil and gas. Some connected to the industry felt that this was the dying age. However, the falling success of the economy - and the oil and gas industry - was the perfect storm to justify using higher-cost operations to increase production domestically. By the end of Bush Jr.'s second term, hydraulic fracturing was becoming more widespread in the industry.

Barack Obama (2009-2017)

Increasing Government Regulation

When Former President Barack Obama took office, the oil and gas industry saw another reversal in government policy. Throughout his term, Obama sought to increase government regulations on the industry: a very different strategy from his predecessor. His administration saw more restrictions on drilling (how, when, where, etc.), limited federal land access once again, and called for more strict reductions in rig pollution. In 2015, Obama attempted to put restrictions on hydraulic fracturing, such as requiring disclosures of the fracking fluids used and setting mandatory standards for well construction. In contrast to Bush Jr., Obama voiced his argument against subsidizing larger oil companies (Weiner & Clement, 2012).

In 2008, the U.S. fell into what is now called the Great Recession. Unemployment soared again; banks went bankrupt; stocks fell. As the same recession echoed around the western world, oil prices fell sharply once again. Now, the United States was an oil exporter - ranked third behind Russia and Saudi Arabia. As consumption around the world fell, the U.S. had to deal with a surplus of production for the first time in decades. Cutting back on production, the industry saw interest rates rise, asset value decrease, and an increase in layoffs. For the first time in a long time, low prices meant a falling economy. Yet, despite these policies and events, oil and gas production increased to new limits compared to previous years. Hydraulic fracturing methods changed the industry immensely. With new access to shale oils, domestic oil production increased for the first time since 1970 (Rapier, 2020) throughout the majority of Obama's two terms. Overall, there were few policies put in place that made it easier for the industry to operate. Instead, modern technologies and innovations allowed the oil industry to grow despite the administration.

In summary, the Obama administration imposed substantial policies on fossil fuel industries. Such policies, known as the Obama administration's Clean Power Plan, limited the amount of carbon emission allowed. As a part of its plan, Obama joined the Paris Climate Agreement, adding another barrier against the growth of the oil and gas industry (Eliperin, et al., 2016).

Donald Trump (2017-2021)

Supporting The Domestic Oil Industry

By the end of Obama's terms, oil production began to decline once more. However, shortly after Trump gained office, the industry saw another uptake in oil prices - leading to more production and a continued net export of oil. During his administration, Trump made several moves that supported the industry, such as placing his stamp of approval on the Keystone pipeline project, opening the Arctic National Wildlife Refuge for drilling and exploration opportunities, expanding drilling on federal lands that had been previously written off by the Obama administration, and decreasing Obama's methane leak restrictions (Loeb, et al., 2020). Despite government support on the national level, many states began placing their own

regulations on the industry. For example, in 2018 Colorado attempted to pass Proposition 112 calling for a drilling setback of 2500 feet from any homes, buildings, waterways, etc. This proposition did not pass in the polls, but it did jolt many in the state's industry to reconsider their sustainability practices, and companies across the nation are beginning to take the arguments for a cleaner environment more seriously. The oil industry attempted to meet modern sustainability and production demands when fell prey to COVID-19 in 2020. Demand plummeted as all travel came to a halt. Oil prices went negative in April. Layoffs in the industry and around the world skyrocketed (Deloitte, 2021). The times are unprecedented and have left Americans to wonder: What is next? For now, the oil and gas industry are trying to survive. On top of the effects of the virus, election year has proven challenging for many operators still able to continue drilling and production.

Trump had a different approach to the oil and gas industry than Obama. Trump proposed that as a long goal for his administration, he wanted domestic energy independence (Yachnin, 2016). The Washington Post held a similar view, stating that "Trump seems to view fossil fuels as at the center of U.S. economic power at home and abroad, providing cheap energy for the dream of increased domestic manufacturing and also lucrative export markets for U.S. oil, natural gas and coal" (Eliperin, et al., 2016).

During the 2016 campaign, Trump said, "Our total untapped oil and gas reserves on federal lands equal an estimated \$50 trillion... We have no idea how rich we are." Along with that statement, Trump stated that he had a "100-day-plan" that would roll back the Obama administration's regulations (Yachnin, 2016).

Trump promised that his administration would withdraw from the Paris climate accord, support the shale industry's growth by leasing more federal funds for drilling, and push a "reset" button on the Obamas administration's Clean Power Plan. When stepping into office, Trump's administration took an aggressive approach to environmental and energy deregulation. He kept most of his promises of cutting back red tape to reinvigorate the fossil fuel industry. For instance, Harvard University found at least 40 rules the Trump administration had so far challenged (Tobias & Colburn, 2018). Further, Trump signed memorandums to revive the Keystone XL and Dakota Access pipelines and withdraw from the Paris climate agreement. In March 2017, Trump issued executive orders directing all federal agencies to eliminate rules that restrict U.S. production of energy. As a result of Trump's administration interferences, in 2018, domestic oil production hit a record high, fulfilling one of the Trump administration goals of domestic energy independence (Loeb, et al., 2020).

During the 2020 campaign, Trump claimed to have created and saved the U.S. oil industry. The following speech pronounced by the former President summarizes his mandate idea and achievements regarding the oil & gas industry.

"I created it; we became number one. We have millions of jobs. And we saved it, so Texas is not going to have to let go of millions and millions of people. Oklahoma, North Dakota — many states... We're at \$40 a barrel, yet you can buy gasoline for under \$2. Nobody has ever seen it like this. So we have the biggest energy in the world. We're number one in oil, as you know — oil and gas — by far. We're now number one in the world. And we would have had millions of people out of work. I saved it," he said (Exarheas, 2020).

However, to win over more votes in his home state of Florida, President Trump reversed his previous stance on offshore drilling and ruled many shoreline sections in the Gulf of Mexico "off-limits" (Lefebvre, 2020). This was a blow to an industry that was already struggling. As the election has drawn to a close, many oil and gas companies are preparing to deal with the future administration reinforcing rules like this that were only temporarily discarded.

Joe Biden (Since 2021)

Developing Renewable Energy

Joe Biden and the democrats have a completely different perspective of the oil and gas industry. President Joe Biden does not believe that the U.S. needs the oil and gas industry to be domestic energy independent. He believes that renewable energy is more important and that the country will achieve reliable renewable energy in the near future. During his campaign and one of the presidential debates, Biden said that he would "transition" away from oil favoring renewable energy. During the debate, he said: "I would

transition away from the oil industry, yes... The oil industry pollutes significantly... It has to be replaced by renewable energy over time (Ronayne & Knickmeyer, 2020).” During the debate, he also repeatedly said that he wanted to end federal subsidies for the oil and gas industry and that he would permanently ban new drilling on federal acreage. Also, during the campaign, Biden promoted his energy plan that aims to eliminate carbon from power generation by 2035 so the U.S. can achieve a net-zero greenhouse gas emission by 2050 (Royall, 2020).

However, this strict emissions-free plan will lead to a costly regulation on oil and gas market. Giving up the underground resources, existing power plants, and pipelines means the loss of hundreds of billions of dollars. This forced energy swift will eliminate many thousands of jobs in the oil and gas sector, and result in high training costs of the new energy industry. This industrial restructuring will lead to a sharp increase in the cost of electricity for commercial and domestic use, transportation, food, clothes, etc.

President Biden also ordered a 60-day moratorium on the new oil and gas leasing and drilling permits for federal lands and water. This appears to be the first step of his promise to ban new drilling on federal acreage permanently. According to industry leaders, the restriction on federal lands will lead to the U.S. losing its energy autonomy and importing oil. President Biden said that he would not ban fracking. However according to Anne Bradbury, chief executive of drilling trade group American Exploration & Production Council, this 60-day moratorium is a frack ban (Roberts, 2021).

Texas has little oil and natural gas drilling on federal lands, and the off-shore drilling in federal waters is significant. According to the Texas Oil and Gas Association, under the Biden policy, Texas may lose 120,000 jobs and \$65 million in revenue by next year. This will hit the market hardly and the price of the oil and gas will be negatively affected.

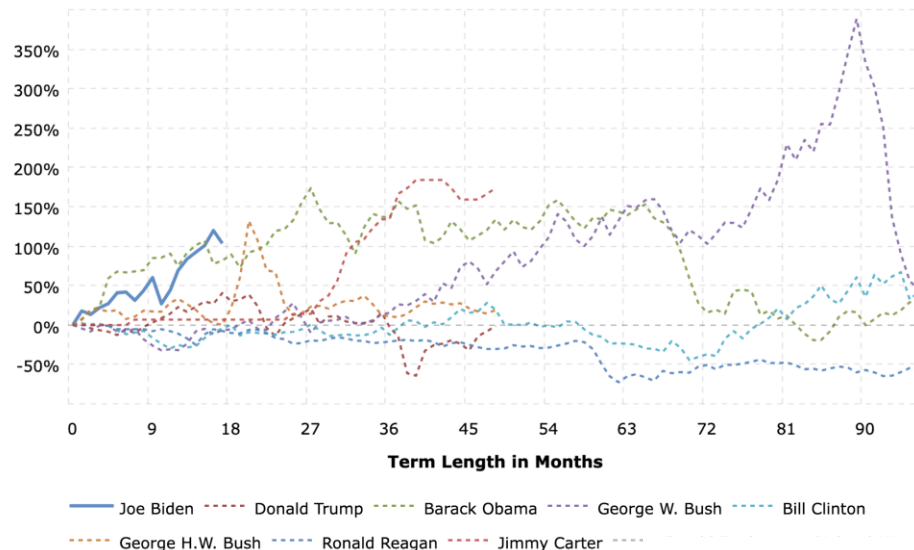
Russia invade Ukraine in 2022 which result in the turmoil in global oil markets. Biden has boycotted U.S. oil imports from Russia in order to sanction Russian intrusions. Oil prices surge to highest level since 2008 amid pandemic and external wars.

CONCLUSIONS

After looking at the past 43 years’ presidential administrations and trends in domestic oil prices and production, is it possible to predict the future of oil and gas under the policies put in place by Joe Biden in the coming years? It is unlikely. Figure 2. showed the standardized price of crude oil across the tenure of eight presidents.

Jimmy Carter experienced a domestic production increase during his presidency despite advocating against consumption, but foreign events like the Iran-Iraq War prevented a fall in oil prices. Therefore, the standard price never fell but reached a pike around 40 months during Jimmy Carter’s tenure. Similarly, despite George W. Bush Jr.’s lax policies regarding the industry, his administration did not see oil prices lower or domestic production increase. In fact, despite Obama’s administration putting forth more strict regulations on the industry, the introduction of hydraulic fracturing caused domestic production to soar. It was a combination of the housing market bubble, a surplus in supply, and the OPEC price war that caused the crash in price and production. While some regulations impose greater burdens or greater expenses than others on the industry, such as the lowering of the acceptable ozone limit emissions by Barack Obama, there is no clear pattern associated with oil prices and production and national policy.

FIGURE 2
STANDARDIZED PRICE OF CRUDE OIL ACROSS THE TENURE OF EIGHT PRESIDENTS



Note: This line chart was made by analyzing the change of standardized price during the tenure of eight different presidents. From *Crude Oil Prices – 70 Years Historical Chart*, by macro trends, n.d. (<https://www.macrotrends.net/1369/crude-oil-price-history-chart>).

It seems that the success of the oil and gas industry relies more on global demand and events than any policy set forth by the President at the time. This might be a result of the way the United States’ current democratic system functions. With a president elected every four years, senate members every six, and house representatives every two, policies get tabled, and a lag time exists between approval and implementation. It could be years before the effects of an administration are seen – if they ever are – whereas foreign impacts on American oil can be felt immediately.

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